



The African Seed Company Toolbox

52 Tools Every Seed Company Manager
Should Know How to Use

The African Seed Company Toolbox: 52 Tools Every Seed Company Manager Should Know How to Use

Edited by Aline O'Connor Funk

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Contact Information:

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Introduction

Good seed companies that are committed to producing high-quality seed and educating smallholder farmers about its benefits are central to improving food security in sub-Saharan Africa. Farmers have a limited number of crop cycles in their lives, generally ranging from 20 to 40 in Africa. Therefore, using the best possible seed for every crop cycle is important for farmers and their families.

Many elements need to come together in order to make good seed available to Africa's farmers. Breeding and research are two key ingredients. This Toolbox deals with three other ingredients: 1) the seed manufacturing process, 2) the seed marketing process, and 3) the requirements for sustaining and growing a seed company.

The Toolbox focuses on the activities of local, for-profit companies, because they offer perhaps the greatest hope for sustainably serving the largest group of Africa's farmers—smallholder farmers. In addition, they offer hope for building reliable production entities that are not dependent upon government or NGO support, but rather are based on the model of consistently delivering product value and service to customers.

Building and running any business is challenging, and some contend that running a seed business is harder than most. First, risks are extremely high, due largely to weather but also to the fact that the product—seed—is a fragile, living entity that

continues to deteriorate through processing, storage and transportation activities. Second, financial institutions in all countries, especially in developing countries, are usually reluctant to supply working or investment capital at market rates to seed companies, particularly in the absence of collateral. This means that the founders and owners of these companies often take on major personal financial risks. Finally, the research and development needed to supply good raw materials to seed companies, specifically

base genetics, have long been neglected in many African countries. The good news is that some countries are beginning to restock empty pipelines, due largely to the efforts of some extremely talented and dedicated African scientists and the

financial support of a group of enlightened governments and far-sighted donors.

This Toolbox is an easy-to-use resource that takes a straightforward business approach. Emphasis has been placed on having African seed company managers identify the tools that they wish to have included, in the belief that they know best what they need to run their companies. However, this Toolbox is just a starting point for seed company managers. The individual tools will be most effective when they are understood by managers and then adapted to suit the specific needs of the company. As with any tool, the skill is in the hands of the builder. Africa's smallholder farmers and their families need seed company managers who are good builders.

“Wasting even one cycle with sub-standard, low quality seed is a serious loss for the farmer and her family.”

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Editor

Aline O'Connor Funk is a seed industry professional and a strong advocate of placing the farmer at the center of the seed experience. Using this philosophy, she has been directly involved in growing and improving the performance of five US-based seed companies, ultimately serving as the CEO of a major seed company for eight years. Her current professional focus is on assisting local, private sector seed companies in sub-Saharan Africa, where she has advised more than 25 small and start-up seed companies in 13 countries. Aline holds an undergraduate degree from Georgetown University and an MBA from the University of Chicago.

How to Use This Toolbox

This collection of information on how to run a seed company has been named a “toolbox” for a very specific reason: It is a set of tools, but on its own cannot build anything. It needs a builder. The builder must have a vision of what is to be built, the willingness to work hard, the discipline to understand his tools, and the knowledge and skill to use the tools as well as to adapt them for the task at hand.

This toolbox is only a starting point. Good managers will change and refine the tools to suit their specific needs, sometimes simplifying them and sometimes making them more complex. They will use the tools to stimulate critical thinking about their business among their team. They will choose and use the tools that best suit their needs at a particular time of the year.

The toolbox is geared towards start-up and young companies, although it is based on general seed enterprise management principles that apply to all seed companies, irrespective of size. In addition, the emphasis is on production of seed for staple grain crops, not vegetable, vegetatively propagated, or other crops.

Companies that follow the tips listed below will benefit the most from the toolbox:

- ✓ Because it has 52 separate tools, the toolbox is modular in its construction. One does not need to read the entire toolbox to benefit from it. Rather, managers can select and focus on the tools that suit their needs at a given time.
- ✓ Many tools contain exhibits, which are also supplied separately on a CD-ROM included in the binder. This is done because many of these exhibits are spreadsheets or checklists that managers can put on their own computers and modify to suit their needs. It is strongly

suggested that managers think about modifying the exhibits. What is presented here is only a starting point—an example of how one company might think about a specific spreadsheet or form.

- ✓ The tools have been designed so that they can easily be used for training middle managers as well as other company staff. For example, an entire production team should review and learn from many of the tools in the section called Your Products, as these tools teach about seed quality and production efficiency. A finance manager will benefit from many of the tools in the Your Growth section. Seed company managers will find it useful to hold meetings with their team at different times of the seed production and marketing cycles to discuss specific tools and how to implement or improve upon the ideas suggested in them.
- ✓ Many of the tools link to other tools. These cross-references are listed in each tool. To develop a full understanding of an issue, it is recommended that you read all tools related to a given subject.
- ✓ Finally, this toolbox only scratches the surface of knowledge that can help managers run a seed company. For managers who wish to learn more, a list of useful Internet links is provided at the end of the toolbox. We provide these links as a convenience, but they are independent entities and therefore we do not control or endorse the linked sites or anything on them. All efforts have been made to vet the accuracy and quality of these online resources as of the date of the toolbox.

Abbreviations

Abbreviations	
COGS	Cost of goods sold
FR	Full retail tonnage
GP	Gross profit
ha	Hectare
ITG	In the ground tonnage
KPI	Key performance indicators
t	Metric ton
NGO	Non-governmental organization
P&L	Profit and loss statement
PP&E	Property, plant & equipment
SSA	sub-Saharan Africa
USD	U.S. Dollars

Section One: Your Products

Introduction

Smallholder farmers in sub-Saharan Africa urgently need a reliable supply of improved seed to increase their productivity. In many areas, farmers do not plant improved seed because they do not understand its benefits. In addition, many farmers do not use improved seed because they doubt that there will be a consistent supply available at planting time. Therefore, they choose to lower their risk by saving seed, seed that in most cases is genetically weak, low yielding, and susceptible to disease. Seed companies are working hard to break this cycle by supplying new varieties of many crops to smallholder farmers.

Since production costs represent the single biggest category of expense for seed companies, learning how to produce a high-quality seed crop consistently and efficiently is essential. But it's not easy. While no single element of production is extremely difficult, the entire process is complex because there are so many elements involved, and each element must be executed well.

The Your Products section provides many tools to help you think about the products you provide for your customers. The seed that you provide is more than just your company's crop – it is something that you have started from good foundation seed, grown, cleaned, processed, treated, stored, fumigated, tested, packaged, labeled, and distributed to retailers. Your customers' experience with your product encompasses all of these elements.

Because it is impossible to provide a set of tools that will completely explain how to produce improved seed, the goal of this section is to introduce you to the key concepts involved in production and to encourage you to think about developing your own tools that are uniquely adapted to your company and production environment.

Some tools, such as The Enemies of Seed Quality, should be shared with your production staff and even with outgrowers, while other tools, such as Production Record-Keeping, are intended to help you think about the critical functions that should be in place as your company grows. Many of the tools contain examples of spreadsheets that illustrate key production functions. You will find it worthwhile to discuss these examples with your team and determine how you wish to modify them to suit your needs.

The most successful seed companies in the world have been built on a strong foundation of seed quality and efficient production costs. The tools in this section share many of the principles followed by these companies.

Source: Aline O'Connor Funk

#1 - Keys To Product Planning Success



Good seed companies plan their product line carefully. To do this, you must first determine what products you can sell that will have clear value for your customers – so clear that farmers will be willing to pay you for the value the products bring to them. For seed, this value will be a combination of production factors, including:

- **Germplasm/Genetics**
- **Your Cost of Production**
- **Quality**
- **Seed Treatment**
- **Packaging**

Other factors such as farmer service and education, purchasing convenience, and price are also part of the value equation, but in this tool we will focus on the production-related decisions you make regarding your product line. Planning carefully around these five factors will pay big dividends.

Germplasm/Genetics

Knowing what your customers want and need, and marrying this knowledge with good germplasm that you can source reliably, is a seed company's dream. To do this well, it is critical to develop relationships with germplasm suppliers and understand what is "in the pipeline." A seed company does not want to invest in rolling out a particular product only to find out in a year that there is better germplasm available. You must look ahead. Many seed companies get themselves in trouble by trying to develop a product line initially that is too broad or too complicated.

Points to Remember

- **You must build your product line around products that you can actually produce profitably.**
- **Quality is probably the most important factor to consider in building your brand with your customers.**

Start at a manageable level and add products as you grow. In addition, it is important to survey your competitors to see what they are providing to customers. You might want to avoid providing the same seed unless you believe you can do it better or more cheaply than your competitors.

One big issue to consider is whether you only want to offer seed that is exclusive to your company. While many companies choose this route, it is important to note that in many other parts of the world, including India and the United States, vast amounts of nonexclusive or nonproprietary seed are sold by seed companies. The rationale of these companies is that if the seed is the best possible seed available for the farmer, it should be included in their product line whether it is exclusive or not. These companies compete based on production quality, service, and convenience rather

than the exclusivity of their product line. Many people believe that a nonexclusive approach is best for farmers, as it brings them the best germplasm available in the market, irrespective of exclusivity to a specific seed company.

Your Cost of Production

Researchers work with relatively small volumes of seed production in controlled, often optimal, environments. However, as a larger commercial producer you will need to understand how to profitably produce seed on a big scale. You must build your product line around products that you can actually produce profitably. Seed companies often refer to this as “produceability.” For example, a maize hybrid might look great in research data, but if it is not produceable on a large scale, it is unlikely to benefit farmers. Another example is groundnut seed that looks terrific on paper with respect to yield but will not store well and is thus a bad production bet. Produceability absolutely must be taken into account when building your product line.

Quality

Planning for quality is critical. A big part of what you are selling is the quality of your product, not just

the base genetics. Farmers will pay more for improved seed because they value the testing, the careful storage, the clean seed, the gentle processing, and the purity. Quality decisions are made constantly and are an important part of your product line planning. In addition, quality is probably the most important factor to consider in building your brand with your customers. Your brand can represent high standards to a farmer, or low standards. Always remember that quality does not simply impact one year's sales, it impacts farmers' long-term perception of your brand.

Seed Treatment

There are many seed treatments available on the market that will protect seed against soil borne diseases and fungi. As a seed company, you will need to decide if a seed treatment provides value to your customers. This can be done through your own testing program, ideally one in which farmers participate and see the results for themselves. Seed treatments vary greatly in both effectiveness and cost. As part of developing your product line, you will need to test seed treatments and decide what is best for your customers based on value and cost.

Packaging

Size of packaging is an important element of product line planning and should be based on customer preferences. Irrespective of what size seed package you believe your customers will ultimately want to plant, keep in mind that when customers are trying product for the first time they generally want to try it in small amounts. You might want to consider selling smaller introductory packages (e.g., .5 kg, 1 kg, or 2 kg) until your product reputation is established and farmers are comfortable buying larger packages.

Seed Size

For graded seed, the size of seed sold will also be a factor. One of the biggest myths in the seed industry is that smaller seed for maize is not as good as larger seed. Unless one is talking about extremely small sizes, there is no truth to this. Companies that can educate their customers about this and possibly even offer greater value to customers by providing more seeds/kg with smaller seed will reach more farmers and have more product to sell.

Source: Aline O'Connor Funk with special thanks to Remington Seeds

#2 - The Enemies of Seed Quality



After seed reaches physiological maturity, everything that happens to it has the potential to harm its quality – from the conditions in the field before harvest to how it is processed, stored, handled, and transported – literally everything! Good seed company managers know that each kernel of seed is a fragile, living entity that must be fiercely protected to preserve germination and vigor if the farmer is to capture its benefit.

Successful seed companies become obsessive about quality at each step of the chain in handling seed. It is not enough to do some things very well and other things at only a mediocre level. You also cannot afford to do anything poorly. It will cost you financially, and it will damage the reputation of your company. Being a high-quality seed company means doing a lot of things well.

The most damaging enemies of seed quality are outlined below:

Contaminated Parent Seed

Starting the production process with impure parent seed is a guaranteed route to producing poor-quality certified seed. If parent lines are not well maintained, purity is compromised and the resulting certified seed will be compromised as well.

Inadequate Isolation

For crops requiring isolation, it is essential to adhere to recommended isolation minimums, or even to exceed them if feasible.

Poor Nicking on Hybrids

With maize, nicking is when the pollen hits the silks. Proper nicking is a key determinant of seed quality and yield for hybrid maize. Ideally, there will be 5 percent to 7 percent male pollen shed before the female silks appear. Pollen shed that is either too early or too late is harmful. Production research is one of the best ways to control nicking issues, possibly leading to staggered planting of male and female parent seed.

Bringing in Seed From the Field That Is Damaged or Diseased

Starting out with high-quality, disease-resistant foundation seed is extremely significant. In addition, care and frequent inspection during the growing season will go a long way towards identifying and avoiding these problems.

The Enemies of Seed Quality

- Contaminated Parent Seed
- Inadequate Isolation
- Poor Nicking on Hybrids
- Bringing in Seed From the Field That Is Damaged or Diseased
- Beating the Seed Up During Husking and Shelling
- Too Much Heat in Drying
- High Humidity
- Poor Testing or Inaccurate Record-Keeping of Test Results
- Poor Seed Positioning
- Poor Storage

Related Tool Topics:

7, 9, 12, 14, 15

Beating the Seed Up During Husking and Shelling

Minimizing hard mechanical contact with the seed at this stage is essential. Hand husking and shelling is the most gentle approach, but is also slow. If machines are used, they must be designed and calibrated to be as low impact as possible. Sheller speed must be as low as possible and will vary based on the type of machine. Impact points should be padded if possible, and care must be taken not to let cobs or seed free fall more than 3 meters.

Too Much Heat in Drying

Companies using drying machines run a serious risk of “cooking” their seed, thereby killing it, if they are not extremely vigilant and watchful. Drying seed is an extremely delicate operation requiring close monitoring and frequent checks to prevent hotspots and general overheating. Generally, the lower the temperature, the better.

High Humidity

Moist, wet conditions are very detrimental to seed quality. Whether held in bulk while waiting for processing or further along in the processing chain, seed that is exposed to high humidity is at risk from a quality perspective. Seed that is properly dried for storage can still develop problems if the humidity under

storage conditions is too high, promoting mold and attracting insects.

Poor Testing or Inaccurate Record-Keeping of Test Results

Many seed managers have experienced the crushing disappointment of finding out that seed they thought was of sufficient quality and thus sold was actually not of adequate quality. This can happen due to either 1) poor testing, which can generate false results for a given seed lot, or 2) a mix-up in company record-keeping. The mix-up can occur if results are wrongly recorded as being acceptable when they are not, or if a lot is approved for sale that was never tested in the first place. Most good companies will work to reduce these risks by:

- Developing an in-house testing capacity to supplement external government testing, especially for germination. This does not need to be expensive; it can be as simple as germinating your own 10x10 matrix of certified seed in buckets or trays filled with sand, or on absorbent paper.
- Developing spreadsheets to track the testing results for each lot of seed, especially if the seed has been exposed to any unusual weather or climatic conditions.

- Ensuring that taking and recording testing samples by lot is done by a team of two people, with each checking the other's work.
- Establishing a process for putting seed “on hold” if it cannot be processed due to poor or inconclusive test results. Companies should develop a clear, highly visible sign to identify a bag of seed that cannot be packaged for sale. The sign should state the reason the seed cannot be processed, as well as the name of the person authorizing that it be withheld from the processing queue.

Poor Seed Positioning

Placing seed in the environment for which it is best suited is called seed positioning. A hybrid or variety that is sold for planting in an area for which it is not adapted is no longer quality seed. You might say that this does not make sense, but successful companies know that a good hybrid/variety in the wrong place is no longer a good hybrid/variety for the customer.

Poor Storage

Inadequate storage can result in excessive heat or humidity, which carry great risks. Absence of moisture, adequate ventilation, pallets to keep seed off the floor, and protection against rodents and storage insects are all important elements of good storage.

Source: CIMMYT (John MacRobert), Aline O'Connor Funk, and Remington Seeds

#3 - How to Set a Production Plan



Many people do not think of seed companies as being in the “manufacturing business,” but they are. Seed companies manufacture seed.

All manufacturing processes require careful planning and sequencing of steps. They also require excess production to offset unforeseen setbacks.

When setting a production plan for seed, there are two very important steps.

First Step

The first step is determining how much certified seed you need to produce in order to meet your sales goals.

This work must take into account the reality of seed production, which is that you need to plan to produce more seed than you want to sell, possibly by a factor of 30 percent or more. The reason for this is that as you go through the production season, your yield can be negatively impacted by a variety of production, processing, and storage setbacks. Therefore, if you wish to sell 400 t of bean seed, for example, you will need to start by planning production for 480 t of bean seed.

One of the most important inputs in setting a production plan will be your own history and experience with production. Using assumptions to set a plan and then carefully tracking how your company performed compared to the plan will provide valuable lessons for you in future years. A spreadsheet to assist you in doing this, *Certified Seed Volume – Planned Versus Actual*, shown here and included on the CD-Rom.

The top part of the spreadsheet is built upon your assumptions about hectareage to be planted and yield per hectare. In the lower part of the spreadsheet, you should record what actually happens during the production season and how much seed you ultimately package to sell to customers. Doing this carefully each year will help you develop good judgment about production dynamics.

Look carefully at the entire spreadsheet during your planning phase to see what factors will impact the certified seed volume that you will ultimately have available for sale and plan accordingly. The factors, and their impact, will vary by crop and by year. You will need to make the best possible judgments you can in order to minimize your risks.

Dependable Seed Suppliers

Anticipate factors that are most likely to impact seed field yield

Keep seed quality a top priority

Maintain good storage facilities

Test!

Second Step

The second step is to set a multiyear plan for producing the desired amount of certified seed from parent seed, which you may also need to manufacture.

The basic process is this:

- Seed received from the breeder (called **breeder seed**) is multiplied to produce **pre-basic seed**.
- **Pre-basic seed** is multiplied to produce **basic seed**, also called **foundation seed**.
- **Basic, or foundation, seed** is used to produce the first generation of **certified seed**.

It is easy to see how each of these seed multiplication activities requires planning and forethought.

Forecasting how much pre-basic and basic seed should be produced in order to achieve a certain target level of certified seed production in a given year is complicated. An extremely useful tool for doing this has been developed by CIMMYT (John MacRobert) and is called Seed Plan. It is included on the CD-Rom. Seed Plan is a series of spreadsheets that will help you understand volume requirements at each stage of the manufacturing process based upon assumptions you make about the seeding rate and seed yield of the parental material.

Seed Plan has been adapted for use with OPV and varietal material, as well as for hybrids, whether single-cross, double-cross, or three-way. There is a separate spreadsheet for each type of seed. Once you enter your assumptions, the first table in each Seed Plan spreadsheet will outline the necessary manufacturing process based upon your certified seed production goals. The second table takes an opposite approach by calculating the amount of certified seed you will be able to produce from a set amount of parent seed.

Managing and growing your seed company is highly dependent upon being able to forecast revenue and expenses fairly accurately. The single most important element of your business forecast is the amount of seed you will have available for sale. Therefore, setting a good, realistic production plan is one of the most critical business activities for seed company managers.

A Word About Parent Seed Quality

Special care should be taken to ensure that the quality of your parent seed is high. It is worth the time to make certain your parent seed is genetically pure. Ensure off-type plants are removed from parent seed fields. Otherwise, the genetic purity of all subsequent commercial seed will be low. Also pay close attention to the weeds or diseases that might be in your parent seed fields. You can't afford to infest your commercial seed fields (or customer fields) with weeds or diseases.

#3 - How to Set a Production Plan (Continued)

Certified Seed Production Planning Spreadsheet

CERTIFIED SEED VOLUME -- PLANNED VS ACTUAL

Production Year:

<fill in year>

Note: Lightly shaded cells contain formulas and will automatically calculate.
Bold titles indicate assumptions, non-bold titles should reflect actual numbers

	Hybrid Maize (one column per hybrid)	Total Hybrid Maize Need to input formulas based on # of hybrids	OPV Maize (one column per variety)	Total OPV Maize Need to input formulas based on # of varieties	Total Maize Seed #VALUE!	Additional Crop #1	Additional Crop #2	Etc...	Can set up totals for all production here if useful	Comments
Budgeted/Planned Production (ha)										
Actual Planted Production (ha)	220	Need to input formulas based on # of hybrids			0					
Yield Assumption (t/ha)	200				0					
Planned Production (t)	3.0				0	0	0	0		
Weather Loss (ha)	600		0		0					
Other Loss (ha)	22				0					
Harvested (ha)	4				0					
Harvested (t)	174				0					
Actual Yield (t/ha)	490.0				0					
Variance From Yield Assumption (t/ha)	2.8		#DIV/0!			#DIV/0!	#DIV/0!	#DIV/0!		
Lost Due to Quality (t)	(0.2)		#DIV/0!			#DIV/0!	#DIV/0!	#DIV/0!		
Net Harvested (t)	0.1				0					
Decrease Due to Processing (t)	489.9		0.0		0	0.0	0.0	0.0		
Other Post-Harvest Loss (t)	0				0					
Reserved for Sampling, Germ Tests, etc. (t)	0				0					
Net Available to Sell (t)	0				0					
Reference: Net Planted by Customers in Sales Year (t)	489.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
FILL IN THESE NUMBERS AT END OF PLANTING SEASON										
					0					

Seed Plan Example- Doublecross Hybrid

TABLE DC.1: The minimum quantities and areas of breeders and basic seed required to produce the certified seed production goals of a double-cross hybrid									
Certified	CZH1	Sales Target	2008	2009	2010	2011	2012	2013	
Basic	CML444/CML395 (A/B Female)	Production		200 t	400 t	1 000 t	5 000 t	10 000 t	
		Area required		200 t	400 t	1 000 t	5 000 t	10 000 t	
	CML312/CML442 (C/D Male)	Production	1.20 t	2.40 t	6.00 t	30.00 t	60.00 t	3 333 ha	
		Area required	1.2 ha	2.4 ha	6.0 ha	30.0 ha	60.0 ha		
Pre-basic	CML444 (A Female - female)	Production	0.47 t	0.93 t	2.33 t	11.67 t	23.33 t		
		Area required	0.5 ha	0.9 ha	2.3 ha	11.7 ha	23.3 ha		
	CML395 (B Female - male)	Production	43 kg	108 kg	540 kg	1 080 kg			
		Area required	0.043 ha	0.108 ha	0.540 ha	1.080 ha			
Breeders	CML312 (C Male - female)	Production	17 kg	42 kg	210 kg	420 kg			
		Area required	0.017 ha	0.042 ha	0.210 ha	0.420 ha			
	CML442 (D Male - male)	Production	17 kg	42 kg	210 kg	420 kg			
		Area required	0.017 ha	0.042 ha	0.210 ha	0.420 ha			
Breeders	CML444 (A Female - female)	Production	7 kg	16 kg	82 kg	163 kg			
		Area required	0.007 ha	0.016 ha	0.082 ha	0.163 ha			
	CML395 (B Female - male)	Production	2.70 kg	13.50 kg	27.00 kg				
		Area required	27 m ²	135 m ²	270 m ²				
Breeders	CML312 (C Male - female)	Production	1.05 kg	5.25 kg	10.50 kg				
		Area required	11 m ²	53 m ²	105 m ²				
	CML442 (D Male - male)	Production	1.05 kg	5.25 kg	10.50 kg				
		Area required	11 m ²	53 m ²	105 m ²				
Breeders	CML444 (A Female - female)	Production	0.41 kg	2.04 kg	4.08 kg				
		Area required	4 m ²	20 m ²	41 m ²				

By inputting basic assumptions, you can use Seed Plan to help you lay out the required approach to producing hybrids. See the CD-ROM for the full set of spreadsheets and instructions.

Source: Seed Plan Workbook, CIMMYT, John MacRobert

Source: Chuck Kuster

#4 - Why Hybrids?

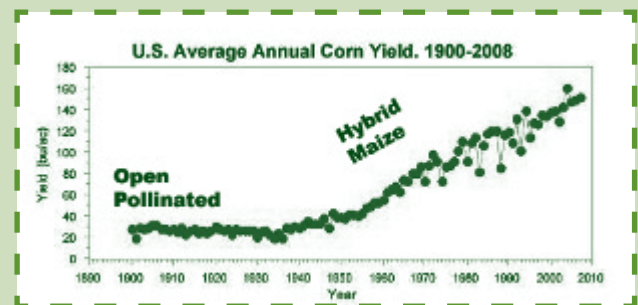


Seed companies all over the world have learned that one of the most important additions to their product line is hybrid seed. What is hybrid seed, and why is it so valuable to farmers?

Hybrid seed is seed that is produced using special techniques in the field that involve crossing two separate and carefully selected “parents.” The resulting “child,” the hybrid seed, will exhibit very special growing and yield strengths, collectively called hybrid vigor. However, hybrid vigor only expresses itself fully for the first generation of the hybrid seed. After the first generation, if you save the seed and plant it again you will not experience the same level of hybrid vigor as you saw in the first generation. This happens because, at this point, the plant starts to perform more like an open-pollinated variety (OPV), crossing with itself and weakening the genetic structure. For this reason, farmers all over the world choose to purchase fresh hybrid seed each season for those crops for which good hybrid seed is available to them.

The art of saving seed was practiced long before there were commercial seed producers. In fact, most vegetables and grains planted today trace their existence back to early cultivators who saved seed. But today, most of the responsibility for improving seeds resides with seed breeders and seed companies, and great progress has been made around the world. The following chart illustrates the dramatic increases in U.S. maize yield once the process of hybridization was discovered and introduced to American farmers in the 1930s.

Average Maize Yields



Average maize yields remained in the 20 bushel/acre (206 kg/ha) range and were standard in the United States for decades until hybrid maize seed was adopted. Average U.S. maize yields today are seven or eight times that amount.

The upward slope of the yield curve from the 1930s on was due initially to hybridization and later to intensive breeding efforts and other crop advances. These dramatic gains would not have been possible without hybridization.

Source: United States Department of Agriculture

Because of this progress, it is very important that farmers carefully compare the potential risks and rewards of saving seeds versus purchasing new seeds. This is especially critical when customers consider saving and planting grain produced from hybrid seeds.

What is it that these breeders and seed companies do to improve yield and crop health by making hybrids? Understanding the answer to this question requires a basic understanding of hybrid seed production.

Pure Line Selection

Over the years, OPVs have tended to have considerable genetic variation. For example, some maize OPV lines have had very small stalks. Other varieties would grow 15 feet or more and have thick, woody stalks. Some plants would be ready for harvest in 80 days while others needed 120 days. A wide range in how well the various plants could handle disease, insect, and weather pressures has also been present, often in a single field.

Plant scientists discovered that they could reduce genetic variability by growing and selecting plants with specific traits over several generations. These plants would be “selfed” or bred with themselves. Plant height, grain yield, period of time it took for a plant to reach maturity, ability to handle stress, disease resistance, and grain color are a few of the positive selection variables

that scientists identified and used in their breeding programs.

The problem was that while such inbred plants were genetically consistent and possessed the desired characteristics more regularly than OPV seed, they were also weaker or less robust than their predecessors. This is termed “inbreeding depression.” Fortunately, however, there was a very important discovery. Plant scientists noticed when crossing different pure (or inbred) line strains, the resulting seed would grow plants that were more consistent and robust than the original open-pollinated sources. This phenomenon is called heterosis or hybrid vigor. Although scientists do not know exactly what causes heterosis, they have learned how to capitalize on the phenomena.

“Great fires erupt
from tiny sparks.”

African Proverb



Open-pollinated Varieties

When the seed from two open-pollinated varieties (right and left) were crossed in the production field and the resulting seed was planted, the ear size and yield from the maize crop was increased substantially (center ear).

#4 - Why Hybrids (Continued)

Pure Line Selection (Continued)

While saving seed from prior crops is a common custom with OPVs, this is not encouraged with hybrid seed crops. Several problems will likely arise, including:

- Heterosis for hybrid vigor would be lost. Yields will likely be lower and risks higher due to diseases, insects, and weather.
- Saved seed from hybrids will not produce “true” in the next generation. This is because the hybrid was carefully designed to contain the genetics from two distinctly different parents. Some of these genetic characteristics, such as yield and disease resistance, will not perform by saving and planting grain.

Hybrid Seed Productions

Hybrid seed production is one of the most important activities for a seed company because hybrid seed can provide tremendous value to farmers. Especially when combined with judicious amounts of fertilizer, yield increases can be extremely high. There are many examples of farmers who have tripled or even quadrupled their yields. This is why hybrid seed accounts for 100 percent of the seed for certain crops in certain countries, primarily developed countries.

In sub-Saharan Africa, it is increasingly common to see hybrid seed available for crops such as maize, sorghum, and rice.

Open-pollinated Maize Compared to Hybrid Maize



Open-pollinated maize (left) and hybrid maize (right) grown under identical conditions.

The Visual Demonstration That Convinced U.S. Farmers to Try Hybrid Maize

Times were tough for American farmers during the economic Great Depression of the 1930s. So when seed companies started promoting hybrid maize, farmers were skeptical. After all, at that time farmers simply saved open-pollinated seed from the prior crop and did not pay cash for seeds. However, today virtually all of North American maize is grown from hybrid maize seed. How did this happen?

The early hybrid seed promoters often started by locating farmers with good reputations among their neighbors. The promoters would then give the farmers small sample bags of seed to try for free. The only condition was that the promoter had permission to return at harvest and compare the yields of the hybrid and open-pollinated varieties.

With the cooperating farmer and neighbors present, the promoters would measure off equal sections of each field and weigh the harvested OPV maize as well as the hybrid maize from the two equal sections. Farmers were always happy to learn about the increased yield delivered by the hybrid maize. Participating farmers were often so pleased with their hybrid seeds that they agreed to let the seed company take photographs for publicity purposes. Many became hybrid seed promoters themselves.

By the 1940s, the majority of American farmers were planting hybrid maize, and the average yield of maize had increased by 50 percent nationwide. In subsequent decades, breeding advances helped maize yield to grow more than 5-fold from the initial levels.

Early Tripod Scales
for Weighing Corn Test Plots - 1930s



The activity of harvesting the new hybrid maize crops and weighing them to prove its value created a lot of attention among curious farmers. Seed promoters soon realized that plots near high-traffic areas were the most visible and successful since farmers watched the fields all year long.

Source: Aline O'Connor Funk with special thanks to Remington Seeds for Grower Forms

#5 - How to Choose and Monitor Good Outgrowers



If your company uses outgrowers for production, your future is highly dependent upon identifying and retaining good outgrowers. This is not easy to do. Careful observation and decision making are required. Companies that use a disciplined approach to selecting and developing strong outgrowers will achieve an advantage over their competitors and will enjoy more consistent and higher-quality seed production.

There are many factors to consider when selecting outgrowers, but the two most important are:

1. Their production experience and attention to quality
2. Your ability to support and monitor them

A company's ability to monitor and support an outgrower is largely a function of location. When outgrowers are too far away from your production staff or too far away from each other, it becomes very difficult to monitor them during the growing season.

As your company grows and you are working with an increasing number of outgrowers, it will be helpful to use a formal and standardized approach for rating them, so that you can look at their overall capability and identify areas for improvement. The following pages present a sample grower rating form. One version is filled in and one is blank for your use. This form is currently in use by a very large U.S.-based contract seed production company.

The form requires you to weigh eight key factors when evaluating outgrowers (weights must add up to 100) and also requires that you score each outgrower on these eight factors. The figures are then tallied to calculate a grower rating score and a letter grade.

Please Note:

The Grower Rating Form and others, are included in the CD-Rom with this binder.

Discipline

is

Important

Companies that use a disciplined approach to selecting and developing strong outgrowers will achieve an advantage over their competitors.

Related Tool Topic:

28

The key elements of this form are:

Description (of Rating Factor) Column:

The examples on the following pages list eight factors that are important when assessing outgrowers. You can add to, subtract from, or change this list of factors to adapt it to your own company's needs. For example, if irrigation is an important consideration for you in choosing your outgrowers, you might wish to add it as a factor.

Rating Column:

In this column, you need to enter the score for the outgrower for the most recent production year. If the outgrower does not grow for you every year, perhaps due to crop rotation practices, enter the rating for your most recent experience with the outgrower. Use the key at the top of the form to understand what to enter in the column (e.g., 1 = Excellent, 0 = Very Poor). This column will obviously be different for each outgrower you are rating.

Weight Column:

This column should represent the weight, or importance, of each factor to your company. For example, is "soil type" more or less important to you than "previous experience" for your outgrower selections? **Note that the weights on the form should be the same for all outgrowers.** The weights are your decisions about what is most important to you in selecting outgrowers, and will not vary by outgrower. You can decide on these weights and then print them as part of your final form before you fill it out. **Weights must add up to 100 for the score to tally properly!**

Score Column:

In this column, you should simply multiply the rating by the weight for each factor you have listed in the description column. When you have finished each calculation, add this column to determine the total score and then the classification or letter grade. For example, an outgrower who is excellent in all categories will receive a total score of 100, which is an A. An outgrower who is only average in all categories will receive a total score of 50, which is a C.

A form that can be used to monitor each outgrower's performance each year, including harvest results, is also included in this tool.

As you grow and use ever larger numbers of outgrowers, objectively assessing their strengths as production partners is critical.

Grower Rating Form

Date: September 15, 2009

GROWER NAME: Mr. Farmer

		Rating	
		Excellent	1.00
		Good	0.75
		Average	0.50
		Poor	0.25
		Very Poor	0.00

DESCRIPTION	RATING	WEIGHT *	SCORE
1. Quality/Yield of Previous Seed Crop(s):	.50	30	15
2. Professionalism:	.75	15	11.25
3. Soil Type/Fertility:	1.00	10	10
4. Drainage/Soil Type/Compaction:	.5	10	5
5. Weed Control and Farming Practices:	.5	15	7.5
6. Geographic Location to Plant/Growing Area:	.25	10	2.5
7. Attendance at Company Meetings:	.25	5	1.25
8. Previous Seed Experience:	.50	5	2.5
TOTAL SCORE =			55
CLASSIFICATION =			C

Manager Approval: _____
(Required for "Poor" rating)

SCORE > 75 60 – 75 50 – 59 < 50	CLASSIFICATION Excellent A Good B Average C Poor D
--	---

* Note that the figures in the "weight" column must sum to 100.

Source: Remington Seeds

Grower Rating Form

Date: September 15, 2009

GROWER NAME: Mr. Farmer

Rating

Excellent	1.00
Good	0.75
Average	0.50
Poor	0.25
Very Poor	0.00

	DESCRIPTION	RATING	WEIGHT *	SCORE
1.	Quality/Yield of Previous Seed Crop(s):	<u>.50</u>	<u>30</u>	<u>15</u>
2.	Professionalism:	<u>.75</u>	<u>15</u>	<u>11.25</u>
3.	Soil Type/Fertility:	<u>1.00</u>	<u>10</u>	<u>10</u>
4.	Drainage/Soil Type/Compaction:	<u>.5</u>	<u>10</u>	<u>5</u>
5.	Weed Control and Farming Practices:	<u>.5</u>	<u>15</u>	<u>7.5</u>
6.	Geographic Location to Plant/Growing Area:	<u>.25</u>	<u>10</u>	<u>2.5</u>
7.	Attendance at Company Meetings:	<u>.25</u>	<u>5</u>	<u>1.25</u>
8.	Previous Seed Experience:	<u>.50</u>	<u>5</u>	<u>2.5</u>

TOTAL SCORE = 55

CLASSIFICATION = C

Manager Approval: _____
(Required for "Poor" rating)

SCORE

> 75
60 – 75
50 – 59
< 50

CLASSIFICATION

Excellent	A
Good	B
Average	C
Poor	D

* Note that the figures in the "weight" column must sum to 100.

Source: Remington Seeds

Grower Rating Form Blank

Date: _____

GROWER NAME: _____

Rating

Excellent	1.00
Good	0.75
Average	0.50
Poor	0.25
Very Poor	0.00

	DESCRIPTION	RATING	WEIGHT *	SCORE
1.	Quality/Yield of Previous Seed Crop(s):	_____	_____	_____
2.	Professionalism:	_____	_____	_____
3.	Soil Type/Fertility:	_____	_____	_____
4.	Drainage/Soil Type/Compaction:	_____	_____	_____
5.	Weed Control and Farming Practices:	_____	_____	_____
6.	Geographic Location to Plant/Growing Area:	_____	_____	_____
7.	Attendance at Company Meetings:	_____	_____	_____
8.	Previous Seed Experience:	_____	_____	_____

TOTAL SCORE = _____

CLASSIFICATION = _____

Manager Approval: _____
 (Required for "Poor" rating)

SCORE

> 75
 60 – 75
 50 – 59
 < 50

CLASSIFICATION

Excellent	A
Good	B
Average	C
Poor	D

* Note that the figures in the "weight" column must sum to 100.

Source: Remington Seeds

Outgrower Yield Comparison Spreadsheet

OUTGROWER YIELD COMPARISON FOR 20XX SEASON

Crop _____ Total Ha Planted by All Outgrowers _____ Prepared by _____

Note: Use one spreadsheet per crop.

	<Outgrower #1> <Location>	<Outgrower #2> <Location>	<Outgrower #3> <Location>	<Outgrower #4> <Location>	<Outgrower #5> <Location>	<Outgrower #6> <Location>	<Outgrower #7> <Location>	<Outgrower #8> <Location>	<Outgrower #9> <Location>
Variety Planted									
Ha Planted									
Planting Date									
Spacing									
Fertilizer App Date									
# of Times Weeded									
Rain Received/Dates									
Harvest Date									
Harvest Yield (kg)									
Harvest Productivity (kg/ha)									
Comments									

“Do not look where you fell,
but where you slipped.”

African Proverb

Source: Aline O'Connor Funk, Remington Seeds and Leldet Seeds

#6 Do I Need An Outgrower Contract?



An outgrower contract is always recommended.

Even if you are located in a country that does not have a strong legal system to back up a contract, it is beneficial to have one because most of the reasons listed below are still relevant.

Why is a contract recommended?

1. A contract outlines the expectations for and responsibilities of both parties.
2. A contract outlines the costs to be borne by each party.
3. A contract outlines the quality parameters to be met by the grower, including, but not limited to, isolation distances.
4. A contract outlines how the grower payment calculation will be made.
5. A contract provides reassurance for both sides that the other party is committing to its responsibilities.
6. A contract provides a discussion outline for your business arrangement with the outgrower.
7. If the contract is with a group of outgrowers, it will provide a discussion outline for the group representative when communicating with the members.
8. A contract is a vehicle for the outgrower to record his or her own requests and terms of the arrangement.
9. A contract may be legally enforceable if either side fails to meet its responsibilities.

Outgrower contracts are not all alike. Each company must think carefully about what should and should not be included in each individual contract. Terms will vary by crop, by type of outgrower, and, possibly, by season. There is no substitute for thinking carefully about your contracts and writing the terms as simply and clearly as possible. Explaining to your outgrowers before the season begins how the contract will work will help avoid possible misunderstandings and frustration later.

An example of how one company has developed an outgrower contract for varietal crops is on the next pages. Of course, a contract for a hybrid crop such as maize will be more complicated.

For example, an outgrower contract for hybrid maize will also need to include language covering:

- More specific isolation requirements, possibly including borders of male rows
- Possible male/female staggered planting requirements
- Detasseling requirements
- Removal of male rows
- Ownership of ears from male rows

While outgrower contracts are recommended for all crops, they are highly recommended for hybrid crops due to the additional production complexity.

Finally, remember that an outgrower contract should be a document that helps your outgrower maximize his or her income from seed production. By educating the outgrower about optimal production practices and requiring that the practices be followed in order to meet the terms of the contract, your outgrower will benefit and your company will benefit. High seed production yield and high-quality seed is a winning outcome for both parties to the contract.

“There is no substitute for thinking carefully about your contracts and writing the terms as simply and clearly as possible.”

Outgrower Contract - Sample

SAMPLE Contract for the Multiplication of <Varietal Crop> Material.

This agreement, dated <date> is between;

<Name and Address of Your Company>. (hereinafter called The Company).

And

_____ (hereinafter called The Grower).

This contract pertains to the multiplication of material for the following variety:

variety

Proposed location of Multiplication site: Farm:

District:

Proposed field area available for Multiplication: Hectares

Proposed season for Multiplication of material:

Status of Input Seed for Multiplication Process: Foundation

Proposed Seed Rate: kg / ha

Quantity of Parent Seed Supplied: kg

Grower representative in charge of crop:

CONDITIONS:

The Grower is expected to abide by all the conditions within the Seed Act which have relevance to the multiplication of <crop>. The Merchant will assist in providing the relevant information required by the Grower. Examples include: isolation from possible contaminants, both biological and chemical within the field and post harvest, previous crop history of the land with <crop> not following <crop> etc.

In pursuance with the Seed Act this crop will fall within the supervision of <name of national seed inspection agency>. Consequently, the Grower will have to be registered with <name of national seed inspection agency> and the crop will also be registered with <name of national seed inspection agency>. The Merchant will assist in these issues, providing that The Grower undertakes to give the Merchant the relevant details to include the following: planting dates, emergence dates, area planted, physical address details and a map showing the precise location of the crop within their premises.

The Grower agrees to allow <name of national seed inspection agency> inspectors access to the crop in field while growing, the relevant store post harvest and finally, <name of national seed inspection agency> will have to be present at dispatch of the harvested produce. This is necessary to preserve the provenance of the material.

The Grower undertakes to abide with <name of national seed inspection agency> regulations and to adhere to the advice and directives of the inspectors in pursuit of their duties.

The Grower undertakes to establish the best crop stand possible and to maintain the same in the best possible condition observing best cropping practice. Crop maintenance such as rogueing of diseased and off-type plants has to be done to the complete satisfaction and approval of <name of national seed inspection agency>

The Merchant will undertake to provide technical advice if required.

The Grower acknowledges that the germplasm and any product thereof is the property of The Merchant. It will remain so throughout the process until and including delivery when all the remaining germplasm will be returned to The Merchant together with all the material produced from the bulking generation.

Outgrower Contract - Sample (Continued)

The Grower further agrees that under no circumstances should any of the material or its product be sold, given, reserved, replanted or used in any way whatsoever without prior express written authority from The Merchant.

PRODUCT DELIVERY:

The Grower will sell all of the product back to The Merchant in <state condition here, e.g. “ a clean, dried, sorted condition. The product will remain unshelled and will be shipped in this state. Moisture level must be within the range of X% and Y%, and will be determined by (identify method)”>

State packaging conditions here, e.g., “The consignment should be packed in good quality sacks to a consistent weight, clearly labeled as to variety, point of origin, sack weight and clearly dated with the harvest date. The consignment should be labeled both on the sack with indelible marker and with manila labels within the sacks.”>

State insecticide requirements here, e.g. “The seed should also be dusted with a grain dust insecticide to protect the same from insect damage according to the recommendations of the Manufacturer.”>

Transport of the product to the Merchant stores from the Grower premises is on the account of The Merchant.

PRODUCT STATUS AND PRICING:

The intention is to produce good quality certified seed. Accordingly, it is hoped that the harvested crop will have been approved by <name of national seed inspection agency> and go on to be fully certified.

The parent material is provided by The Merchant free of charge.

The Merchant proposes to pay The Grower a price of X/Kilogram for the crop in its cleaned, sorted, unshelled state. This price is contingent on the crop having been approved for harvest by <name of national seed inspection agency> as a Seed crop, of being shipped correctly to The Merchant and of attaining a suitable germination threshold once tested.

Should the crop fail to be approved or lose its status through inappropriate action or negligence on behalf of The Grower, The Merchant will pay X/Kilogram for the crop.

Conversely, if the crop were to fail due to a fault of The Merchant, The Grower would still get the stated seed price of X/Kilogram.

The crop will be weighed by both The Grower at dispatch and by The Merchant at receipt. Discrepancies in the weighing will be dealt with as they arise but it is proposed to use the mean value of the two consignment weights to determine payment.

As the final product price is linked to the quality of the product and its germination potential, sampling of the product will be a key element in the process.

The minimum germination for <crop> in order to be certified is XX%.

The Grower should keep a representative sample of the product as a reference. The Merchant proposes to use <name of national seed inspection agency> to both sample the product and carry out the germination trials in the <name of national seed inspection agency> lab, generating an impartial, true result.

The Merchant proposes to pay XX% of the value of the consignment on delivery with the balance paid within XX days once the Germination results are known.

Signed:

Signed:

Company Name

Grower Name

Source: Leldet Seeds

Source: Aline O'Connor Funk with special thanks to Remington Seeds

#7 - 10 Major Production “Bleeders”



Being a sustainable private company requires profitability, because without profits you are unable to generate the cash flow required to stay in business. In the seed business, **the major determinant of a company’s profitability is its cost of goods sold (COGS), or its production costs.** If production costs are not managed extremely carefully, the company will bleed cash!

Here are the main production “bleeders” that seed company managers need to prevent and control:

1. Weak outgrowers

Whether an outgrower is strong or weak, you make the same upfront investment -- the same foundation seed, the same fertilizer purchases, the same monitoring visits, the same upfront use of company oversight and training resources. What varies, of course, are the production results from each outgrower, not your upfront investment in the production. When a poor-quality outgrower is on your production team, the cost to you is not only the underutilized upfront investment, but also the opportunity cost of the revenue you are losing by not having additional seed to sell. This can be huge.

2. Poor production management practices, training, and oversight

When outgrowers do not follow optimal management practices – spacing, fertilizer usage, gap planting, weeding, insecticide application, etc. – you are losing out on production volume and on the opportunity to have more product to sell. Clear written and verbal communication about expectations, strong upfront training, and effective oversight during the production season will all help ensure that good management practices are followed by your outgrowers.

What Is Production Research?

Not all seed research relates to breeding. An important type of research for a seed company is called production research. This is the study of exactly *how* to produce specific types of seed in order to maximize volume and quality at harvest time.

With hybrids, in particular, production research is critical. A seed company should start by gathering information from the breeder or other experts from the source of the seed (e.g., the NARS or CG center). However, this advice will most likely represent production from a breeder’s perspective, so the seed company must then conduct trials to see how to best produce the seed at a commercial level. Particular attention should be paid to nicking periods, the pattern of male and female rows, border rows to ensure isolation, plant population, and crop management practices.

An important component of production research is maintaining accurate production records so that production techniques can be either replicated or improved in subsequent years.

3. Lack of geographic diversification in production

If you produce seed in a geographic area that has a lot of production risk (e.g., disease, drought, flood, etc.), it is important to diversify your production. This means that you should make every effort to spread out your production locations so that if a disaster impacts one area, you do not lose a significant proportion of your production. In some cases, this will cost you more money (e.g., increased monitoring of your production), but the cost will ultimately be less than the cost of losing a large amount of production.

4. Hybrids or varieties that are not “produceable”

Some hybrids or varieties will appear to be excellent candidates for commercialization based on breeder and research station work, but they ultimately prove to be extremely difficult and costly for a seed company to produce. When considering a new product for inclusion in your product line, it is very worthwhile to first do your own production research on how to best produce the seed at a commercial level, before ramping up full-scale production. Conducting this research can save you significant amounts of time and money and maximize your results at harvest time.

5. Wasting small seed

Farmers all over the world view small seed as less desirable or hardy than larger seed, even though it is not correct. Because of this bias, many seed companies do not even attempt to retail smaller seed, instead selling it off as grain or other food. This is a poor choice for seed companies, as seed is expensive to produce and should not be wasted. Companies that invest in proving to their customers that small seed is good seed or encourage their customers to buy small seed because it is a better value (e.g., there are more seeds per kg than with larger seed) will not only help their customers but will improve their own COGS.

6. Certification problems

One of the biggest setbacks a seed company can experience is having seed fail to be certified by government inspectors. While the lost production costs can be significant, they are small compared to the lost future revenue. The resulting lower production volume also impacts customer faith in the company, agrodealer confidence, and more. Clearly understanding in advance what government inspectors will be looking for and then taking every step necessary to ensure government certification will benefit your company at harvest time.

Minimizing Production Bleeding!

There are many tools in this toolbox that will help you keep production costs under control. In order to have a profitable company, you will want to learn how to use these tools. The most important relevant tools are: Enemies of Seed Quality (#2), Seed Processing Dos and Don'ts (#12), Storage Dos and Don'ts (#14), and Avoiding Quality and Production Problems (#15).

#7 - 10 Major Production “Bleeders” (Continued)

7. Poor inventory control resulting in lost seed

Managing seed inventory is complicated and becomes even more complex as a company grows in size. Careful record-keeping and controls for tracking the movement of seed from the field, through processing, and then out for distribution must be put in place.

8. Poor storage

Every seed company manager appreciates walking into a well-run, secure, dry, cool storage facility because it means that the viability of the seed is being preserved for future planting. Poor storage, on the other hand, can destroy valuable inventory and reduce future revenue for the company. Paying close attention to airflow, humidity, temperature, moisture, security, and insect and rodent infestation will prevent losses and more than pay for any investment you make in good storage facilities.

“It is critical to have good financial records related to production costs and to analyze the COGS expenses.”

Related Tool Topics:

2, 12, 14, 15

9. Failing to understand outgrowers’ economics

In an environment of rising food prices, outgrowers can be tempted to sell the seed crop they are growing for you as grain or food if it will bring them more money. In an ideal world, outgrowers would not do this, but the reality is that many of them will do this with at least a portion of their crop. In many other countries, such as India and the United States, seed companies recognize that outgrowers need to receive market-based compensation in order to produce seed, and thus will adjust the prices paid to outgrowers to compensate for food crop price increases. At a minimum, it is important to understand outgrower economics and take proactive steps to ensure that you are receiving the full harvest of the seed crop that you have produced through your outgrowers.

10. Lack of financial information on COGS

Since cost of goods sold will represent the single largest expense category in your company, it is critical to have good financial records related to production costs and to analyze the COGS expenses. For example, it is very useful to track production cost per metric ton for each crop each year. Then, it is very wise to analyze the costs and look for opportunities to become more efficient or to produce higher-quality seed at the same cost. You will benefit by involving your whole team in these discussions and constantly searching for new ways to improve.

"If you run after two hares,
you will catch neither."

African Proverb

Source: Aline O'Connor Funk with special thanks to Remington Seeds

#8 - Sample Field Inspection Report



All countries have seed inspection requirements. Certified seed must live up to its name and be given a certificate of approval by the national inspection agency. Therefore, it is essential for a seed company to focus on good production in order to obtain the certification, without which the seed cannot be sold. However, good field inspections are also important for other reasons:

- They help identify potential problems before they become major issues.
- They are a good tool for educating and training outgrowers.
- They are part of any good seed company's quality control process.
- They can potentially save a seed company large sums of money.

At a minimum, field inspections must cover the elements that government seed inspectors review. Timely, company-led field inspections can help avoid problems that might later cause government inspectors to reject a crop.

Field inspections should be carried out several times during the growing season and should cover:

1. Planting and germination

- a. Field preparation
- b. Isolation
- c. Correct use of seedstocks (especially male/female planting pattern if a hybrid)
- d. Spacing and population (seeds/ha and hills/ha)
- e. Fertilizer applications
- f. Germination, stand, and gap planting
- g. Other possible planting errors

Field Inspection Times

Field inspections should be carried out several times during the growing season and should cover:

1. Planting and germination
2. Growing season
(ideally more than one inspection)
3. Preharvest

Related Tool Topic:

9

2. Growing season (ideally more than one inspection)

- a. Purity
- b. Off-type plants and roguing
- c. Thinning
- d. Disease
- e. Insect damage
- f. Weeding
- g. Spraying
- h. Other crop damage
- i. Flowering, silking, etc.
- j. Irrigation, if applicable
- k. Tasseling and detasseling, if applicable
- l. Pollination and nicking

3. Preharvest

- a. Disease
- b. Insect damage
- c. Other crop damage
- d. Off -types
- e. Standability
- f. Moisture levels and drydown
- g. Potential yield
- h. Removal of male rows, if hybrid

Once a company determines its inspection requirements for each crop, it is advisable to generate a standard inspection form for each crop. Company personnel who inspect crops either on company land or on outgrower land should record observations on the form from each visit, identifying problems and recommending steps to address them.

Despite the large number of items to inspect, a simple field inspection form is recommended. Too much information and too many inspection steps can obscure the real issues. The most important element in a field inspection is the inspector, not the form. Good technical knowledge and a disciplined eye are the winning ingredients, and these should lead to clear identification of potential or existing problems, as well as recommendations for solutions. Training on what to look for in a field inspection is critical.

An important step is to have the grower sign the field inspection report in addition

to the company inspector. This will help ensure that the inspector has discussed the issues with the grower and that the grower understands and will act upon the inspector's recommendations.

Most strong seed companies around the world develop a set schedule for field inspections, with a clear list of what to look for at a given time of the year. The emphasis is on preventative inspections – visits that are geared to prevent problems, not simply discover them.

A field inspection should be viewed as a golden opportunity to work closely with an outgrower, teaching him or her more about how to be a better farmer.

A sample inspection form for hybrid maize follows.

Remember: All information must be clear and legible, or the value of the inspection is lost!

Hybrid Maize Inspection Report - Sample

ABC SEED COMPANY

2009 HYBRID MAIZE INSPECTION REPORT – SAMPLE

Name/Location of Outgrower: _____

Date Planted: _____ Number of ha: _____

Inspection Date: _____ Inspector: _____

INSPECTION REFERENCE LIST		
Planting and Germination	Growing Season	Preharvest
Field preparation	Thinning	Disease
Isolation	Rain received	Insect damage
Correct use of seedstocks	Purity, off-type plants, roguing	Other crop damage
Spacing and population	Disease	Off-types
Fertilizer applications	Insect damage	Standability
Germination, stand, gap planting	Weeding	Moisture levels and drydown
Rain received	Spraying	Potential yield
Other possible planting errors	Other crop damage	Removal of male rows, if hybrid
	Flowering, silking, etc.	
	Irrigation, if applicable	
	Tasseling and detasseling	
	Pollination and nicking	
Inspection Item	Comments	
Population and stand		
Disease pressure		
Insect pressure		
Drought pressure		
Other (e.g., wind, flood)		
Purity/off-types		
Weed control		
Pollination		
<u>Overall Comments on Condition of Crop:</u>	<u>Follow-Up Needed:</u>	
	<u>Signature of Grower:</u>	

PLEASE WRITE CLEARLY AND LEGIBLY!

"He who is carried on another's back
does not appreciate how far off the town is."

African Proverb

Source: Aline O'Connor Funk with special thanks to Remington Seeds

#9 - Production Record-Keeping



Product quality is no accident, and a very important determinant of quality is strong production. No matter what the size of the seed company, maintaining clear, detailed, and accurate production records is critical. Many production managers start the season believing that they can keep track of their production with minimal notes, only to later find that they have lost track of key facts. Maintaining good production records helps avoid this and also enables communication with the rest of the management team about current year production.

Each company needs to determine what is important to track for their own production needs. However, at a minimum, production records need to cover what is planted at each location, how the crop is managed, what is ultimately harvested at each location, and the lot numbers assigned to each crop.

Production records are also a useful tool for CEOs to monitor inspection dates and results and ensure that any issues are brought forward for discussion on a timely basis.

To get you started, the following page contains a sample production record for a company that produces and sells several types of seed and several varieties of each type. As the report gets filled in during the year, it will expand to numerous pages. Because it is the main tool used to track the company's production for the upcoming season, it is one of the most important records kept by the company and one of the most important tools for ensuring seed quality.

In addition to production records, product quality is also dependent upon tracking the results of certification inspections and various quality tests such as germination tests.

Important Items for Record Keeping

Each company needs to determine what is important to track for their own production needs. However, at a minimum, production records need to cover:

- **What is planted at each location**
- **How the crop is managed**
- **What is ultimately harvested at each location**
- **The lot numbers assigned to each crop.**

Related Tool Topics:

2, 8, 15

Production Record Spreadsheet

PRODUCTION RECORD

Growing Season: _____ Prepared By: _____

Note: Lightly shaded cells contain formulas and will calculate automatically

Crop A	Grower Name & Location	Foundation Seed Supplied (kg)	Date Planted	Fertilizer Supplied (kg)	Irrigated Y/N Partial	Company Inspection Date			Harvest Date	Harvest Yield t	Harvest Verified By (Initials)	Lot Nos	Comments
						Date #1 (Initials)	Date #2 (Initials)	Date #3 (Initials)					
Variety X													
(# of ha)													
(# of ha)													
(# of ha)													
Subtotal	0	0								0			
Variety Y													
(# of ha)													
(# of ha)													
(# of ha)													
Subtotal	0	0								0			
Variety Z													
(# of ha)													
(# of ha)													
(# of ha)													
Subtotal	0	0								0			
CROP A TOTAL	0	0								0			
Crop B													
Variety X													
(# of ha)													
(# of ha)													
(# of ha)													
Subtotal	0	0								0			
Variety Y													
(# of ha)													
(# of ha)													
(# of ha)													
Subtotal	0	0								0			
Variety Z													
(# of ha)													
(# of ha)													
(# of ha)													
Subtotal	0	0								0			
CROP B TOTAL	0	0								0			
Crop C													
Variety X													
(# of ha)													
Continue as above.													

Source: Aline O'Connor Funk

#10 - Elements of a Good Seed Tag

Product labeling, or the seed tag, is your company's promise of what the customer is buying. A farmer cannot identify seed or assess seed quality simply by looking at it, which is why your seed tag is so important. The information on the seed tag must be 100 percent accurate. It is a very important element of the bond of trust that must exist between a seed company and the farmers it serves.

For example, a seed tag cannot state that the seed is 98 percent pure when your tests have shown it to be only 95 percent pure. Total "truth in labeling" is required.

Good product labeling will meet three needs:

1. Identify the type of seed (crop, variety, classification, treatment if used)
2. Attest to the quality of the seed (germination and purity results)
3. Provide some information about where the seed was grown (company that produced the seed and a lot number)

Product Labeling

Reminders:

- **Communicate with your regulatory authority to learn about the seed labeling requirements for the areas in which you sell seed**
- **Determine the appropriate language to use**
- **Train those involved in product labeling so they understand why accuracy is so important**
- **Develop a good plan for assigning lot numbers**

A possible layout is:

- Company: (company name, logo, address)
- Crop: (e.g., sorghum)
- Class of Seed: (e.g., hybrid)
- Variety Name and/or Number:
- Treatment Used: (list treatment or write none)
- Lot #: (company-assigned production and processing lot #)
- Seed Grade (if graded): (e.g., large flats)
- Germination Results: (%)
- Purity Results: (%)
- Certified by: (name of certifying agency)

If possible, you should also include the attestation of the relevant regulatory authority of the country. This will help set your seed apart from “fake seed” in the market.

Another important consideration is the language used for the label. A good seed tag should be written in the primary language of the marketing area.

Seed labeling requirements will vary by country. **You must become familiar with your country’s requirements and ensure you meet them.** Many companies voluntarily choose to include more information on the tag than required, such as the geographic origin of the seed.

Always remember to think of the seed tag as your solemn promise to your customers: you promise them that the seed in the bag is accurately identified and that the quality standards are at least at the level represented on the tag.

“Not to know is bad. Not to wish is worse.”

African Proverb

Source: Aline O'Connor Funk

#11 - What Goes On The Bag



There is more to your seed bag design than you might think:

- It conveys key facts about the product, which must always be 100 percent truthful.
- It is an educational tool for farmers.
- It is a “messenger” for the image of your company.
- It can inspire customer loyalty.
- It is a sales tool because it influences the customer’s buying decision.
- It becomes part of an agrodealer’s shop display, so its appearance is important.

Key facts that need to be included on the bag are:

- Company name and logo
- Product (e.g., Hybrid Maize Seed, or OPV Sorghum Seed)
- Variety name and/or number and/or logo, unless this is put on a tag instead of the bag
- Treated or untreated
 - If treated, a consumption warning must be clearly positioned, such as: “Not For Human Consumption” or “Treated Seed, Do Not Use for Food, Feed, or Oil Purposes”
- Bag weight
- Phone number and/or location of seed company

What Does A Customer Think When:

Your seed bags are
dirty or torn?

Important information
is missing?

There is no seed tag?

They can’t easily find your
contact information?

Related Tool Topic:

20

Some companies also elect to include a very brief tag line, such as

High-Yielding, High-Quality NERICA Rice Seed

Ideally, all of the above will be presented in a clear, attractive design that appeals to customers and is a symbol of the quality of the seed inside the bag.

If the bag will be printed on two sides, you also have the option of including some educational material for the farmer on the back of the bag, depending upon its size. This might include important topics such as planting depth, spacing, fertilizer application, and recommended intercropping. It might also include information on the other seed products offered by your company. Choice of language is an important consideration as well, as many farmers can only read the local language.

It is also important to understand that an agrodealer's most-used source of information about your product will be the information printed on your seed bag. Therefore, the bag becomes an important tool that agrodealers can use to educate customers.

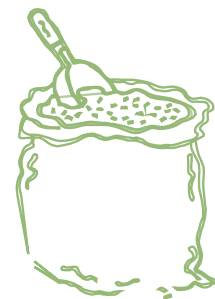
Finally, recognize that designing and obtaining finished bags will take some time. Start this work early so that your bags are ready for use when you start to bag your seed after cleaning it.

A good seed bag can help market your company and educate farmers. Don't waste the opportunity!

"A good seed bag
can help market
your company
and educate
farmers.

Don't waste the
opportunity!"

Source: CIMMYT (John MacRobert), Remington Seeds, and Aline O'Connor Funk



#12 -Seed Processing Dos and Don'ts

Once seed is brought in from the field after harvest, it must be processed to become seed that is ready to market. Seed processing involves drying, shelling and cleaning, sizing, protecting, and packaging.

For each step in this process, there are practices that should be followed and others to be avoided:

DRYING DOS

- Let seed dry in the field as long as is practical. This will save on mechanical drying costs.
- If moisture levels are higher than 12.5 percent when seed comes out of the field, dry the seed mechanically or via the sun in a thin layer.
- When seed is in a dryer, check it carefully and frequently. A sample Dryer Bin Ticket is included as an example.
- Make sure you understand the relationship between relative humidity and seed moisture, especially if you are in a high humidity environment. For example, for seed to stay at 12 percent moisture, the relative humidity needs to be around 58 percent when the temperature is 25 degrees Celsius.
- Take all necessary precautions to ensure that seed that is being dried does not get mixed with any other seed. Carefully maintain all labels and records.

The new CIMMYT Publication [Seed Business Management for Africa](#) is an excellent resource for seed processing information. See the Websites and Links section at the back of this toolbox for more information.

DRYING DON'TS

- Do not leave seed in the field so long that it is at risk of insects, pests, theft, or other dangers.
- Do not dry seed in the sun in a thin layer if it will be subject to weather risk, ground contamination, or ground moisture.
- Do not leave seed sitting in a location with a high temperature and/or high humidity for a lengthy period of time, or even a very short time if the conditions are particularly hot and/or humid. The viability of the seed will deteriorate, perhaps rapidly.
- Do not attempt to dry seed more quickly by increasing dryer temperature levels above recommended levels. You might “cook” your seed, thus ruining it. In addition, if you are using heated air to dry, make sure that you are drying seed at shallow depths to avoid getting “hotspots” in the seed, which will cook it.

SHELLING, CLEANING, & SIZING DOS

- Shell seed with as little hard mechanical bruising as possible.
- Carefully remove all inert matter, as well as excessively large and small seed.
- Minimize the amount of hard mechanical pounding on the seed throughout the cleaning and sizing processes; treat it as gently as possible.
- Fumigate seed thoroughly and regularly to control insects.

Related Tool Topics:

2, 7, 14, 15

SHELLING, CLEANING, & SIZING DON'TS

- Be careful not to remove more seed via scalping and grading than you need to. Many seed companies completely bypass good seed because they do not recognize that small seed has the same potential as larger seed.
- Do not grade seed into uniform sizes unless your customers demand it. Generally, grading into sizes is done to satisfy the requirements of farmers with mechanical planters, but if your customers will be planting by hand this will not be necessary. The less you handle the seed, the better it is for the seed.
- Do not automatically assume you need to purchase mechanical equipment for these steps, especially while you are still small or mid-sized. Manual labor might ultimately be more reliable, and possibly more cost-effective, especially when used judiciously in combination with standalone mechanical processing components such as a seed treater.

TREATMENT DOS

- Consider using a seed treatment consisting of a fungicide and/or insecticide. This will help protect the seed against disease, seed and soil-borne organisms, and insects.
- Ensure that the seed treatment process you are employing treats the seed evenly and thoroughly, and that all personnel are following the recommended application instructions.

- Ensure that all employees working with seed treatments are following appropriate safety measures (e.g., wearing masks, storing seed treatments properly, etc.)
- Clearly mark treated seed so that it will never be considered for human consumption.

TREATMENT DON'TS

- Do not use seed treatment that does not contain a brightly colored dye. The dye helps you determine the evenness of the treatment application and provides an additional visual deterrent to people who might wish to consume the seed.
- Do not use a seed treatment that is not specifically recommended and formulated for your growing climate. Seed treatments vary by climate and by crop.
- Do not deviate from the recommended dosage rate of the seed treatment. If applied at the wrong dosage rate, seed treatment can potentially harm the seed.

PACKAGING DOS

- Package seed according to actual, tested, customer preferences.
- Label all seed carefully as soon as it has been packaged; set up a process to double-check labels.
- Weigh seed carefully to ensure that all packages contain the same weight.

PACKAGING DON'TS

- Do not store seed directly on the ground; always raise it off the ground by placing it on a pallet.
- Do not stack seed carelessly on pallets. If the seed falls from the pallet, it can cause an injury.
- Do not overlook farmers' desire to purchase small, trial-sized packages of seed. Once they have seen its value in their field, they will be more comfortable purchasing larger packages.

Dryer Bin Ticket

DRYER BIN TICKET

DRYER BIN #:				
FIELD #:				
FIELD/ GROWER NAME:				
CROP & VARIETY:				
FILL DATE:				
FILL START TIME:				
DATE	TIME	%MOIST	TEMP	INITIALS

Source: Remington Seeds

“Knowledge is like a garden;
if it is not cultivated, it cannot be harvested.”
African Proverb

Source: Aline O'Connor Funk with special thanks to Remington Seeds

#13 - Inventory Management Tools



Inventory management is the process of recording and tracking product that goes in and out of the warehouse by crop, variety, and production lot number. For certified seed, this process includes:

- Receiving harvested seed from the field/outgrowers
- Recording how many units of bagged seed—both bulk and retail-sized—are processed from the seed received from outgrowers
- Keeping track of which seed passes or doesn't pass quality/germination tests
- Recording and subtracting units of damaged, obsolete, or low-quality seed
- Tracking seed that is shipped out to distributors
- Receiving seed that is returned from distributors (Note: There must be clear policies here for whether or not returned seed can go back into inventory for sale. Quality-control issues to be checked include pest infestation, germination, moisture, and rodent damage.)
- Keeping track of all other seed supplies, such as bags, pallets, labels, etc.
- Recording annual levels of carryover seed and keeping track of quality tests on carryover seed
- Conducting periodic physical counts to determine the accuracy of record-keeping and uncover unexpected activities such as theft
- Taking and maintaining samples of seed from each lot, to be used later for testing if there are customer complaints about quality

Inventory Concepts

Manage your inventory by seed lot.

Conduct seed quality tests by seed lot.

Plan and discuss with employees your inventory plan and perhaps practice filling some orders, recording the movement of seed out of the warehouse.

Think through your discard plan. Where will you store discard? How will you dispose of treated seed?

As you might imagine, this is a complex process. However, good inventory management is critical to profitability, quality control, and your peace of mind as a seed company manager!

Inventory is tracked for each crop and variety by units of measurement (e.g., kg, same-sized bags, or whatever consistent unit of measurement your company uses) and by lot number. A **lot number** is a “number of origin” that is assigned to each “lot” of seed that is produced. An individual lot should represent **seed from a single outgrower’s single field under the same management practices, inputs, and stresses**. So, by this definition, if an outgrower has a single field of pigeonpea seed that was planted at the same time, subject to the same stresses, and managed under identical practices, but part of the field was subject to some brief flooding from a nearby river, then the seed company should assign two lot numbers to this field: one lot number for the seed coming from the portion of the field that was subject to stress and one for the other portion of the field.

Alternatively, if an outgrower with a field of soya seed ran out of herbicide and subsequently bought a different kind of herbicide to complete the spraying, this field should be split into two lots, assuming all other factors are identical.

In addition, lots generally have a maximum weight, for example 40 t. Therefore, a seed field that yields 120 t under consistent growing conditions would be assigned three lot numbers, one for each 40 t lot.

Lot numbers are essential for quality control. You should have each lot of your seed tested. If an individual lot fails to pass a quality test, then you can identify and isolate the entire lot and retest if necessary. If it fails a second time, the lot must be pulled from inventory so it will not be sold.

An important aspect of inventory management is having sufficient warehouse space for handling and storage to ensure that seed varieties do not become mixed up. You will also want to have a well-ordered and well-organized inventory management approach so that inspectors can see that you are able to avoid seed mix-ups and track your carryover seed accurately.

Excel spreadsheets can simplify this work immensely, but, as a company begins to get very large, integrated operations software will be necessary to track inventory. It is not advisable to start with integrated software before it is needed, however. Experience with well-constructed spreadsheets will prove an invaluable background for later moving to an integrated software package.

#13 - Inventory Management Tools (Continued)

Most good, well-run seed companies will generate at least the following reports for both certified seed and foundation seed:

Harvest Report Records the bulk seed received from growers; lot numbers are assigned as the seed is harvested and put in bulk bags.

Quality Testing Report Keeps track of seed that passes/does not pass quality-control tests.

Bagging Report Records how bulk seed is bagged for sale; obviously, any seed that does not pass quality tests cannot be bagged for sale. Lot numbers must continue to stay with seed; this is critical for tracking purposes.

Inventory Tracker Records seed that is pulled from the warehouse for distribution; can also be expanded to track returned seed.

Obsolescence Tracker Tracks seed that does not pass quality tests and cannot be sold or seed that belongs to a product that is no longer part of the company's product line. This should also be tracked by lot number.

Physical Count Manual count of what is in the inventory at a certain date. This needs to be compared with what the company *thinks* should be in the inventory to uncover discrepancies.

Carryover Report This is a physical count of what is carried over in storage from season to season.

Developing most of these reports is very much a common sense exercise. They might look different from company to company, based on company needs and practices.

A specific example of a useful inventory management report, the Inventory Tracker, is provided on the following page. There are a couple of key points to keep in mind about this report:

1. It is extremely important to have an accurate beginning inventory number.
2. You should have a second person check the beginning inventory number.
3. You must use consistent units throughout the report—either weight or bagged units if they are all the same size, etc.
4. It is useful to always have a second person check the entries on the report for accuracy.
5. Many people who work in agriculture are notorious for disliking paperwork! You will need to impress upon them the importance of accurate record-keeping.

"A good inventory depends on an accurate beginning inventory."

<Size A:> _____ <Size B:> _____ <Size C:> _____

[illegible]

Source: CIMMYT (John MacRobert), Aline O'Connor Funk, and Remington Seeds

#14 - Storage Dos and Don'ts



Seed is alive. Therefore, it must be stored extremely carefully. Whether certified seed or parent seed, if seed is stored incorrectly the cost can be enormous.

A great deal about good storage is common sense. Seed company managers need to be passionate advocates of some very simple rules of good storage. These are:

- **High temperatures are an enemy of seed storage longevity.**
- **High moisture levels are an enemy of seed storage longevity.**
- **Pests and rodents can damage seed in storage, not just in the field.**
- **Germination should be tested regularly.**
- **Record-keeping and inventory control are important.**

Of course, good seed managers must understand exactly how to apply these rules. There is a great deal of technical advice surrounding optimum storage conditions, and there is no substitute for doing your homework in this area. An excellent resource for educating yourself about seed storage in sub-Saharan Africa is the CIMMYT publication, "Seed Business Management for Africa". Scheduled to be published in late 2009, this information resource addresses topics related to storage in tropical and subtropical environments, including specific recommendations related to moisture and temperature limits, pest control, and proper ventilation. To access a copy of this material, contact the author, John MacRobert, directly at j.macrobert@cgiar.org.

As background to the specific issues that are covered in this publication, below are some of the most important seed storage "dos and don'ts." They are framed in a general sense only, as specific parameters vary widely by type of seed and local conditions. However, many of these specific parameters are covered in the publication recommended above.

Have you...

Checked for roof leaks?

Measured the temperature of your warehouse during a hot day?

Kept all seed off the floor?

Removed weeds and trash around your storage area that may hide rodents and insects?

Allowed for adequate ventilation?

Related Tool Topics:

2, 7, 12, 15

Dos

Ensure that seed is properly dried before being put into bags for storage. This means moisture levels below 12.5 percent for most field crops. Seed will require mechanical drying if it cannot reach this level in the field or in the open air.

Store seed at the coolest possible temperature to prevent unnecessary loss of germination and vigor.

Store seed in a low-humidity environment to protect it from fungi and pests.

Fumigate seed properly to prevent insect damage.

Ensure that your storage has adequate ventilation to prevent heat buildup in warm climates.

- Allow air flow between seed piles and the wall (at least 1 m)
- Make seed piles no larger than 4 pallets x 4 pallets to allow air flow with 1 meter of space in-between seed piles.
- Consider insulating the roof or construct a simple ceiling if the roof is a major source of heat.

Ensure that your storage facility is water-tight and rodent-tight.

Store seed on pallets to raise it off the ground.

Test temperature and humidity levels in your storage area regularly.

Label all seed very carefully, including variety or hybrid number, lot number, and production year.

Invest in good grain moisture testers for use in the field at harvest time and in the warehouse and processing facility. Battery-operated testers for field use are available.

Storage Dos and Don'ts

These dos and don'ts relate to storage of certified seed.

The same principles relate to breeder, basic and foundation seed, but even more caution with temperature and moisture must be exercised. Breeder, basic and foundation seed is valuable and must be treated like gold! Ideally, mechanical cold storage is best.

#14 - Storage Dos and Don'ts (Continued)

Don'ts

Do not store seed in bulk (especially maize on cobs) in substandard conditions while waiting to process it. Significant damage can be caused in a short period of time, especially when high moisture levels are present.

Do not try to mechanically dry seed faster by raising the temperature. You can severely damage the seed by “cooking” it.

Do not overfill your warehouse. Heat can build up, causing damage to the seed. Overfilling can also make it very difficult to access seed when you need it.

Do not label seed without having a second person double-check the label. Mix-ups can be common in the absence of careful checking.

Do not select storage space that is poorly ventilated, prone to moisture, ill-sealed, or not secure.

Do not fumigate for pests without following safety protocols.

Do not store seed near fertilizer, as fertilizer can attract moisture from the atmosphere, which will damage the seed.

Clearly, there is a strong emphasis on cool, low-humidity storage. If temperature and humidity conditions are met, it is possible to store seed for lengthy periods of time. The exact length of time, however, will depend upon a number of important factors, such as the quality of the seed when it enters storage.

The exhibit that follows illustrates the relationship between temperature, humidity, and days of viable storage. Please note that this chart is not a recommendation of storage days, but rather serves to illustrate the general interaction between the three variables. Under proper conditions, however, some vegetable seeds can be safely stored for more than five years, while maize seed can be stored for approximately three years under low-humidity, low-temperature conditions. Regular testing is strongly recommended in all circumstances.

Dealer and Distributor Storage

While all of the above recommendations and cautions relate directly to you, as the seed company you must also ensure that your **dealers and distributors** have proper storage. Even if they have taken ownership of the seed from you for sale to their customers, if they store it improperly it is your reputation and future sales that will be negatively impacted. Customers will not know who stored it improperly; they will simply remember that your company's name was on their bag of low-performing seed, and your reputation will suffer.

Illustration of Seed Storage Life (Days) Under Varying Moisture and Heat Conditions

IMPORTANT! The storage life estimate in the chart below is only an illustration of the overall relationship between heat, moisture, and storage life. Actual seed storage potential will vary according to additional factors, such as consistency of temperature and type and initial quality of seed being stored.

There is no substitute for cool, dry storage and regular and careful germination testing.

Temp	Moisture															
	23%	22%	21%	20%	19%	18%	17%	16%	15%	14%	13%	12%				
32° C	0-2	0-2	1-4	1-4	1-4	1-4	3-6	4-8	6-12	8-16	16-32	180-512				
29° C	0-2	1-4	1-4	3-6	3-6	4-8	6-12	8-16	12-24	24-48	48-96	346-768				
27° C	1-4	1-4	3-6	4-8	6-12	8-16	12-24	16-32	24-48	32-64	64-128	512-1024				
24° C	1-4	3-6	4-8	6-12	8-16	12-24	16-32	24-48	32-64	64-128	128-180	768+				
21° C	1-4	3-6	6-12	8-16	12-24	16-32	24-48	32-64	48-96	96-154	154-346	768+				
18° C	1-4	4-8	8-16	12-24	16-32	24-48	32-64	48-96	64-128	96-154	154-346	768+				
16° C	3-6	6-12	12-24	16-32	24-48	32-64	48-96	64-128	96-154	128-180	180-512	1024+				
13° C	4-8	8-16	16-32	24-48	32-64	48-96	64-128	96-154	128-180	154-346	346-768	1024+				
10° C	6-12	12-24	24-48	32-64	48-96	64-128	96-154	128-180	154-346	180-512	346-768	1024+				
7° C	8-16	24-48	48-96	64-128	96-154	154-346	180-512	346-768	512-1024	768+	1024+	1024+				
4° C	16-32	48-96	96-154	128-180	154-346	346-768	512-1024	768+	1024+	1024+	1024+	1024+				
2° C	180-512	512-1024	768+	768+	768+	768+	1024+	1024+	1024+	1024+	1024+	1024+				

KEY: Estimated Days Seed Can Be Safely Stored (numbers represent estimated days)

	Less than one month
	Between 1 and 5 months
	5 months or more

Chart is illustrative only. See above note.

Source: Aline O'Connor Funk with special thanks to Remington Seeds

#15 - Avoiding Quality and Production Problems



Seed company managers lose sleep at night thinking about the major things that can go wrong! If you are proactive and work to prevent quality and production problems, you can avoid costly future mistakes.

Think prevention!

1. Do everything you can to ensure you have your foundation seed in time for planting. For many companies, this means producing the foundation seed themselves. If possible, have at least one season of key parental lines held in reserve in cold storage, in case you have a season with serious foundation seed production problems.
2. Make sure that you have a very good understanding of the best management practices to be used when producing your seed (e.g., optimal population, planting depth, and, with hybrids, knowing how to stagger the male and female parents). This starts with getting good, reliable instructions from your foundation seed source and also doing your own research on the production of the particular hybrid or variety.
3. Put processes in place to ensure that products are always accurately labeled.
4. Put safeguards in place to ensure that parent lines are never mixed up. A good approach here is to color code the bags for male and female lines of hybrids. Of course, parent line pedigrees must be clearly marked on each bag.
5. Always check the germination and vigor of your parent seed before planting it.
6. If you are using a dryer, put safeguards in place to ensure that you do not “cook” your seed in the dryer – either totally or by developing hotspots. These safeguards should include temperature probes and frequent inspections of both the bin and the drying apparatus during the drying process. The maximum recommended temperatures for drying should never be exceeded, and close attention needs to be paid to how the maximum recommended temperatures vary according to seed type and moisture level of the seed when it is put into the dryer. Using temperatures below the recommended maximum will take longer but will aid in maintaining vigor and germination. A key quality-control step is to do random sampling with a moisture tester in the field before harvesting so that you know the moisture level of the seed you will be drying.
7. Plan carefully to make sure that you are on time with crop management windows (e.g., fertilizer application or weeding dates) in the seed production cycle.

8. Take steps to ensure that moisture does not damage any seed waiting for processing. This can happen if seed is stored in a pile that is too deep or for too long in humid conditions.
 9. Prevent significant insect damage by inspecting seed frequently and fumigating as necessary.
 10. Inspect your storage facilities frequently and handle any necessary repairs promptly so that small problems do not become big problems (e.g., heat, flooding, moisture seepage, a leaky roof, poor ventilation, and/or poor security).
 11. Carefully check references for large outgrowers. Work to ensure that they give you the full amount of seed they have produced versus selling some of it elsewhere.
 12. Work closely with your outgrowers to ensure that they are using the best possible production techniques. This will benefit them as well as your company.
 13. With hybrids, work diligently to ensure genetic purity. Double- and triple-check your isolation distances before planting, so that the certifying agency will not reject your crop after it is produced for poor isolation distances. Rogue your crop carefully and detassel with precision. Double-check this work. Harvest male rows separately and remove the cobs before any work is done to harvest the female rows.
- Avoiding potential problems takes common sense, discipline, and good technical knowledge.

Related Tool Topics:

2, 7, 9, 12, 14

An example of how a large U.S.-based maize production company helps to monitor the quality of its maize during storage follows. They call this tool their Bulk Seed Storage Inspection Report.

Bulk Seed Storage Inspection Ticket

Bulk Seed Storage Inspection Report

Location:

Year:

Bin ID:

[illegible]

Source: Remington Seeds

Source: Aline O'Connor Funk and Leldet Seeds

#16 - Key Elements of a Licensing Agreement



Expanding your product line may involve signing a licensing agreement with the originator of the germplasm of the product you are interested in producing and selling. This entity could be a national research program, an international research program, or even another seed company.

A good licensing agreement works to protect the interests of both parties – the originator or owner of the material, called the licensor, and the person who wants to have access to that material via a license, called the licensee. However, like any contract, a license agreement is a negotiated agreement. Therefore, it is wise to understand in advance what is typically involved in this type of agreement and what will or will not work well for your company as the licensee.

In all cases, it is highly advisable that you consult with a lawyer to draw up a licensing agreement. Contract law varies by country, and you should engage knowledgeable legal representation to ensure that the contract is protecting you, as the licensee.

The key elements of a good licensing agreement are listed. Some agreements do not cover all of these elements—by agreement of both parties—but it is advisable that you at least consider including all of the following categories.

Key Elements of a Good Licensing Agreement

- Parties to the Agreement
- Material and Activities Covered
- Geography Covered
- Ownership Agreement
- Term
- Exclusive vs. Nonexclusive Rights
- Payment and Timing of Payment
- Obligations of the Licensor
- Obligations of the Licensee
- Liability
- Assignability or Nonassignability of Agreement
- Termination
- Conflict Resolution
- Miscellaneous Provisions

An explanation of each element follows. A sample licensing agreement, which covers some of these elements, is included as an exhibit.

Parties to the Agreement

Clearly list the legal names and identifying information for both the licensor (the source of the material to be licensed) and the licensee (your company, the entity that wishes to license the material).

Material and Activities Covered

Identify the germplasm that is covered by the agreement. Frequently, this is simply referenced in the body of the agreement as being included in a schedule, which is attached to the end of the agreement. Also specify the activities covered by the agreement, e.g., production, sale and distribution, breeding, etc.

Geography Covered

Clearly identify the geographic territory covered by the agreement. Ideally, the territory should have defined boundaries, e.g., a country or a state.

Ownership Agreement

In this section, include proper references to who actually owns the material and the impact of the agreement on ownership status, which is generally none. This section is best drafted by a lawyer or taken from an existing agreement if the language reflects your position regarding ownership of the material. It is important for a licensing agreement to be written in a way that clearly protects existing ownership positions, if that is the intent of the agreement.

Term

A licensing agreement needs to include the specific term, or length in years, of the license. Generally, the term will begin as of the date of the signed agreement and continue for the length of time specified in the contract, unless there is a breach (violation) of the contract, in which case the agreement can be ended before the term is over. However, conditions of a breach need to be clearly stated in the agreement. (See Termination section.)

Exclusive vs. Nonexclusive Rights

The contract should clearly stipulate if the license is an exclusive or nonexclusive license. If it is nonexclusive but you still wish to place some restrictions on additional licensees, such as geographic territory restrictions, these restrictions should be outlined in this section.

Payment and Timing of Payment

If royalties or other payments are a condition of the license, they should be clearly explained in this section. You should include payment dates, record-keeping requirements, and an explanation of how the payments will be calculated.

Obligations of the Licensor

It can be very helpful to list the exact obligations of the supplier of the material being licensed. These obligations might include dates by which the material is supplied, packaging size, mode of delivery, quality of material, etc.

#16 - Key Elements of a Licensing Agreement (Continued)

Obligations of the Licensee

This section is similar to the previous section but relates to the obligations of you as the licensee. Your obligations might include payments to be made, records to be supplied, product feedback to be given, and/or promotions to be carried out.

Liability

If something is wrong with the seed, an issue of “fault” or liability might arise. This section should include language identifying who is liable in the event of poor product performance and how this will be determined.

Assignability or Nonassignability of Agreement

This section states whether or not you are able to transfer this agreement to another legal entity. For example, if you decide to form a second seed company and want that company to market the material covered in this agreement, will you be permitted to assign this agreement to the new entity?

Termination

This section should outline the ways in which the agreement can be terminated before its natural expiration date. In addition, it should outline the causes for which the agreement can be terminated.

Conflict Resolution

Language should be included to identify how conflicts will be resolved if they arise and cannot be resolved directly by the parties to their mutual satisfaction.

Miscellaneous Provisions

Anything else you wish to include that is not covered in the previous sections.

“ He who does not seize opportunity today will be unable to seize tomorrow’s opportunity. ”

African Proverb



Most suppliers of germplasm for your product line will require you to sign at least some kind of licensing agreement. However, many licensing agreements are extremely simple and straightforward. Even if there is no royalty or payment requirement, suppliers generally want to make sure that it is clear to all parties they still legally own the material and also want to have formal records identifying who is using the material.

As suggested above, it is highly recommended that you consult a lawyer to review an agreement before you sign it. In addition, remember that a good agreement will protect the interests of both parties, so do not hesitate to be proactive about ensuring that your interests as a licensee are protected.

An example of a licensing agreement follows.

Licensing Agreement - Sample

LICENSE AGREEMENT BETWEEN (LICENSOR) AND (LICENSEE)

This agreement is made and entered into this _____ day of <month, year> by and between <name of breeding organization> hereafter referred to as Licensor which expression shall include successors and assignees and <name of your company>. (Hereinafter referred to as LICENSEE which expression include its successors and assignees.)

WHEREAS

- a) The LICENSOR is the breeder of proprietary plant varieties and has proprietary rights to the varieties as follows:
 - (i) Schedule I: Plant varieties
- b) The LICENSEE is desirous of acquiring from the Licensor to undertake the production marketing and sale of seed of the said plant varieties.

Now therefore the parties hereto agree to as follows:

1. The Licensor hereby grants to the Licensee exclusive rights to produce market and sell seed of the said plant varieties respectively in <geography> (herein after referred to as the Territory).
2. The Licensor will avail seed of the parental material of plant varieties to the Licensee solely for commercial purpose and NOT for breeding.
3. The LICENSOR shall, at all times retain the Intellectual Property Rights in respect of the plant varieties, parental lines or populations.
4. Agreement shall be deemed to commence on the date of its signature and shall continue for X years except otherwise provided in the Agreement.
5. the LICENSEE shall produce seed of the said plant variety strictly in accordance with:
 - a. the seed and plant varieties Act that govern the production and marketing within <Country>;
 - b. the rules and regulation of the Seed and plant varieties act
6. For the purpose of procuring seed of the said variety the Licensor shall arrange to supply the initial breeder seed at a cost to be determined from time to time by the Licensor. Following the initial supply of breeder seed the Licensee will be responsible for the maintenance of lines and producing the basic and certified generations of the said variety.
7. The Licensee hereby acknowledges that the intellectual property rights in the seed as well as the commercial seed of the said varieties remains vested in the LICENSOR and that the LICENSEE will acquire no such rights thereto.
8. The LICENSEE shall not, without the prior written consent of the LICENSOR, undertake production of the said plant variety outside the territory. If this permission is granted the party that undertakes this production is to be bound by contract to the LICENSEE subject to ratification by the LICENSOR to ensure;
 - a. That the ours of the licensee is not defeated.
 - b. The party will not market the seed outside with out permission of the LICENSOR.
9. The LICENSEE shall not do anything to detract from the standing or prestige of the said variety and will do everything possible to ensure that the interests of the LICENSOR in relation to the said hybrid or variety are protected.
10. The LICENSEE agreed to keep accurate records of all seed of the said variety produced and sold by the LICENSEE. Such records shall be made available to the LICENSOR during reasonable hours or by correspondence.
11. The LICENSEE undertakes to pay the LICENSOR a fixed royalty at the rate herein below specified.
 - a. For the first X years from receiving the initial breeders white labelled seed the LICENSEE will pay royalties of X percent on gross annual sales, licensed on an <exclusive/non-exclusive> basis
 - b. During this period the LICENSOR will be able to sell stocks of the same variety under the Seed and Plant Varieties Act that govern the production and marketing within <Country>. As has been the nature of the LICENSOR.
 - c. After X years and for the remaining X years the said varieties will attract a royalty of X percent on gross sales. Along with other private companies which the LICENSOR may wish to licence.
12. The royalties fall due within X days subsequent to <Date> of each calendar year and the LICENSEE shall furnish the LICENSOR with an audited summary certified by a reputable audit firm resident with the territory of all seed produced sold and paid for of the said cultivar during the preceding X months ending on <Date> and shall make payment of the royalty. The LICENSOR reserves the right to request an independent audit of the LICENSEE records.
13. To the extent not inconsistent with the terms of this agreement, the current FIS rules and usages for the International trade in seeds are incorporated in this agreement.
14. This Agreement shall be construed and governed by the Laws of <Country>.

Licensing Agreement - Sample (Continued)

15. All disputes even if only one of the parties declares there is a dispute arising from this Agreement shall be settled preferably by arbitration and not by a court of law subject to any special written Agreement to the contrary the FIS Arbitration Procedure Rules for the IST will be applicable
16. The LICENSOR shall not be liable for any claims arising from production, advertising or sale of any seed of said plant variety or damages whether general or special resulting from the aforesaid variety.
17. In the event of any significant breach of the terms and condition of the Agreement by the LICENSEE, the LICENSOR shall have the right to demand that the LICENSEE carry out its obligation under the agreement within X days of receipt of the letter and failing compliance with herewith cancel this agreement.
18. In the event of the termination of Agreement the LICENSEE or his successor has in the event the LICENSOR not exercising its option to purchase the current stock at cost or assume full responsibility of any seed of the said plant variety being produced from crops already in progress the right to dispose of the seed of the variety to any party they so wish.
19. This Agreement shall terminate if the LICENSEE goes into liquidation, ceases to carry on business or becomes unable to pay debts The termination of the Agreement as a result thereof shall not affect the liability of the LICENSEE to any royalty on stocks sold either prior to the date of termination or subsequently. Any seed not sold by the LICENSEE shall not be disposed of without Licensor's consent.
20. In the event of the LICENSEE being merged and or its majority shares purchased by a third party or otherwise the LICENSOR reserves the right to terminate this Agreement forthwith without notice. This Agreement shall not be assigned to a third party without prior written consent of the LICENSOR.
21. The License does not bar the LICENSOR to enter into other agreements with any other third parties whatsoever.
22. Any notice required or permitted to be given or served upon either party hereto shall be sent by email confirmed by registered letter to the following address:

In case of notice to the LICENSOR

<add address>

In case of notice of LICENSEE

<add address>

23. The parties hereto agree that this Agreement is the entire Agreement between them No variation or consensual cancellation of the Agreement shall be of force or effect unless reduced into writing and signed by the parties authorized in the presence of the two witness who shall also affix their signatures thereto

IN WITNESS WHEREOF the Parties have caused their common seal to be hereunto affixed the day and year first herein before written.

Sealed with common Seal of <Licensor>

In the presence of

<TITLE>

Sealed with the common Seal of <Licensee>

In the presence of:-

<TITLE>

Schedule 1:

VARIETY		

Source: Leldet Seeds

Section Two: Your Customers

Introduction

Businesses exist to serve their customers, and farmers are the customers of seed companies. Good seed companies understand farmers—their problems and their preferences—and always try to look at their activities through the eyes of their customers and walk in their customers' footsteps.

Businesses cannot survive without satisfied customers. This is a simple but profound truth in the business world. Businesses exist to solve problems for customers by providing good products and services on a timely basis. Farmers who receive high-quality seed from you consistently and conveniently will become your loyal customers and will tell other farmers how satisfied they are. Your business will grow.

All too often, seed company managers become tied up with production problems, financial issues, or staffing issues. As a result, the customer is often forgotten in the busy world of starting and running a seed company. The tools in this section are intended to help you become more customer oriented and improve communication with your customers. They will enable you to build a more stable business and grow it sustainably.

Some of the tools are very practical, such as Set Up a Good Demonstration Plot, while others, such as Key Things to Understand About Your Customers, are more abstract and are intended to stimulate your thinking about farmers and their habits. While all of these tools apply to small start-up companies, they are also used by large progressive companies. Customer focus is a universal business practice.

One of the most rewarding aspects of being in the seed business is having satisfied customers—farmers whose lives become better because of the improved seed you provide to them and their families. If you build a strong customer focus into your company, you will have many satisfied farmers and your business will grow as they tell other farmers about your company.

Source: Aline O'Connor Funk



#17 - How to Profile and Target Customers

Many seed companies are able to grow rapidly because they have taken the time to profile their target customer base. How is this done? The first step is to openly discuss what you know about your customers and what this information means for your marketing strategy.

To begin, answer the questions below and then discuss your answers with your team and with other people who are knowledgeable about your market area such as your local extension officer. Be sure to include both men and women in your discussions to get the perspectives of both genders.

Remember that your customer is the person who makes the purchasing decision.

Ask These Questions of People Around You:

1. How do the customers I want to reach purchase goods now? How far do they generally travel?
2. Will most of my customers be men or women? Do women make purchasing decisions differently than men?
3. Will the majority be new customers or repeat customers?
4. Will they want to purchase all seed for a planting season at one time or spread the purchase out over several trips?
5. What is convenient/inconvenient for them when purchasing seed (e.g., distance, hours of operation for the outlet, package size, etc.)?
6. Can they read? If so, can they only read the local language or other languages as well?
7. What product features will be most important to my target customers (e.g., yield, storage characteristics, taste, poundability, color, etc.)?
8. Will my target customers typically want to have seen the product in the field before they will consider buying it? If so, how many times will they want to see it before they are ready to purchase?
9. Are they part of an association or buying group?
10. Do they want services/products in addition to seed (e.g., agronomic support, fertilizer advice, etc.)?

After answering these questions about your target customers, use this information to develop sales and distribution plans that are specifically tailored to meet the needs of your customers. Doing this will help you avoid situations like the following, which are actual mistakes that seed companies have made:

- Customers want to purchase seed in 1 kg packages, but the seed company has packaged in 5 kg packages.
- Customers are all literate, yet the seed company prints no helpful information on the seed bag, missing a great opportunity to provide useful instructions to customers.
- Customers will all attend a field day at the local school, yet no seed will be available to them for purchase within a 40 km radius.

“The first step is to openly discuss what you know about your customers and what this information means for your marketing strategy.”

“A tree is known by its fruit.”

African Proverb

Source: Aline O'Connor Funk

#18 - Key Things to Understand About About Your Customers



1. Trust is the most critical element of a farmer's relationship with a seed company. Customers need to trust their supplier 100 percent when it comes to quality, product performance, product selection, planting instructions, and much more. The importance of this cannot be overstated.
2. The convenience of making the purchase is a big factor for customers. Convenience is determined by geographic location, timing of seed availability, and size of packaging. The income level of the customer must be taken into account when determining the packaging size and the price.
3. From year to year, customers want their supplier to be reliable and consistent. They will be loyal to those brands that become reliable suppliers of high-quality seed.
4. Customers want a fair deal. They do not want to feel like they are being overcharged, nor do they want to hear that another farmer got a better deal than they did.
5. Customers can be characterized by their purchasing patterns. Do your customers want to buy all their seed at once, in one large package? Or do they prefer to make several smaller purchases? How will they transport the seed, and how does your packaging size relate to this?
6. Farmers are extremely **VISUAL!** Your marketing efforts will improve significantly if you always add strong visual elements to any interaction you have with farmers. (See tool #20, The Value of Visual References.)

What Would Your Customers Say?

Are you trustworthy?

Is your business convenient?

Are you a dependable supplier?

Do you treat people fairly?

Do you provide information and education?

Do you show appreciation for their business?

Related Tool Topics:

7, 9, 12, 14, 15, 20

7. Appreciation is the forgotten element in most customer relationships. Customers have choices, so good companies demonstrate their appreciation to loyal customers, especially if they are satisfied and spread good news about your company. Don't take them for granted!
8. You are the seed expert, and your customers both need and expect good education from you. Whether it is a talk at a field day or thoughtful instructions on your bag, education is key.
9. Farmers are conservative risk managers. They will probably want to see your product perform for at least one season and possibly two before trying it for themselves. Keep this in mind in setting up both your demos and your expansion plans.
10. If a farmer has a good experience with your seed, most likely he or she will tell approximately 10 people. But if that same farmer has a bad experience with your seed, he or she will likely tell 50 people! This is just human nature, but it is a great incentive to pay attention to quality.
11. Farmers make smart decisions. The more successful you are at looking at the seed purchasing decision through their eyes, the more you will be able to understand how to educate them about the value of improved seed. Oftentimes, farmers do not understand the value of improved seed, and so they decide to use saved seed based on incomplete information. The more you understand about this dynamic, the easier it will be to increase adoption rates of improved seed in your sales area.

Source: Aline O'Connor Funk

#19 - Marketing: What It Is and Why You Need It



Strong, capable marketing is essential for a good seed company. If you are able to produce seed but cannot market it successfully, thereby bringing solutions and income to your customers, then you are really not much more than a contract grower. A good seed company knows how to market its product and bring value to customers.

What, exactly, is marketing? Definitions vary, from very simple to more complex definitions that even include sales processes. However, for our purposes here, the following definition of marketing is very useful:

“Marketing is the strategies and tactics used to create and maintain satisfying relationships with customers that result in value for both the customer and the marketer.” *(From the Web site KnowThis, www.knowthis.com, a good resource for marketing. This site includes 27 free tutorials on various marketing topics and is a useful reference site.)*

An even simpler way to look at marketing is to think of it as **working to solve customers’ problems** and doing it **profitably for both the customer and the firm supplying the product**. That is, both the company and the customer benefit from the solution.

Business should always be about customers and solving their problems. If you can keep this perspective in the forefront as you build your business, you will be on the road to creating a very successful seed company.

Do You Know...

Who are your most profitable customers?

Who are your most loyal customers?

Who are your best prospects for new business?

How many times will your company visit with your best agrodealers?

How much time and money are you willing to invest to gain a new customer?

How much profit can you generate over the next five years from a good customer?

Key Marketing Tools For a Seed Company Include, But Are Not Limited to, the Following:

- Company literature (brochures, fliers, posters, etc.), often called collateral
- Promotional items such as caps, visors, T-shirts, etc.
- Laminated photos of product performance and satisfied customers
- Field days
- Demo plots
- Customer and prospective customer meetings
- Crop signs
- Vehicle Signs
- Product packaging
- Radio advertising
- Billboards
- Public relations, such as exposure on a television news program
- Company shop and displays
- Material displayed at agrodealers

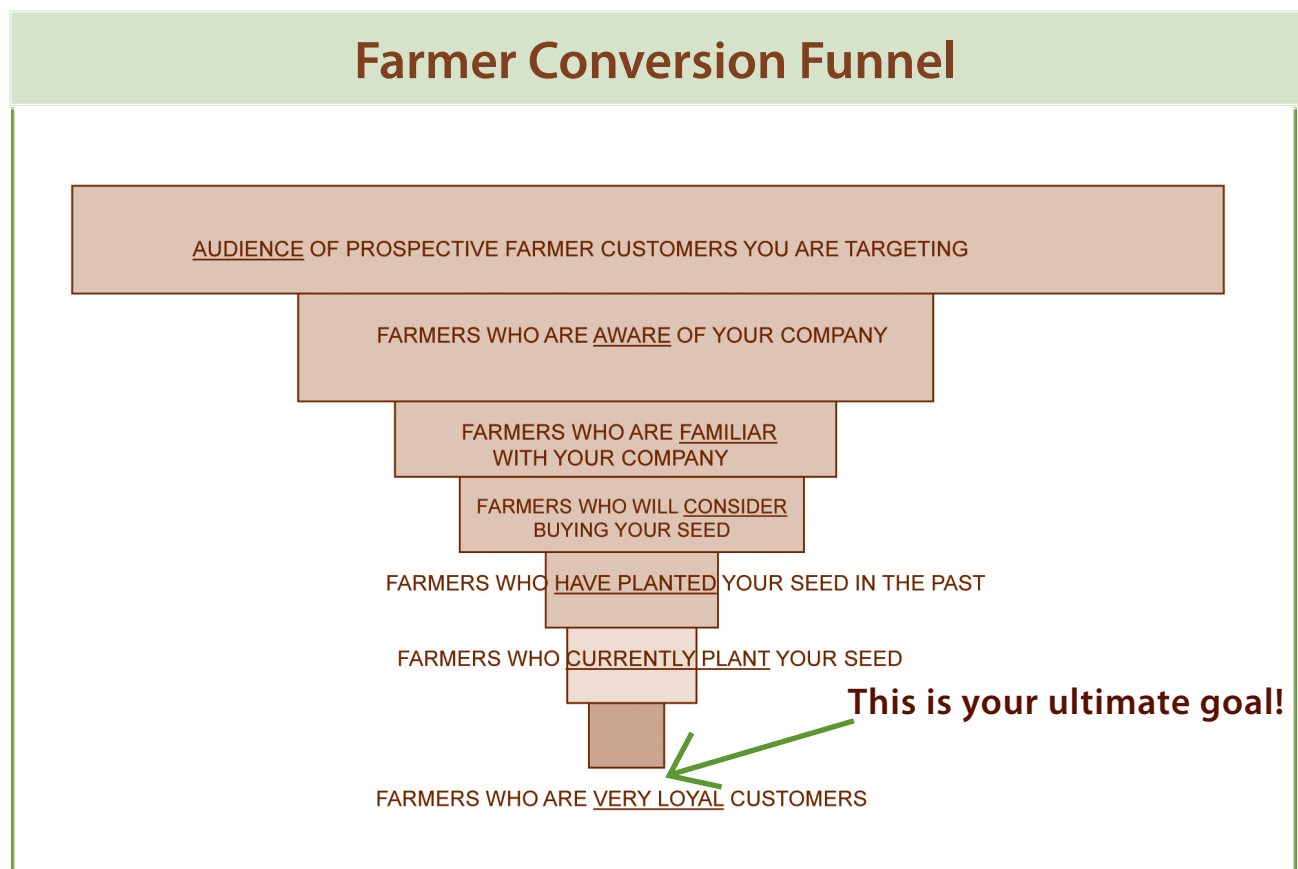
Of these, the most important tools for a seed company are the “people-to-people” tools: field days, demos, and meetings. By using these tools, you will be able to demonstrate product value to customers, build trust and rapport, and allow prospective customers to interact with current, satisfied customers.

In order for a company to develop strong customer relationships, it is first important to identify, or target, the customers you want to reach. This group is called your target audience. Then you must construct a straightforward but effective plan to reach these customers, demonstrate the value of your products, and eventually develop among them a strong loyalty to your company and products. It is helpful to use a framework called a “marketing funnel” to think about how to go from defining your audience of prospective customers (prospects) to

developing loyal customers. An example of a marketing funnel is presented on the following page.

Tools from the list above can help you move farmers through each level of the funnel, for example, from someone who is merely aware of the existence of your company to someone who will seriously consider purchasing your product. Clearly, the “people-to-people” tools and the tools that include strong visual proof (such as demonstrations and laminated photos) are the most useful tools for moving customers through multiple stages of the funnel. However, all marketing tools should be constructed with the various stages of the funnel in mind. In particular, you want to ensure that you convince potential customers to try your products and then become loyal customers.

#19 - Marketing: What It Is and Why You Need It (Continued)



Audience of Prospective Farmer Customers You Are Targeting

This refers to your entire “target market,” that is, all of the farmers who you currently hope will become your customers. This audience should not be defined too broadly. It should be realistic.

- A good example of defining this audience is: All small and mid-sized farmers within a 100 km radius of the company headquarters.
- A bad example (too broad) of defining the audience is: All farmers in northern Mozambique.

Farmers Who Are Aware of Your Company

This subset is the group of farmers who are aware of the existence of your company but do not necessarily know very much about you.

Farmers Who Are Familiar with Your Company

These farmers are not only aware of your company but also know some key facts about what you do. This would include the products you sell, where they can buy your seed, your reputation, etc.

Farmers Who Will Consider Buying Your Seed

This important group is made up of farmers who believe that spending money on your seed may benefit them. They may have heard good things about your company from a neighbor, seen a successful demonstration, heard about you from a trusted expert, been convinced by a radio program, etc.

Farmers Who Have Planted Your Seed in the Past

This group includes all customers who have ever planted your seed—past and present.

Farmers Who Currently Plant Your Seed

These are farmers who planted your seed during the last planting season or during one of the last two planting seasons if your area has more than one growing season.

Farmers Who Are Very Loyal Customers

This group is the most important. They are customers who not only currently plant your seed but are also extremely loyal to your company. It will be difficult for a competitor to take them away from you because they have a very strong relationship with you and are extremely satisfied with your product. They are also unlikely to revert to saved seed, especially in the case of hybrids, because they fully appreciate the value of improved seed. They trust you as a seed supplier.

“A deaf ear is followed by death and
an ear that listens is followed by blessings.”

African Proverb

Source: Aline O'Connor Funk and Chuck Kuster

#20 - The Value of Visual References



Simple Rule #1: Farmers are highly visual!

Simple Rule #2: Don't forget Rule #1!

Simple Rule #3: Incorporate strong visual elements into everything that "touches" your customers.

Farmers around the world tend to be very visual in how they learn. Using visual elements to demonstrate yield or better roots or other physical aspects of a plant is much more memorable than simply talking about these issues.

What are visual elements? They are primarily photos, but also include simple drawings, color, symbols and logos, signs, and even clever representations of your product to emphasize a point such as baskets full of maize to represent yields. Your goal is to support key messages through the clever use of visual references that your audience will remember.

Visual Examples:

The big differences in root quality between several maize hybrids are quite visual in picture #1. To communicate this key sales point, a company representative dug up roots, washed them off, and passed them around for discussion during a field day.



Display
Roots

One inexpensive yet eye-catching way to visually demonstrate a product is by displaying the crop in a new or different way. In picture #2, the sales representative removed the upper portion of the maize plant and peeled back the husks to highlight the large, uniform maize ears.



Display
Growing
Plants

Colorful field signs can provide a visual backdrop for product displays. Farmers like being able to touch products, so displaying them in boxes, buckets, and baskets is a good approach, as shown in picture #3, where the seed company displayed products in seed bags.



Display
Grains

Related Tool Topic:

23

Be creative when preparing products for display. For example, the wheat in picture #4 has been tightly wound for handling. It shows your pride in your product and the care you take in managing it. Passing the display around while pointing out important attributes helps customers remember.

Field signage is always important. Take care to ensure your signs are visual and neat, as shown in the Field Display picture. If your demo or field day plot is neat and organized, customers will assume you take the same care with your seed. Samples of strong and weak field signs and logos are included in the following exhibit.



Passaround Display



Field Display

Thinking Through Your Logos and Field Signs

One of the most overlooked yet most important marketing elements is a company's logo. You need to consider how a logo will translate when turned into field signs and posters. A number of practical considerations can avoid future issues and expense.

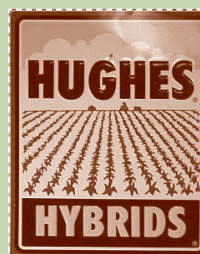
- Does your logo translate well from color to black and white applications?
- Is your logo still readable when reduced in size, such as for a flier or brochure?
- If your company's product lineup expands, is your logo still pertinent?
- Can your logo be easily placed or painted onto a field sign? Is there space for the addition of more information like seed or field numbers?



This is an example of a dull, meaningless brand logo. What is a "Big M?" What will this mean to the customer? Plus, the design is not visually appealing.



The Horizon Seeds logo is recognizable because of its distinctive shape. But the company has to add a second piece on to the bottom of the field sign in order to include the hybrid number.



This is a nice logo because the company's name and business are quite obvious. The trouble is that this brand also sells nonhybrid seed, so its name no longer accurately reflects its business.

Source: Aline O'Connor Funk with special thanks to John Makoni, Takemore Chagomoka, and Paul Seward (FIPS)

#21 - Set Up a Good Demonstration Plot



Demonstrations of high-quality seed are the best sales tool a seed company has! However, like any tool, demos will only be effective when focused on the right goal and implemented properly. Following the guidelines below will help you maximize the benefits gained from your demos.

Plan to have more, relatively small demos rather than a few large ones.

- You will reach more farmers.
- Smaller demos are easier to manage and easier to hand water, if necessary.
- Farmers want to see how seed does in a location very close to their own farm, so having demos in as many locations as possible will strengthen your sales potential.
- Some demos will not thrive, so you want to spread your risk by setting up a fairly large number of them.
- How many demos to plant is up to you. Some new companies have been very successful with as many as 35. Five or six demos are most likely too few, but having more than 35 or 40 for a smaller company becomes hard to manage. Success will depend upon your staff support and the locations you choose for your demos.

Choose your locations carefully.

- High-traffic areas are best. You want as many farmers as possible to pass by each demo as it is maturing. Good locations are near churches, mosques, schools, main roads, market centers, village centers, athletic fields, etc.
- Select locations that will be relatively easy

for your staff to visit during the season. You will want to check to see how the demo is maintained and how the crops are doing.

Carefully select a local person to manage the demo and involve him or her in the planting.

- If the demo is successful, consider offering a small but meaningful bonus to the demo manager based upon local farmer interest in the demo. This person is important because he or she can help you educate other farmers and promote your seed. Managing the demo is a professional obligation, and the person doing it deserves professional consideration. You will both benefit if the demo is well planted and well maintained!

Plan your demo carefully.

- Carefully mark off rows and spacing. Anywhere from two to four rows of each variety is sufficient. Rows do not need to be excessively long; 10 meters can be sufficient if the growing conditions are adequate.
- If the demo is on a slope, ensure that the rows run perpendicular to the slope of the land in order to retain water and reduce soil erosion.

Plan your demo carefully (continued).

- Good management practices must be used. Ensure that your instructions regarding fertilizer application (both amount and positioning of fertilizer in the soil relative to seed), weeding, the number of seeds per hill, gap planting, etc., are followed carefully. This is an excellent opportunity to teach the local demo manager proper management techniques if he or she is not practicing them already.
- If the demo is at risk of failing due to lack of water, the demo manager should judiciously hand water if possible. Drought does not occur every year, and you do not want to lose the potential educational benefit of your demo by losing the entire plot to drought. However, be sure to treat all entries in the demo equally, even the local landrace, so that farmers can still compare performance.

Include all seed of your product line that is well adapted to the demo location and that you wish to demonstrate to farmers.

- Ideally, you will only demonstrate seed that you will have for sale in the coming season, but, in some cases, it makes sense to include seed of a variety you hope to have available in the future so that farmers can begin to assess how it performs in the local environment. You must, however, be honest with them about when you expect to have the seed available for sale.

As part of the demo, you must include the most commonly planted nonimproved seed that local farmers are using.

- For example, include the local landrace variety and/or OPV, in the case of maize, if you are demonstrating hybrids. While some seed companies believe that they do not need to do this because “all the local

farmers know what the local landrace looks like,” it is important to include it in the demo. Farmers need to see improved seed and nonimproved seed side by side, and when the plot is mature it will be a great visual tool when you are visiting the plot with farmers to discuss the benefits of your seed.

When the crops begin to show their potential, it is a very good idea to put your company’s sign on the demo.

- Passers-by will want to know whose seed it is, the variety name, and when it was planted. The sign should convey a good impression of your company and be a good reflection on the quality of your seed.

At the appropriate time, plan a farmer visit at the demonstration plot.

- This can vary from something informal, such as a local village gathering with a representative of your company to learn about the success of the plot, to something larger and more formal, such as a large scale field day. If the demo performs well, be sure to invite local opinion leaders to the gathering so they can learn about your seed.

Finally, be smart and make sure that farmers who come to see the demo will have a convenient option for purchasing your seed!

- Set up demos that are convenient to potential customers and also to a purchasing location. Let farmers know where they can buy the seed if they like the demo.

Related Tool Topics:

20, 22

Source: Aline O'Connor Funk with special thanks to Paul Seward (FIPS), Leldet Seeds, and Tanseed for their inspiration

#22 - Plan a Successful Field Day



Field days are important venues for showcasing your company and your products. Following the steps below will help ensure the success of your field day.

1. Start to plan early! Late planning is the enemy of a good field day.
2. Think about the farmers you want to attract:
 - How do they typically hear about events in their area?
 - What is a convenient time and day for them to attend a field day?
 - From how far away will they typically come?
 - Perhaps most importantly, what will they want to learn or see at a field day? Are they literate, semi-literate, or illiterate?
 - Think about the answers to these questions for both men and women farmers. Don't overlook what is best and most convenient for the women farmers.
3. Because farmers are visual learners, determine how you will provide visual tools at your field day. Consider whether farmers will respond to:
 - Laminated photos you pass around
 - Demonstrations of actual planting techniques
 - Sample seed packages for purchase, which will teach them about quality, seed treatment, etc.
 - Signs on your plot
 - Samples of beans, grain, cobs, etc. to see and feel
 - Food products to pound, cook, or taste

Define Your Field Day Message(s)

What is the most important message you want to communicate at your field day?

Will farmers hear this key message several times in varied forms?

What is the first visual element farmers will see? Does it support your main message?

Do your speakers understand what your primary message(s) are?

Have you briefed all employees on your key messages?

Related Tool Topics:

20, 21

4. Bring in some good speakers, other than company personnel, to visit with or speak to the farmers. Possibilities include a local extension worker who is familiar with the benefits of your seed, a satisfied customer who can talk to the other farmers, or someone from the local research institute. If a good farmer was involved in planting the demo, allow him or her to speak to the group to talk about his or her experience with your seed. Discuss expected yield, how much the additional yield might be worth, and what a farmer could do with the additional money from selling the extra harvest.
5. Make a plan for how you will publicize the field day. Announce it in advance and try to remind potential attendees closer to the event. Be very specific about time, location, and why farmers should attend. Try to encourage groups to come together. If there is a local school group, invite the older students, if appropriate, as they will learn too.
6. Invite other local decision leaders to attend and learn. However, do not let the field day become a forum for local politicians or government officials to make speeches. The focus should stay clearly on the farmers and on demonstrating the benefits of your improved seed to the farmers.
7. Plan ahead to determine what you want to leave with farmers to remind them of your company (e.g., a brochure, a package of sample seed, a visor, a great story, a raffle drawing memory, a better understanding of good farming practices, impressions from great photos).
8. Lay out the program for the field day, including speakers, testimonials, education, conveying practical information on where to purchase seed, etc. Leave ample time for farmers to look at the plot, examine photos, ask questions, and talk with the company representatives.
9. Be practical. Look at the field day through your customers' eyes.
 - Make sure speakers can be heard and seen. This is often a very big problem at field days. Speakers **MUST** be heard!
 - Make sure farmers know what they are looking at. What is the variety? When was it planted? Did you use fertilizer? What yield do you expect?
 - Be sure that farmers have a chance to ask questions. Ask them questions too, especially about their preferences. An interactive field day is more interesting for farmers than a one-way lecture.
10. In advance, identify the key decision makers or opinion influencers who will be attending your field day. Pay special attention to them, making sure that they have a chance to ask any questions they might have and possibly asking them to consider planting some sample seed and give you feedback after the next growing season.
11. Determine in advance whether or not you want to sell small, trial-size samples at the field day. Doing this can be a very easy way of helping farmers who have always saved seed to take a safe, small, first step toward adoption of improved seed.

Source: Aline O'Connor Funk and Chuck Kuster

#23 - Promotional Brochures That Sell



Creating good company brochures will provide a strong boost to your sales by attracting prospective customers, as well as strengthening the loyalty of existing customers. In addition, good brochures will strengthen your company's reputation with the distributors of your products.

A good brochure is one that gets read and is remembered later. A brochure that gets read and remembered is one that has a clear purpose and is planned. It's also important to use effective design, an appropriate level of writing, proper language/dialect, and local photographs when possible.

The first step in developing a good brochure is to define the purpose of the brochure and identify the audience.

1. Define your purpose

- Will the brochure be used generally to familiarize farmers with your seed company and its approach?
- Is its purpose to promote a specific seed product?
- Are you trying to differentiate your company or products from your competition?
- Is your goal to update customers on a new product, a new program, or harvest results?
- Are you promoting an event, such as an open house or field day?

2. Identify your audience

- Your message should be crafted for a specific audience, such as smallholder farmers in your selling area or agrodealers who could distribute your product.
- A common tendency for businesses is to blanket all customers and prospects with each message or with a multipurpose brochure. This dilutes your messages because the reader does not feel that you are speaking directly to her or him.
- Remember that many, if not most, of the farmers who are potential customers are women. Tailor your communication to them, too.

Answer These Questions First:

What does a prospect want to know about your company?

What does a prospect want to know about your products?

What does a customer know about your business style?

The second big step is to put yourself in your reader's shoes when you are deciding what to put in the brochure.

Ask yourself: If I am a prospective customer, what would I want to know about this company? What would convince me to try their products? If women farmers are a large portion of your potential customer base, what is particularly important to them?

This is where many seed companies start to get off track. Rather than thinking about their readers' needs and perspectives, they think it is more important to list all of the managers' names, outline their history as a company, and detail their professional affiliations. This type of information does not help sell seed. Instead, customers want to know about:

- Products and their specific characteristics
- The benefits of purchasing the products and why farmers should switch from their current seed practice
- Whether or not others are benefiting from using the products
- Where to get more information
- How they can purchase the products
- The values and reputation of the company (To some extent, this needs to be demonstrated by the company rather than laid out in a brochure, but your brochure should reinforce your values. It is important to pay attention to this.)

"He who learns, teaches."
African Proverb

The third step in developing a good brochure is to determine how you plan to distribute it.

For example, if you want a brochure that is given away in large quantities by your agrodealers to prospective customers, you will probably want to create something fairly simple and inexpensive, such as a flier. However, if you want a brochure to give away in more limited quantities to prospective agrodealers, village heads, potential sources of finance, and large customers at a major field day, you may elect to develop something like a two-sided, tri-fold brochure.

#23 - Promotional Brochures That Sell (Continued)

The fourth and final step is to use good design principles when putting together your brochure. Here are some rules for good brochure design:

1. An effective brochure starts with a strong headline. That headline should speak directly to the audience and be visually attractive.
2. Write your brochure content to summarize features, advantages, and benefits: “This seed contains **new and better disease resistance** (feature) that will **increase your yield** (advantage) and **put more profit into your pocket** (benefit).”
3. Make your company name and logo visible.
4. Always include your company’s contact information.
5. Use subtitles and visuals like photographs to emphasize your selling points and key messages.
6. Use language that is clear and easy to read. The brochure should not be overcrowded and jammed with confusing, unconnected messages.



Related Tool Topic:

20

A WORD ABOUT PHOTOS

Farmers are very visual, so selecting and using good photos is important. Good photos will clearly demonstrate the product benefits and show how customers’ lives will become better through the use of the products. The photos should include some “element of scale,” such as a person or a hand with the product, so that the viewer can easily see, for example, how large the ear of maize is or the yield from a hectare of rice. If you are using color photos, it is advisable that you work closely with the printer to make sure that the coloring in the photos is correct before the full

printing is undertaken. Farmers do not like photos with sickly-looking, off-color crops!

A well-worded caption can be a strong selling point. For example, “Mrs. Matumba tripled her maize harvest this year by switching to our Mbegu Bora maize hybrid and by using small amounts of fertilizer. Her family will eat well, and she will have extra maize to sell in order to pay school fees for her children.”



Photographs that illustrate a point, such as the outstanding yield on these sorghum hybrids being shown at a field plot, are effective sales tools.

In summary

A good brochure will:

- Be very strongly focused on the targeted audience and take the audience into account (e.g., what information is most important to them, how literate they are, etc.)
- Be clear, well-written, and attractive
- Contain strong visual references, such as attractive photos (See Tool #20 - The Value of Visual References)
- Outline how the reader will benefit from using your products
- Address both women and men as prospective customers

A poor brochure will:

- Be overcrowded and visually unappealing
- Have no photos or bad photos
- Be poorly written, possibly even containing spelling or grammatical mistakes
- Contain a significant amount of information that is not important to customers
- Fail to address the key customer questions, such as “Where do I get more information?”
- Be of poor paper and printing quality, casting a negative reflection on the quality of your seed products

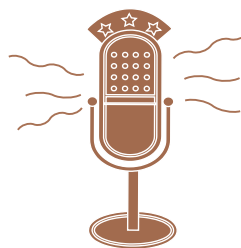
Don't Overlook These Clever Communication Tools and Tips

There are other clever ways to communicate without incurring brochure design and printing expenses. Here are a few:

- Develop a checklist for customers on crop land preparation
- Send or deliver a thank you card to key agrodealers, village leaders, and/or customers who make testimonials or organize field days for you
- Prepare posters and fliers on how to use your products to get the optimum yield
- Provide alerts on various crop-related issues, such as crop diseases and insects
- Gather and share customer testimonials
- Prepare laminated cards showing photos, testimonials, etc., and discuss these with lead farmers in the village
- Share harvest success stories from your customers with other customers and agrodealers via photos or written testimonials

Source: Aline O'Connor Funk and Chuck Kuster

#24 - Radio Advertising: Worth It or Not?



Radio advertising can be very successful when all the elements are properly tuned. Communicate a message that resonates, pick the right radio stations, and play the advertisements at the right time, and audience response can be phenomenal. Fall short on any of these aspects, and your message may fall on deaf ears. A series of radio advertisements, also called a campaign, can be an effective tool for growth if it is well crafted and reasonably priced.

First, determine your radio campaign goals.

The first step is to establish a simple and measurable goal for your radio advertising. A goal of “getting more customers” is too vague. Do you want to introduce a new product? Is your goal to get a specific number of people to a field day? Are you trying to get farmers to go to your agrodealers?

The second step is listening to competitor commercials.

What actions are they driving? What are their messages? What time of day are their ads airing? Are there specific programs they advertise on? How often are competitors advertising?

Craft a simple message.

While clever radio advertisements can be quite effective, they are risky for novices to attempt, so it is better to keep your message simple and direct. Your first sentence should grab listener attention. Lead with an important benefit or a curiosity-provoking question: “What would you do with more income from your cowpea crop?” “Are you struggling with low sorghum yields?”

Always ask the listener to take action.

“Come to my field day.” “Try a seed sample.” “Call me for more information.”

Test your advertisement with friends and customers.

Advertising professionals always test their advertisements. Test your advertisement with friends who are farmers and good customers before signing a contract with the radio station. Listen carefully to the feedback you receive.

Make certain you pick the station your customers listen to if there is more than one station in your region.

Also, try to align your time slot to when your audience is likely to be listening. Positioning your advertisement around farming news, weather reports, and perhaps local news is wise.

Be patient.

Advertising is a long-term investment, not a quick-fix. Plan to run advertisements for an extended period of time before you’ll start to hear from customers and prospects.

Negotiate rates and ask for special deals.

Radio advertising is inherently flexible, so rates are variable. Often, advertising sales people will offer deals.

Understand your investment and returns.

It's impossible to evaluate radio advertising by itself because it is only part of the marketing effort. However, one way to evaluate your investment in radio advertising is through your cost per customer. For

example, let's say 10 advertisements cost \$50 USD. That \$50 investment helped encourage 250 people to attend your field day. Your cost per participant for attending the field day would be \$.20 per attendee. (This assumes there were no other advertising expenses.) If you eventually sell seed to 25 of these people, your radio advertising was probably a wise investment.

Another way to look at the cost of radio advertising is to do a cost-benefit analysis. A simple approach to performing this analysis is included in the exhibit on the next page.



#24 - Radio Advertising: Worth It or Not? (Continued)

Cost-Benefit Analysis For Radio Advertising

Seed company managers need to balance the cost of various types of advertising with the expected benefits. Some forms of advertising can provide great value to your company; others will not. The basic approach outlined below for evaluating advertising is presented for radio advertising, but it will work for any form of advertising you are considering.

1. First, look at the cost of the radio campaign and determine how much it will cost you IN TOTAL. That is, how much will it cost to pay for the air time, develop the content or program, travel back and forth to the radio station to manage all aspects of the broadcast, etc.? ALL costs tied to the radio advertising should be included in this estimate.

Total Cost of Radio Program Is: _____

2. Second, calculate how many kg of seed the radio campaign will need to “sell” in order to pay for itself. For example: If your profit per kg of seed is \$.15 USD, and the TOTAL cost of your radio campaign will be \$600 USD, then you will need to sell an additional 4,000 kg, or 4 t, as a direct result of the radio campaign to break even.

Growth in Seed Sales Needed to Pay for Radio Program Is:

Total Cost (above) Divided by Your Profit for 1 kg of Seed
(e.g., maize)

This equals your breakeven point, or the number of kg of seed (e.g., maize) you must sell to cover the cost of the radio program.

3. Third, assess how likely it will be to achieve the breakeven point you have calculated in step #2. Avoid getting caught in the trap of saying, “Well, we need to do this to establish credibility.” Or, “Potential customers need to hear about us.” If you are tempted by these statements, think carefully about how likely a farmer is to buy your product based on a radio advertisement. Also think carefully about whether or not the promotional money might be more effective if spent on other things, such as demos or field days.

Radio advertising is a good way to increase awareness of your company and products among farmers, but it is important not to pay more than you should for the benefits you expect.

Offer Content to Your Local Radio Stations

Radio stations are constantly looking for good material to include in their programs. In fact, many must offer agricultural programming but lack good ideas for the programs or do not know the right people to develop the content. This is where an aggressive, proactive approach by your company can generate good publicity. If you can provide timely, useful information, many stations will be very grateful and allow you a “free” commercial message on the air in exchange for providing the information.

For example:

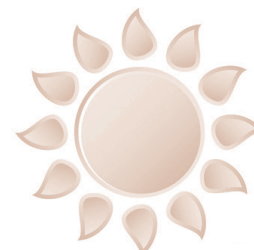
- The radio station may be willing to do a remote broadcast at your field day or meeting. If so, line up some testimonials for interviews.
- Prepare some agronomic or technical advice for on-air discussion. If your content is good, the station may even run it for free.
- Discuss giving some seed samples that the station can use as a promotional prize in return for a free on-air mention of your seed company or products. For example, “The prize for our contest is a 2 kg bag of rice seed from <insert your name.>”
- Always invite radio stations to your field days. Send them a reminder of the upcoming event and follow up to tell them what visitors saw, whether the station attended or not.



Photo: Courtesy of Farm Radio International

Source: Aline O'Connor Funk

#25 - Distribution Planning Tips and Tools



What is meant by distribution? Distribution is the work that a seed company does to get its products out to the places where farmers will come to buy them. It includes everything from planning how to load the truck, to making sure that new agrodealers are added in a logical fashion, to keeping accurate records of what has been delivered to whom.

Product distribution is a critical part of the sales process. However, since it comes at the very end of the production-conditioning-storage-marketing-sales chain of work that must be done by a seed company, it is often undertaken without sufficient advance planning. Many seed company managers think that the tough part about the business is production and selling and that distribution will be relatively easy. This attitude will cost you money, customers,

and agrodealer support. It is very important to plan your distribution activities in advance—even several years in advance for some activities!

The following checklist will help you sort out the key issues before they become problems and structure the rest of your business to support a distribution strategy that will work for you.

Before working on the checklist below, take a moment to think seriously about the many ways that distribution problems can hurt your profitability: seed that costs more than it should to get to retail customers, planting windows that are missed because seed distribution is not well organized, and seed that loses germination and vigor because it is sitting in a hot truck for too long. Good planning will help you avoid these problems and protect your profitability.

Item	Things to Consider	Your Plans
1. Product Fit	Make sure you clearly understand where your products should be planted (e.g., the right agroecology) and do not distribute them to geographic areas for which they are not suited! Putting the right product in the right agro ecology is called product positioning.	
2. Sales Points	You should develop a three-year sales growth strategy and develop your distribution plan to support this strategy. Identifying where the company plans to add agrodealers, increase customer penetration, and conduct demonstrations is critical to developing your distribution approach. Of course, ease of distribution needs to feed into your sales strategy as well.	

Item	Things to Consider	Your Plans
3. Roads and Routes	This sounds obvious, but looking critically for potential road problems during the time you will be delivering your seed is a very important step. Seasonal flooding, broken bridges, and construction detours all have the potential to hold up shipments, possibly causing you to miss delivery windows or “cook” the seed due to excessive delays in hot weather. Seed is a living organism, and delays in hot lorries can seriously damage the seed by reducing germination and vigor.	
4. Weight	Seed is heavy! Plan carefully for the size and quality of vehicle you will use relative to how much seed you plan to carry per load and the quality of the roads you will be using. Your seed is valuable; make sure you don’t risk spills or vehicle maintenance delays.	
5. Outgrowers Locations	It is smart to ensure that distribution routes are also close to outgrowers, possibly saving additional trips. You will be making multiple trips to distribution points during the year to deliver product, collect revenue, drop off brochures, check on demo plots, etc. Coordinating these trips with outgrower visits can be very cost effective.	
6. Demos/ Field Days	Your demo and field day strategy should be well coordinated with your distribution routes. Farmers who are able to see your product in the field are most likely to want to buy. Ensuring that there is a local agrodealer near your best demo plots, and that you are able to reliably supply that agrodealer, will translate into a good revenue stream.	
7. Storage	Distribution should be planned around agrodealers who can meet your product storage requirements. Agrodealers with good storage are valuable to you, as you can feel comfortable that they will protect the quality of your product, thus protecting your reputation with farmers. If an agrodealer has a large amount of storage, you might even want to consider using him or her as a staging location for further distribution.	

#25 - Distribution Planning Tips and Tools (Continued)

Item	Things to Consider	Your Plans
8. Staging	Staging means distributing product to one location, from where it will be further distributed to other locations. Especially as a company grows larger, distribution staging locations become essential so that product can get to final locations more rapidly and cost-effectively. In some cases, the company distributes further from the staging location, while in other instances agents come to the staging location to pick up the product themselves.	
9. Collections Process	Distributing the product is only the first step; you must then get paid for the product! Give some thought to the ease and cost of returning to the distribution locations, possibly multiple times, to collect what is owed to you if you are extending credit to the agrodealer.	
10. Future Growth	It is always important to establish an early presence and begin developing relationships in areas you are targeting for future growth. It takes time to build awareness of your company and establish your reputation when you are first going into a completely new area.	
11. “Spiraling” 	Many seed companies have found that a good strategy for growth is to establish a reputation and sales volume in a specific area and then “spiral” outward from that area. This allows them to take advantage of distribution efficiencies and customer word-of-mouth endorsements, as well as providing a critical mass for future field days and demos. This strategy makes a lot of sense, as opposed to an approach based on a lot of unconnected “islands” of distribution.	

Item	Things to Consider	Your Plans
12. Costing	It is good business discipline to develop a measure of how much it costs you to deliver a ton of seed. To do this you must include all related expenses: vehicle cost, driver time, fuel, road expenses, etc. Calculating this expense for sample loads in different size vehicles, trips of differing lengths, and various delivery sizes (e.g., a truck that is only half full) will enable you to maximize your distribution decisions over time. It will also enable you to determine how much it might be worth to provide an incentive for someone to come pick up their seed. Many seed companies around the world offer a “seed pick-up discount” for large orders of seed that are picked up at the processing center. Of course, prior arrangements must be made for this in order not to disrupt normal distribution patterns.	
13. Paperwork	Many drivers and inventory managers dislike paperwork, but accurate records are a MUST! At a minimum, good distribution requires the following records: • Load Sheet - Details exactly what has been loaded on a truck (sample follows) • Routing Sheet - Details where the driver is supposed to go first, second, third, etc., and what is to be dropped off at each location • Delivery Receipt - Records what has been dropped off at each location, with a copy signed by the recipient at each stop, as well as when the drop-off occurred. All paperwork must be returned to the company and reviewed with the appropriate manager to uncover any issues or problems. Remember that your drivers will be delivering very valuable products and that strong paperwork requirements are a good deterrent to theft and carelessness. The paperwork is also essential for your book-keeping, enabling you to collect the revenue that is owed you.	

Load Sheet (All units are in kg)

Truck load leaving warehouse on (date): _____ Driver(s): _____

Destination(s): _____

Load confirmed by (name): _____

Other information: _____

	Product #1	Product #2	Product #3	Product #4	Product #5	Product #6	Etc...
Loaded							
Dropped at location #1 (name and date)							
Dropped at location #2 (name and date)							
Dropped at location #3 (name and date)							
Etc.							
Undelivered							
TOTAL							

Key events occurring on trip or other items to report: _____

Report submitted by (name): _____ Date: _____

Source: Aline O'Connor Funk

#26 - Vital Sales Tracking Tools



If product quality is the heart of a seed company, sales are the lifeblood. Your success as a company will be closely tied to how carefully you track and monitor your sales.

You need to carefully monitor sales both by product and by sales outlet. If you have full-time sales people on staff, you need to monitor sales by staff person, too.

Sales reports must be carefully reviewed by the team during the sales season to determine progress and obstacles. They must also be reviewed at the end of the year to analyze what worked and what didn't work.

The following reports are examples of the types of tools used to track sales. They are the **Product Sales Report** and the **Sales Scoreboard**. These can and should be modified to suit your own needs. As your company grows larger, these reports will prove to be invaluable to your senior management team.

Winning companies track sales patterns closely and learn how to steadily grow sales each year.

Commentary – Product Sales Tracking Report

This report tracks product sales across the years and also during the current sales season. It is very simple and the columns are self-explanatory.

You will need to decide if you want this report to refer only to full retail sales or to wholesale sales as well. There are good reasons for each decision, so you will need to decide what works best for your company. Retail sales are sales to farmers, either directly or through agrodealers; wholesale sales are bulk sales, e.g., to governments or NGOs.

Each line in the report should contain one product. Please note that this does not mean one crop (e.g., sorghum) but rather one specific variety. For example, if you sell three types of beans, you will need three lines on the report to list these varieties.

You can update this report as frequently as you wish. Most large companies will do this weekly at a minimum. You should do this as regularly as you receive good updated information.

At the top of the report, there is a place for you to specify the dates covered by the report (e.g., the week of November 14, 2009, or 5 Nov 2009–25 Nov 2009).

Please keep in mind that report formats like this are flexible; they can and should be changed to suit your specific needs. However, you do not want to change a report so much that you lose the key points that the report is supposed to highlight or make it so complex that it becomes impossible to maintain the report accurately.

Product Sales Tracking Report

PRODUCT SALES TRACKING REPORT

Covering Period From: <Add Dates>

Note: Shaded cells are formulas and will calculate automatically

	Total Prior Year Sales (kg)	Sales Goal for This Year (kg)	Year-to-Date Orders (kg)	% of Goal	Year-to-Date Delivered (kg)	Year-to-Date Returned (kg)	Year-to-Date Net Sold (kg)
				#DIV/0!			0
List				#DIV/0!			0
your products on				#DIV/0!			0
these rows, one				#DIV/0!			0
row per product				#DIV/0!			0
				#DIV/0!			0
				#DIV/0!			0
				#DIV/0!			0
				#DIV/0!			0
				#DIV/0!			0
				#DIV/0!			0
				#DIV/0!			0
				#DIV/0!			0
				#DIV/0!			0
				#DIV/0!			0
				#DIV/0!			0
				#DIV/0!			0
TOTAL	0	0	0	#DIV/0!	0	0	0

#26 - Vital Sales Tracking Tools (Continued)

Commentary – Scoreboard Report

This report is useful to track sales by sales territory, agrodealer, or commissioned sales person. You should always start by recording the prior year's full retail sales units in a consistent unit of measurement (e.g., kg). The term "full retail units" means the number of units that are sold through retail channels, so this excludes wholesale sales to NGOs, etc. It should also exclude free seed that you distribute for demo plots or for any other reason.

There is also a column for the current year full retail goal by sales channel. This column should include your sales target for each sales entity (each line on the report) that you are tracking.

Other columns provide space to record order positions throughout the year, as well as delivery status, returned units, and net sales.

If you are familiar with Excel, the best way to set up this scoreboard report is to create one tab for each product, and then a summary tab that sums up all the other tabs to give you total sales by sales unit.

You can update this report as frequently as you wish. Most large companies will do this weekly at a minimum. You should do this as regularly as you receive good updated information.

At the top of the report, there is a place for you to

specify the dates covered by the report (e.g., the week of November 14, 2009, or 5 Nov 2009-25 Nov 2009).

Please keep in mind that report formats like this are flexible; they can and should be changed to suit your specific needs. However, you do not want to change a report so much that you lose the key points that the report is supposed to highlight or make it so complex that it becomes impossible to maintain the report accurately.

Related Tool Topic:

28

Scoreboard Report

SCOREBOARD REPORT

<Add Dates>

Note: Shaded cells are formulas and will calculate automatically

	PRODUCT (e.g., maize)							
	Prior Full Year Full Retail Units (kg)	Current Year Full Retail Goal (kg)	Year-to-Date Retail Orders (kg)	Orders as % of Goal	Orders in This Period (kg)	Year-to-Date Delivered (kg)	Year-to-Date Returned (kg)	Net Sales (kg)
Sales Territory A				#DIV/0!				0
Sales Territory B				#DIV/0!				0
Etc....				#DIV/0!				0
				#DIV/0!				0
				#DIV/0!				0
				#DIV/0!				0
				#DIV/0!				0
				#DIV/0!				0
TOTAL	0	0	0	#DIV/0!	0	0	0	0

Can use this column for agrodealer customers instead of sales territories; depends on how you structure your sales activities.	Remember that Full Retail (FR) units refers to all units sold and planted for which you are, or should be, paid. It excludes sample seed, free demo seed, etc. This column should include the year-end results by sales area for the given product.	This column should have the current year-end goal by sales area for each product	Enter the year-to-date order status by sales area for each product. You should update this as the sales season progresses.	Calculate the ratio of column D/column C to see how close to your year-end goal you are.	List the orders that are new this period. This is a good column to look at to get a feel for current period incremental activity.	This should show how much of the product that has been ordered has been delivered.	Unused product returned from agro-dealers.	Formula will calculate your net sales.
--	---	--	--	--	---	--	--	--

Source: Aline O'Connor Funk with special thanks to Remington Seeds

#27 - Understanding and Choosing Agrodealers



Agrodealers can play a very important role in the growth of your business. For a small seed company, over-the-counter sales in the company's own outlets can account for the majority of sales, but as a company grows it generally becomes essential to distribute seed through agrodealers, unless a company is building a different distribution system. How you select which agrodealers to utilize and how much you understand about their business will determine the success of your growth strategy.

Understanding Agrodealers:

- Agrodealers sell many types of products; seed represents just part of their business activity. This means you will need to invest time educating them so that they know how to represent your products well to their customers.
- Agrodealers buy the products they sell from a number of suppliers and must manage their cash flow carefully. Agrodealers get cash when customers purchase products from them, but they have many uses for that cash. Therefore, you need to clearly lay out the expected payment requirements for seed with your agrodealers. Ideally, the best approach will be full payment when you deliver the seed, but in some cases you might decide to extend some credit. If you do decide to extend credit, it is a very good idea to get credit references for the agrodealer. Ask them to provide you with several names and phone numbers of other suppliers that have extended them credit. Then contact those suppliers to find out if the agrodealer has been a good customer and has paid their bills on time.
- Selling seed is a very seasonal activity for an agrodealer. Large volumes can move through his or her shop in a very short time at the beginning of the planting season. To determine how much seed to deliver to an agrodealer, you should look carefully at several factors:
 - The amount of storage space they have and whether or not the space is in good condition (secure, cool, dry, free from pests)
 - Their prior year sales and realistic expectations for growth
 - Their returned seed from the prior year
 - Your ability to supply additional seed to them cost-effectively during the sales season on short notice

Selecting Agrodealers:

- A good agrodealer will focus on customer service and product quality. When you are choosing agrodealers, pay attention to their quality standards, how knowledgeable they are about the products they sell, and how well they serve and educate their customers.
- The good reputation of your company is based on earning your customer's trust. The agrodealer becomes an extension of your company when they sell your seed and explain your products to customers. If you have any reason to question the integrity of an agrodealer, he or she is probably not the right agrodealer to be representing your company. Trust is essential for a good partnership.

Related Tool Topics:

28

Selecting Agrodealers (Continued)

- Agrodealers with established customer bases located in geographic areas that are important for your distribution strategy are vastly preferable to those who are not. Especially when you are just getting established in an area, be sure to focus on those agrodealers who can best help you grow; do not become distracted by servicing agrodealers who are not well positioned to support your company's growth.
- As mentioned above, it is always good to get credit references if you will be extending credit to the agrodealer. In addition, make sure that the person with whom you are setting up the credit terms is the owner of the shop, not just an employee.

AGRODEALER RATING

Whether you are working with a large or small number of agrodealers, it is important to develop a disciplined approach to assessing their attractiveness as a distribution partner for your company. The following pages give an example of one type of approach – one that is similar to a school report card! The first example has been filled in as an illustration while the second one is blank.

In the following rating approach, agrodealers receive a score. The key elements of this form that you need to understand are:

Description (of Rating Factor) Column: The attached example lists eight sample factors that are important when assessing agrodealers. You can add to, subtract from, or change this list to suit your own company's needs.

Rating Column: In this column, you need to enter the score for the agrodealer for the most recent sales year. Use the key at the top of the form to understand what to enter in the column (e.g., 1 = Excellent, 0 = Very Poor). This column will obviously be different for each agrodealer you are rating.

Weight Column: This column should represent the weight, or importance, of each factor to your company. For example, is location more or less important to you than professionalism for your agrodealer selections? **Note that the weights on the form should be the same for all agrodealers.** The weights are your decisions about what is most important to you in selecting agrodealers and will not vary by agrodealer. You can decide on these weights and then print them as part of your final form before you fill it out. Weights must add up to 100 for the score to be calculated properly!

Score Column: In this column, you should simply multiply the rating by the weight for each factor you have listed in the description column. When you have finished each calculation, add this column to determine the total score and then the classification. For example, an agrodealer who is excellent in all categories will receive a total score of 100. An agrodealer who is only average in all categories will receive a total score of 50.

Agrodealer Rating (Completed)

Date: September 15, 2009

AGRODEALER NAME: Mrs. Shopowner

Rating

AGRODEALER LOCATION: XXX Town

Excellent	1.00
Good	0.75
Average	0.50
Poor	0.25
Very Poor	0.00

	DESCRIPTION	RATING	WEIGHT*	SCORE
1.	Volume of Prior Year Sales:	<u>.75</u>	<u>25</u>	<u>18.75</u>
2.	Growth of Prior Year Sales:	<u>.25</u>	<u>15</u>	<u>3.75</u>
3.	Distance/Ease of Traveling to Shop:	<u>.50</u>	<u>15</u>	<u>7.5</u>
4.	Professionalism:	<u>.75</u>	<u>10</u>	<u>7.5</u>
5.	Location Relative to Target Customers:	<u>.75</u>	<u>10</u>	<u>7.5</u>
6.	Agronomic Support to Customers:	<u>.25</u>	<u>10</u>	<u>2.5</u>
7.	Storage Capacity and Quality:	<u>0</u>	<u>10</u>	<u>0</u>
8.	Low Returns:	<u>.50</u>	<u>5</u>	<u>2.5</u>

TOTAL SCORE = 50

CLASSIFICATION = C

Manager Approval: _____
(Required for "Poor" rating)

SCORE

> 75
60 – 75
50 – 59
< 50

CLASSIFICATION

Excellent	A
Good	B
Average	C
Poor	D

* Note that the figures in the "weight" column must sum to 100.

Source: Aline O'Connor Funk, with input from Remington Seeds

Agrodealer Rating (Blank)

Date: _____

AGRODEALER NAME: _____

Rating _____

AGRODEALER LOCATION: _____

Excellent	1.00
Good	0.75
Average	0.50
Poor	0.25
Very Poor	0.00

	DESCRIPTION	RATING	WEIGHT *	SCORE
1.	Volume of Prior Year Sales:	_____	_____	_____
2.	Growth of Prior Year Sales:	_____	_____	_____
3.	Distance/Ease of Traveling to Shop:	_____	_____	_____
4.	Professionalism:	_____	_____	_____
5.	Location Relative to Target Customers:	_____	_____	_____
6.	Agronomic Support to Customers:	_____	_____	_____
7.	Storage Capacity and Quality:	_____	_____	_____
8.	Low Returns:	_____	_____	_____

TOTAL SCORE = _____

CLASSIFICATION = _____

 Manager Approval: _____
 (Required for "Poor" rating)
SCORECLASSIFICATION

> 75
60 – 75
50 – 59
< 50

Excellent	A
Good	B
Average	C
Poor	D

* Note that the figures in the "weight" column must sum to 100.

Source: Remington Seeds

Source: Aline O'Connor Funk

#28 - The 80/20 Rule and How to Use It



This tool may sound like an oversimplification, but it has been proven to be an accurate, predictive tool in many situations in seed companies.

It is based on the 80/20 rule, which means that the majority of the time, 80 percent of your growth will come from 20 percent of your _____ (Fill in the blank).

There are a number of ways you might fill in the blanks:

Agrodealers

If you have 40 agrodealers selling your product, about eight of them, or 20 percent, will provide 80 percent of your growth.

Salesmen

If you have five salesmen, chances are that the vast majority of your growth will come from one of them.

Outgrowers

If you have 10 outgrowers, two of them will account for 80 percent of the outgrower production growth from year to year.

While sometimes this may slide to 70/30 ratio instead of 80/20, it is amazing how often it is accurate.

80/20 Rule

It is based on the 80/20 rule. It means that the majority of the time, 80 percent of your growth will come from 20 percent of your _____

(Fill in the blank)

Related Tool Topics:

5, 26, 27

On a recent trip to India, a seed company manager was told by a wholesale distributor, "Well, of course, 80% of my growth comes from 20% of my stock locations," reinforcing the universal nature of the 80/20 rule.

So, you ask, what does this mean?

You can make this tool work for you by:

1. Identifying the 20 percent of agrodealers who will drive your growth and working to clear all obstacles out of their way so that they can grow their sales for you.
2. Watching as carefully as possible to determine the 80 percent who will not drive growth and making sure you do not waste “growth resources” on them. You do not want to neglect this segment, you simply want to make sure that you are not spending more time and money on them than you should.
3. Trying to move to a 70/30 ratio if you can, which means that you have more than the typical percentage of strong performers!

“Most companies waste time on the 80 percent when they should focus on the 20 percent. I have experienced this and have had to learn the hard way after spreading myself too thin working with poor outgrowers and agrodealers.”

– African seed company manager
with 15 years of experience

“Two ants do not fail to pull one grasshopper.”

African Proverb

Source: Aline O'Connor Funk

#29 - Elements of a Successful Collections Process



Definition of Collections Process: In the seed business, some seed is paid for at the time it is sold, while other seed – such as some seed sold via agrodealers – is generally paid for after it is sold to customers. The process of collecting the revenue on seed delivered to a selling agent but not paid for at the time of delivery is called the collections process.

If profits are the life blood of a company, revenue is the most important component of the blood! Good revenue collection is critical because it allows you to pay your staff, improve your products and services, and continue to operate your business. You do not want to create a business where your paying customers must subsidize your nonpaying customers, or where you or your outside investors must regularly cover losses for agents who don't pay. Establishing a good collections record is essential to your survival as a seed company. Good revenue collection enables you to cash flow your business, invest in improving your products and services, and attract outside financing.

Key Elements of a Good Collections Process

1. **Accurate, timely record-keeping.**
2. **Clear, advance communication of expectations.**
3. **Disciplined follow-up by the seed company.**

The key elements of a good collections process are:

1. **Accurate, timely record-keeping.**

Careful, precise records of what has been sold and delivered, and to whom, are essential. Records should include all products, package sizes, lot numbers, dates of delivery, and the identity of the person who accepted the delivery.

2. **Clear, advance communication of expectations.**

In dealing with an agrodealer or other type of selling agent, you must be extremely clear about how the payment will be calculated, when it will be due to you, and how it will be collected. For example, is the money due all at one time or throughout the season? Do they need to bring the payment to you or will you come to pick it up? Will there be a discount for early payment? Ideally, it is best to state your payment policies on paper and leave a copy of the policy with the seller. Most companies will also require the selling agent to sign a piece of paper that outlines the payment terms, along with other terms such as storage requirements, stating that they understand the terms and agree to abide by them. In general, the seed company should work hard to minimize the level of credit it gives to the agrodealer.

3. Disciplined follow-up by the seed company.

As the seed is sold by the agrodealer, it is critical to follow through on a timely basis and collect the money due to you. If a seed company is lax about doing this, it will become all too easy for your selling agent to use your money for some other business need, such as paying another supplier before you are paid. Frequently, poor collections are the result of slow, undisciplined follow-up by the seed company.

In designing your collections process, you might want to think about providing incentives, or rewards, for early payment or timely payment. Here are some examples of how this might work.

Seed Company A was not able to obtain enough financing from the local bank to adequately cash flow its business. As a result, the managers realized that timely collections for seed sold were absolutely essential. They decided to offer a 5 percent payment discount to their agrodealers on all money paid at the time of seed delivery and a further 3 percent on all money paid within one month of the initial delivery of product. This helped the cash flow of the company and also helped the agrodealers, many of whom liked the idea of saving money by earning the discount, thus increasing their profitability.

Seed Company B was very pleased with eight of its 10 largest agrodealers. For the last three years, these eight agrodealers had paid on time, always paying all amounts owed by the agreed upon dates. As a way of showing its gratitude, Seed Company B decided to institute an award program for large agrodealers with a good track record of payment. Company B is still deciding how to reward these companies, but most likely will provide them with some free product in the coming sales season as a way of showing their gratitude.

At the end of each selling season, it is important to calculate your collections ratio, or your uncollected accounts ratio. These numbers are mirror images of each other, and should add up to 100 percent. For example, the uncollected accounts ratio is:

$$\frac{\text{Value of All Revenue Not Yet Collected}}{\text{Value of Total Revenue for Seed Sales}} \quad (\text{divided by})$$

This should be expressed as a percentage. An extremely good company will have an uncollected accounts ratio by the end of the season of less than 2 percent, while a company with serious collections problems can have a ratio that runs as high as 15 percent, or even more.

“Poor collections are often the result of slow, undisciplined follow-up by the seed company.”

Section Three: Your Growth

Introduction

More than 70 percent of small business start-ups fail in the first five years. Survival and growth depend upon a unique and specialized mix of skills. For example, strong managers need to attract good people and build a well-functioning team, understand cash flows and finance a business, clearly define roles and responsibilities, and analyze company performance to identify opportunities for improvement, all while dealing with dangerous distractions and the normal stresses of growth. It's a challenge!

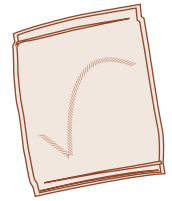
This section of the toolbox focuses on building a successful company—one that will be around for a very long time. It includes specific tools, such as [Checklist if You Are Looking for Financing](#) and [Essential Numbers You Must Know About Your Business](#), as well as more general tools, such as [The Hidden Tool: Critical Thinking](#).

The three main goals of this section of the toolbox are improving your financial literacy, or the ability to read numbers and use them to make decisions about your business; building an organization with clear roles and descriptions of responsibilities; and developing an understanding of how to use formal financial statements and plan for the future.

The skills that you build by using these tools will serve you in any entrepreneurial venture. If you succeed in mastering them, you will be well on your way to building a seed company with true staying power.

Source: PASS Meeting (George Bigirwa, Issoufou Kapran, Joe DeVries, Rob Tripp, Richard Jones, Ashington Ngigi, Jane Ininda, Acar Toure, Ed Mabaya, Chris Kaijuka, and Aline O'Connor Funk)

#30 - Seed Company Growth Checklist



The Seed Company Growth Checklist is a very simple outline of the key activities of a seed company. If you want to be a high-quality seed company with good growth prospects, you should make sure that you are addressing each of the activities on the checklist. Of course, you will not be able to take on all of them with equal intensity from the beginning, but the checklist should provide you with a good map of where you need to go.

Ideally, you should be able to put someone's name next to each item on the checklist. When you are first starting, individuals will be responsible for multiple items, and some of the items will be the responsibility of the CEO directly, until the team gets larger and more skilled managers are developed internally or hired from the outside.

Checklist for African Seed Company Development

Strategic Planning

- ☐ Your Goals: What do you want to accomplish (in terms of volume, growth, financial, reputation)?
- ☐ Your Focus: Where do you plan to compete (which market segments are you targeting, e.g., geography, product, customer type, other)?
- ☐ Your Strengths: How do you plan to beat the competition? Why will customers buy from you versus a competitor?
- ☐ Answer the above questions and also develop your plan for executing other major elements of strategy, including:
 - Developing and protecting your reputation
 - Determining your economic business model (How will you make a profit?)
 - Managing your rate of growth (You don't want to stall, but you don't want to expand too quickly and crash and burn either.)
 - Balancing bulk sales vs. direct retail sales
 - Role and scale of research and development
 - Networking, joint-venturing strategies (if advisable)
 - Creating business opportunities (new linkages)

Related Tool Topic:

31

Creating business opportunities (new linkages)

Product Management

- ☐ New products/product line planning
- ☐ Inventory management
- ☐ Quality testing and assurance
- ☐ Packaging
- ☐ Seed treatment
- ☐ Communication of technical information, training sellers

Production

- ☐ Planning
- ☐ Input acquisition (including foundation seed)
- ☐ Contracting/outgrower systems
- ☐ Planting, crop management, harvesting
- ☐ Quality assurance during growing
- ☐ Cleaning, packaging, storage
- ☐ Risk management, including cost analysis
- ☐ Certification

Market Planning...

- ☐ Knowing your customer
- ☐ Demand forecasting
- ☐ Market information and research
- ☐ Industry and competitive dynamics
- ☐ Cost/benefit analysis

...and Marketing

- ☐ Customer education and demonstrations
- ☐ Field days
- ☐ Pricing
- ☐ Sales
- ☐ Distribution
 - ☐ Model/approaches
 - ☐ Economics (e.g., commission structure)
- ☐ Promotion (e.g., brochures, signs, posters, radio, etc.)

Finance

- ☐ Financial accounting systems (what the accountants want)
- ☐ Management accounting (numbers the managers use to make decisions, e.g., ratios, product margins, etc.)
- ☐ Financial controls, including planning for collections
- ☐ Budgeting
- ☐ Working capital management (the money you need to bridge the gap between when you spend for production and when you get paid by your customers)
- ☐ Capital expenditure planning (for items such as equipment, vehicles, etc.)
- ☐ Financing (bank loans, capital investments, etc.)
 - ☐ Plan
 - ☐ Obtain
 - ☐ Maintain

Human Resource Management

- ☐ Skills analysis
- ☐ Hiring
- ☐ Compensation structure
- ☐ Training needs
- ☐ Coaching and development

Other

- ☐ Extension work/agronomic support
- ☐ Information technology (IT)
- ☐ Legal requirements
- ☐ Facilities management
- ☐ Advocacy re: policy and regulatory

Source: Aline O'Connor Funk

#31 - Must-Have Meetings for You and Your Team



In order to build a vibrant, growing company, you should meet with your team regularly to discuss—in an open and honest way—what is working, what is not, and how to prepare for the future. This is important in all businesses, but especially the seed business, because you must deal with long business cycles and a great deal of risk (such as drought) that is out of your control.

This tool is not intended to address the typical operational meetings that you should have. Rather, it addresses the “big picture” management meetings that are critical for survival and growth.

Getting to the point where your team is having good, productive management meetings will not happen overnight. However, if you follow the principles outlined below, you will begin to move in the right direction.

What Are the Key Meetings to Have?

This will vary based on the individual needs and circumstances of each seed company. For example, a company with two growing seasons will most likely follow a different meeting pattern than a company with one growing season. To help you decide what is right for your company, below is an outline of the annual senior management-level meeting cycle for an existing, successful seed company. Several of these meetings were combined if they occurred at the same time of the year. Again, this list refers to management level meetings, not nuts-and-bolts operational meetings.

Production Planning Meetings – Generally two, one to review foundation seed needs and activities and another to plan for certified seed production activities

- **Sales Planning Meetings** – Generally two, one to do longer-range planning and another closer to the start of the selling season to communicate the action plan for the season
- **Sales Results Meetings** – Generally two, one midway through the selling season to review results and a second close to the end of the season to look at what still needs to be done to maximize selling success

Meeting Summary

Always finish each meeting by making sure everyone knows what will be on the next agenda.

Related Tool Topics:

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- **Financial Results Review** – One meeting after the annual financial results are known (This is a critical meeting, so it is important to prepare for it carefully.)
- **Budget Meeting** – One meeting once the final budget is set in order to communicate the financial plans for the coming year to your team and discuss how you will achieve them
- **Strategy Meeting** – Either a separate meeting or included as a separate topic in all of the above meetings, since strategy development is an ongoing process. You should discuss reaffirming or changing your goals, the strengths and weaknesses of your company, the customers you are targeting, your competition, and how you will build strength versus your competitors in the eyes of your customers.

As already mentioned, the above list outlines management-level meetings. It does not represent all of the operational meetings that must occur in order to plan and carry out the actual work.

How Often Should We Meet?

Some of the above topics can be handled in the same meeting. Senior management meetings should probably occur at least quarterly but not more than monthly. The optimal number is approximately four to six a year. If they are held more frequently, they become operational meetings and lose their “big picture” flavor. Of course, you will have many other meetings to discuss how to execute your plans, but it is important to separate this work from your senior management meetings.

Who Should Attend?

Again, this will vary by company. One rule of thumb is to include everyone who has responsibility for a specific and significant part of your profitability, such as the heads of production, marketing, finance, etc. Some companies also include a small number of other people whom they want to develop as future senior managers, so that they can begin to be exposed to the critical thinking skills they will need to help run a part of the company in the future. One large U.S. seed company holds three senior management meetings a year with 15 people and a fourth meeting with a larger group of roughly 60 people.

#31 - Must-Have Meetings for You and Your Team (Continued)

In each meeting, it is important to follow some key rules:

1. Presenters should be prepared. This includes any analysis that needs to be done in order for the group to discuss results in a meaningful way.
2. Participants should strive to achieve “financial literacy.” While everyone is not an accountant, it is still important to understand the basics of how the company makes or loses money and how the cash flows.
3. The meeting chair should have a clear agenda, including estimated time to be spent on each topic. This will ensure that the meeting time is well managed and the necessary work is completed.
4. Presenters and participants should be open and honest. While honesty is crucial, meetings should not be about blaming. All companies face challenges and obstacles. Successful companies face these challenges and figure out how to overcome them constructively.

General Meeting Content

The following is a useful framework for approaching general meeting content. It can be used whether the topic is production planning, sales, or any other issue.

- I. Brief summary of current situation (e.g., current activities, changes since last meeting, etc.)
- II. Summary of what has worked and what hasn't worked in the recent past
- III. Listing of key current or near-term challenges (These can be challenges coming from inside the company or challenges from the outside, such as a competitive threat or a supplier issue.)
- IV. Discussion of the changes needed to best meet the challenges as well as how to continue, protect, and strengthen what is working
- V. Listing of the key tasks that need to be accomplished within the
 - Next 10 days (list person responsible for each item)
 - Next 30 days (list person responsible for each item)
 - Next 60 days (list person responsible for each item)
- VI. Summary of what will be covered at the next meeting, making sure that presenters know what they need to prepare

Feeders and Bleeders

For the year-end financial meeting, one technique that is very effective is to identify, list, and discuss your “feeders and bleeders.” Feeders and bleeders are results and practices that either feed or bleed the profitability of the company. Members of the senior management team should clearly understand what the feeders and bleeders are for their company so they can protect the activities that are profitable and correct those that are not. An example of a feeder and bleeder list follows.

Feeders and Bleeders - Illustration



The lists to the right illustrate the “Feeders and Bleeders” approach. Here are some tips for using the approach:

- It’s important not to make the list too long – focus on the main things you want people to fix
- Ideally the bleed list should show progress from the prior year. It is important that items don’t show up on the bleed list two years in a row
- Try to identify items that clearly fall under someone’s area of responsibility
- Don’t fix blame. Instead have an open and frank discussion about what worked and what didn’t. You will find that people begin to fix problems themselves.
- In a good company, bleeder lists get shorter over time because people are thinking ahead, and feeder lists get longer because your team understands your profitability dynamics. This is the result you aim to achieve.

200X Feeders - Example

- Sales increase in east (units)
- Maize revenue/unit - mix
- Improved soybean margin
- Overall expense management
- Good cash collections
- COGS (cost of goods sold) improvement, especially from processing

200X Bleeders - Example

- Maize sales below target in west
- Many customers didn’t repeat their purchase from prior year
- Soya profit margin too low
- Delivery expenses too high
- Selling expenses too high (especially given low sales growth)
- Maize returns too high
- Test plot, seed adjustments, other free units higher than budgeted
- Late collections
- Poor maize outgrower oversight, leading to high costs



What Should You Do to Follow Up After Meetings?

Good follow-up is focused and action oriented but not overly formal or bureaucratic. Remember, you are an entrepreneurial, results-oriented team working together, not a government bureaucracy. Good meeting follow-up can be one page of agreed-upon actions with responsible parties. More than this can become onerous and unfocused, and keep people from getting started on solutions right away. It is the responsibility of the head of the company to make sure that the agreed-upon follow-up items are being undertaken and to outline how the group will be updated before the next meeting (e.g., phone, e-mail, personal conversations).

Source: Aline O'Connor Funk

#32 - Habits of Strong Seed Company Managers



Running a good seed company does not depend on doing a few things well – it depends on doing a lot of things well! Occasionally reviewing this checklist will help you focus on the most important things you need to be doing as a senior manager.

1. **Always pay attention to seed quality!** No exceptions, no shortcuts. Poor-quality seed will cost you money and will cause your customers to make lower yield.
2. **Constantly look at your business through the eyes of your customers—the farmers.** This should include looking at convenience, pricing, packaging, and your educational approach from their perspective.
3. **Set clear, attainable goals for your team.** Goals are important for your team to understand and accept. Make sure that each member of the team understands how their actions will contribute to accomplishing the goal.
4. **Plan ahead!** Do not run your business day to day, week to week, or month to month. Despite the many small crises that will inevitably arise each week, good managers plan ahead and keep the team focused on accomplishing the plan.
5. **Communicate regularly with your team about successes, challenges, and changes.** The importance of communicating with your team cannot be overstated. Regular team meetings are excellent communication vehicles and provide good opportunities for all team members to exchange views and information and ask questions.

Working On vs. Working In Your Business

Many managers find it worthwhile to set aside time each week to work on improving their business, instead of dealing with day-to-day tasks. This time is spent identifying and improving big-picture items.

6. **Stay calm, especially when there are problems.** Leadership is an important responsibility, and clear thinking in the midst of a challenge is critical.
7. **Create an atmosphere of open debate; do not discourage your team from voicing independent opinions about what is best for the company and your customers.** You will miss out on excellent ideas and creative thinking if you create an atmosphere where your team is afraid to voice their own opinions.
8. **Show extra appreciation to your team members when they do a good job.** Recognition is a powerful motivator. Regularly look for opportunities to recognize your employees for doing things right! Often, it is the small, unexpected rewards that are the most meaningful.
9. **Hire people based on skills and merit, not based on connections.** Your entire team will work harder and be more confident about the future of the company if they recognize that you are building the company around strong performers, not around personal connections and preferences.
10. **“Manage by walking around,” often referred to as MBWA.** The best managers are close to the activities of the company, observe work personally, and understand first-hand the challenges and successes of the company. It is very hard to build this knowledge from your office or your car. You need to interact informally with your team—observing and coaching them—as they are working.

“Look for opportunities to recognize your employees for doing things right.”

Source: Aline O'Connor Funk and Elizabeth Samuels, <http://www.dedham.k12.ma.us/webquest/fall2003/rs/worksheets/Glossary.doc>
www.about.com, www.ehow.com, www.Wikipedia.com, http://www.internet4classrooms.com/excel_equations.htm

#33 - Excel: Computerized Record-Keeping and Analysis



While it is possible to run your seed company using manual record-keeping when it is very small, it will be essential to computerize your record-keeping and analysis as your company grows. Why is this true?

- Profit margins in the seed business are small when a company is young. As your company grows, profitability will be very dependent upon keeping accurate records of revenues and expenses and analyzing these numbers each year.
- Good quality control is essential for a seed company, and this involves accurate production and testing records. Most seed companies will, at a minimum, need to track hundreds of lots of seed, and larger seed companies track tens of thousands of lots. Computerized record-keeping adds accuracy and efficiency to these efforts.
- Managing a large number of distributors is complex and will be difficult to do without accurate record-keeping. It will also be important to compare distributor performance from year to year.
- As you grow, you will need to make many investment decisions. In order to do this well, you will need access to good historical records about past performance, and you will need to be able to rapidly and accurately analyze your options. Having computerized records will help you do this.
- As you grow, you will need to source financing from outside your company. Most banks and investment funds will not even consider lending a meaningful amount of money (e.g., to expand storage, purchase vehicles, or buy processing machinery) to a company that does not have computerized records.

Internet Resources

General Help:

<http://office.microsoft.com/en-us/excel/default.aspx>

Tutorials:

<http://www.baycongroup.com/el0.htm>

<http://exceltutorial.info/>

Sources:

www.about.com

www.ehow.com

www.Wikipedia.com

http://www.internet4classrooms.com/excel_equations.htm

<http://www.dedham.k12.ma.us/webquest/fall2003/rs/worksheets/Glossary.doc>

While larger companies require complicated operating software packages in order to run the business, small to mid-sized companies can make good use of standard software packages that are widely available in the marketplace. The most useful and flexible software is Excel, Microsoft's spreadsheet software. This software is usually included with any computer that uses Windows as its operating software. Even large companies still use Excel extensively to track and analyze data about their business. It is possibly the most widely used software for business in the world.

Using Excel is not difficult but does require some training. With a small amount of training, it is possible for a motivated person to continue to learn on his or her own. There are many tools available, both online and in book form, for teaching yourself about Excel. However, it is a good idea to take a class in Excel, if possible, or find an experienced person to show you how to use it.

Excel mimics an accountant's spreadsheet on a computer. It will help you do the following, and much more as well:

- Keep track of numbers over time (weekly, monthly, yearly, etc.)
- Perform a high volume of complex calculations in seconds that would take you hours to do manually
- Keep a budget for your company and track your performance against your budget
- Easily add onto, change, or expand the scope of work you have done in the past
- Easily compare investment options
- Prepare documents required by auditors, banks, grant-making organizations, etc.
- Prepare analyses and decision tools for your team to discuss
- Keep track of what YOU think is important in running your business (See Tool # 36, Essential Numbers You Must Know about Your Business.)

Some simple information to get you started with Excel is included on the following pages, as well as some online links for more information. However, as mentioned above, the best way to get started is to have someone who is already familiar with Excel begin to teach you or find a good Excel class that is given in a city or at a school near you.

#33 - Excel: Computerized Record-Keeping and Analysis (Continued)

There are simple uses for Excel, as well as more complicated uses. There is more than one way to do most things in Excel, so find what works for you. Remember to save your work often.

What is a Spreadsheet?

Spreadsheets vs. Workbooks

- An Excel spreadsheet is an electronic version of an accountant's ledger page or calculation sheet.
- A worksheet, or spreadsheet, is the individual page.
- A workbook is a spreadsheet file or a group of worksheets in one file.

Cell Facts

- Each small rectangle in a spreadsheet is a cell.
- Data and formulas are entered into cells in an Excel spreadsheet.

Column and Row Facts

- Columns run vertically in a spreadsheet and are labeled with a letter.
- Rows run horizontally and are labeled with a number.

Data and Formulas

- Data can be entered in several formats:
 - Value - Numbers (e.g., number, currency, percent)
 - Date/time - Date or time
 - Label - Used for headings, names, and identifying columns of data (letters and numbers)
- Formula - A mathematical calculation, such as addition and multiplication. The cell shows the value of the calculation; to see the calculation click on the cell.

Toolbar

You can use the **Toolbar** at the top of the screen for shortcuts to formatting your worksheet.

- To select a toolbar, go to View/Toolbar. Two common toolbars are Standard and Formatting.
- You can see what each icon represents by moving the cursor over that icon and a pop-up box with the name appears.

Saving Your Work

Make sure to save your work often and after you make changes. Either go to File/Save OR on the toolbar select the icon that looks like a disk. To save the file as a new file and not overwrite the original file, go to File/Save As and then change the name.

Enter Data in Excel

1. Click in the cell and start typing.
2. Press the **ENTER**, **TAB**, or **ARROW** key on the keyboard or click on another cell with the mouse.

Editing Cells in Excel

Change Complete Cell Contents

Click on the cell, type new data/formula, and press the ENTER key on the keyboard.

Change Part of the Cell Contents

- Double-click on the cell.
- Edit the cell.
- Press the ENTER key.

Cut and Paste

- Select the cell(s) you want to move and click on the scissors in the toolbar or select Control-X.
- Select the cell(s) where you want the cut cells to be pasted and click the paintbrush or select Control-V.
- Data is no longer in the original location.

Copy and Paste

- Select the cell(s) you want to copy and click on the icon with the two pieces of paper in the toolbar or select Control-C.
- Select the cell(s) where you want the copied cells to be pasted and click the paintbrush or select Control-V.
- Data is still in the original location.

Esc Key

Undoes the current data entry.

Undo Command

- The Undo command allows you to undo one or more recent actions in a worksheet. Click on the Undo button on the Standard Toolbar.

Redo Command

- Once you have undone something, you can change your mind and redo that step with the Redo button.

Formulas

Excel formulas start with the equal sign (=) instead of ending with it: =3 + 2 instead of 3 + 2 =

To maximize spreadsheet functionality, write formulas with cell addresses instead of numbers. This way the cell will reflect any future changes to data in the listed cells. For example: =A1+A2

Calculations

- Subtraction - Minus sign (-) = A1 - B1
- Addition - Plus sign (+) = A1 + B1
- Division - Forward slash (/) = C1 / D1
- Multiplication - Asterisk (*) = F7 * G1

SUM – Adds values in a range of cells. Enter the following calculation with the start and end points of the data range separated by a colon (:) =SUM(B7:B10).

Number Formatting

To format the cell as a percent or currency

1. Go to Format/Cell.
2. Select percent, currency, or comma or change the number of decimal places in the cell.

Columns and Rows to Worksheet

Add Columns to an Excel Worksheet

1. Select the column where you want to insert the column and right click to open the context menu.
2. Choose Insert from the context menu.
3. The new column will be inserted to the left of the selected column.

Add Rows to Worksheet

Follow the same steps as above, but right click on the row and select Insert.

Delete Rows or Columns

Follow the same steps as above, but select delete and the row or column.

Change Column Widths or Row Heights Using the Mouse

1. Move the cursor to the right of the column header of the column you want to adjust.
2. The cursor will change to a double-headed arrow.
3. Click with the left mouse button and drag the double-headed arrow to the right to widen the column or to the left to make it narrower.

Repeat these steps to change the width of other columns or the height of rows.

Source: Aline O'Connor Funk

#34 - Types of Capital



All businesses need cash to operate. This cash typically comes in two forms: retained earnings and capital. Retained earnings are simply earnings, or profit, from the company's operations that can be used to continue to operate and grow the business. Over the years, healthy businesses will generate robust earnings that can be "retained" in the company and used to finance the company's needs.

For start-ups, however, retained earnings are generally not large enough to meet the company's financing needs. In addition, there are times when companies need large amounts of new capital, such as during the building of a new processing plant, and these amounts are beyond the scope of retained earnings. In cases like these, cash for the business will generally come from sources of outside capital.

There are several main types of capital:

Contributed capital is money that is put into the company in exchange for stock in the company.

Debt capital is money that is lent into the business, usually by a bank or other type of financial entity such as an investment fund. Debt capital generally carries a "cost," known as the interest rate, and must be repaid in full by a specified time.

Equity capital is the "net worth" of a company. On the balance sheet, it is the assets minus the liabilities, or what you have minus what you owe. (See Tool #47, Two Vital Financial Statements) Equity capital expands when the company has a profitable year and retained earnings are added to the equity capital base. But it shrinks when the company loses money and must use some of its equity capital, or net worth, to cover expenses and stay in business.

There are two additional terms that are important to know, both of which are related to how capital is used in a business:

Capital investment or capital expenditure is the capital required to acquire or make additions to an asset of the company. In some cases, this asset might fall under the category commonly known as PP&E, or property, plant, and equipment.

Working capital is perhaps the most important use of capital for a seed company. It is the money needed to fund the company's day-to-day liquidity. Certain weeks and even months require expenditures in excess of the cash that the company is bringing in. This is especially true of seed companies, since revenue is only generated at specific times of the year, yet expenses occur every month of the year.

Related Tool Topics:

47, 52

Where Do I Get Capital?

The critical question about capital for a seed company is: How can I get it? Below are some key things to think about if you wish to attract capital (or money via loans) to your business. While the term “investor” is used below, the same points apply to banks when they look at companies to which they might lend money.

- Investors like to invest in profitable, growing businesses. Have you determined how you will be profitable? Another way to state this is: Do you have a viable economic model for your business? Do you have a realistic plan for how you will grow?
- Do you have a track record of profitability and growth, even starting from a small base?
- Investors like companies that keep good financial records and understand their costs. Do you do this?
- Investors like companies that can attract a good team of capable, committed middle managers. Have you done this or is your business still a “one-person show”?
- Investors like senior managers who focus on the business and are not overly distracted by nonstrategic activities. Are you clearly focused on your business plan?

You must keep in mind that the market for capital and loans is competitive. Since you will be competing against other businesses for capital and loans, you must be ready to clearly demonstrate why you are a good business risk, why you will be able to repay the money, and how you will use the money to grow your profitability.

Accessing capital is not an easy prospect, but the reality is that most investors are looking for good investments and most banks are looking for creditworthy borrowers. If you can prove that you are worthy, there is a good chance that you will be able to access capital for growth. However, this will not happen without good record-keeping, a positive track record of performance, and a strong commitment on your part.

Consider approaching a bank or investor for a small loan or investment first and then growing the amount as you grow your business. Develop a good partnership with your financier and grow it over time.

“If you can prove that you are worthy, there is a good chance that you will be able to access capital for growth.”

Source: Aline O'Connor Funk

#35 - Manage Your Working Capital Using A Cash Flow Statement

All businesses need to have cash on hand to meet expenses. This cash is called a company's working capital. Working capital is the short-term money needed to bridge the gap between when a company must pay the expenses required to manufacture its product (e.g., seed) and when a company gets paid by customers for that same product.

In agriculture, this gap is large, lasting for months at a time. For a seed company, the gap is even longer than for a crop farmer, because the seed company cannot simply sell after harvest time, as a grain farmer does. It must wait until the beginning of the next planting season to sell its product.

Probably the single biggest determinant of any company's survival is how it handles its working capital needs. The simple truth is that companies cannot survive without cash on hand to meet expenses and operate until it gets paid for its work.

Working capital can come from several different sources, including:

- A short-term working capital loan from a bank, something that is possible for companies with good track records
- Capital from investors or a revolving investment fund
- Profits earned in prior years and retained in the company, known as retained earnings
- A start-up grant
- Supplier financing, in which suppliers grant credit so that a company can pay after taking delivery of inputs
- Customer financing, in which customers pay for products before they receive them, e.g., they order and pay in advance

"Probably the single biggest determinant of any company's survival is how it handles its working capital needs."

Managing working capital requires care and foresight. The list below presents the five most important keys to managing working capital successfully.

1. **Create a good cash flow forecast.**

Doing this requires you to lay out month by month the amount of cash you will need to pay out from your business and the amount of cash coming into your business. The financial statement used for this purpose is called a cash flow statement when it contains historical figures. If it contains projected figures, it is called a cash flow forecast.

2. **Pay attention to revenue collection.**

The simple rule here is: sooner is better. If you allow your customers to pay you long after you have delivered your product to them, you are simply lending them your own working capital. The longer a customer owes you money, the more difficult it will be to collect it.

3. **Carefully monitor the timing of your expense payments.**

If cash flow is tight in your company, be careful about paying for inputs such as chemicals long before you need them. In addition, some suppliers might be willing to work with you by giving you credit, allowing you to pay for your inputs closer to the time when you are collecting the revenue from your customers. This is called supplier financing and is a source of working capital.

Cash Flow Statement

This statement records the cash that comes into a company and goes out of a company. It is usually constructed of a series of monthly measures and is an important tool for determining working capital needs. It helps the company's managers identify the months of the year when cash will be very short or cash flow will be negative. Negative cash flow occurs in months when the company is spending more cash than it is taking in.

Together with the income statement and the balance sheet, the cash flow statement is one of the three key business financial statements. It is one to which bankers, in particular, will pay close attention.

Related Tool Topic:

47

#35 - Manage Your Working Capital Using A Cash Flow Statement (Continued)

4. Develop a strong relationship with one or more financing institutions that can help fund your working capital needs.

Banks will not lend working capital to companies they do not know well and trust. Start early to educate a potential lender about your business. Develop a good track record so that you can demonstrate your capabilities to the potential lender. Track and analyze your cash flow patterns so that you can explain to the potential lender exactly what your needs are and how you will be able to repay a working capital loan after you receive your customer payments.

5. Be realistic about unexpected events, including those that will impact your cash flow, and develop contingency plans.

Every business must deal with unexpected events, such as customers who don't pay, suppliers who don't deliver what is promised, machinery that breaks down, etc. A wise manager is one who factors in some impact from unforeseen events and does not develop overly optimistic cash flow projections. Just as you would do with your family finances, it is strongly recommended that you have a contingency plan in the event of significant business disruption.

It is easy to see that an accurate cash flow statement and a realistic cash flow projection are at the heart of good working capital management. The following exhibit contains an example of a typical cash flow statement for a seed company. You can either simplify the statement or make it more detailed to suit your needs. The ultimate goal, however, is to accurately identify your cash inflows and outflows and plan ahead to ensure the solvency of your business.

Creating a Cash Flow Forecast

It is very typical to use the actual cash flow history from the prior year to develop the forecast for the following year, paying particular attention to changes in overall levels of revenue and expenses as well as possible changes in timing. Often, the history is reconstructed from bank records if formal cash flow records have not been maintained.

If you do not have a prior year of history, you will need to sit down with your team and develop the best possible estimate based on your knowledge of the business.

If you have any doubts about the timing of the expense payments (cash going out), it is best to forecast them early. If you have any doubts about the timing of revenue (cash coming in), it is best to forecast it late.

In the months where your cash flow is negative, the gaps that you see between cash going out and coming in represent the amount of working capital that you will need to have on hand in order to continue to operate.

Cash Flow Statement

Date

Name of Preparer

NOTE: SHADED CELLS ARE FORMULAS AND WILL CALCULATE AUTOMATICALLY

	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	TOTAL
CASH GOING OUT:													
Total Salaried Payroll													0
Daily Wages -- Field													0
Daily Wages -- Non-Field													0
Outgrower Payments													0
Loan Repayments													0
Bank Interest													0
Input Supply Purchases													0
Office Supply and Equipment Purchases													0
Travel and Transportation													0
Sales Commissions													0
Advertising Payments													0
Capital Purchases													0
(ADD OTHER LARGE CATEGORIES HERE)													0
Other Basic Monthly Expenses													0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0

	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	TOTAL
CASH COMING IN:													
Retail Sales Revenue (net)													0
Wholesale Sales Revenue													0
Long-Term Lending													0
Grant Funding													0
(ADD OTHER LARGE CATEGORIES HERE)													0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0

WORKING CAPITAL REQUIREMENT	0	0	0	0	0	0	0	0	0	0	0	0	0
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Source: Aline O'Connor Funk

#36 - Essential Numbers You Must Know About Your Business

Senior managers must understand the “story that numbers tell about their business.” This knowledge allows you to improve and grow your business.

Some businesses refer to the numbers listed below as KPIs, or key performance indicators.

For all the numbers, ratios, and percentages outlined below, it is important to maintain a consistent approach to your calculations from year to year. If the methodology is ever changed, it is best to go back to past years and change those numbers as well so that a consistent approach is used.

KPI	Unit	Explanation
Unit sales each year, by crop	kg or t	This is your unit sales, net of returns, annually. It is best to split between retail sales and wholesale or other sales.
COGS percentage	COGS as a percentage of revenue, for total company and ideally by crop (%)	COGS is the cost of goods sold. It is the sum of all of the money you spend to “manufacture” your products. It is advisable to include all costs up to and including putting product in the bag.
Gross profit margin (GP or GM)	GP as a percentage of revenue, for total company and ideally by crop (%)	GP margin is calculated as 100 percent (revenue) minus the COGS percentage (e.g., 100% - 55% COGS = 45% GM). This is a measure of the proportion of revenue you have to spend in areas such as sales and marketing, administration, etc.
Return percentage	Returns as a percentage of total units shipped (%)	This is the units returned divided by total units shipped. It is an indication of how much product shipped is ultimately returned by agrodealers or others.
Uncollected accounts	Uncollected revenue as a percentage of total seed revenue billed (%)	Some customers or distributors do not pay. This ratio provides an indication of how much of your revenue has not been realized due to poor collections.
Carryover percentage	Carryover seed as a percentage of your total inventory, after the harvest of new production (%)	The carryover percentage is a measure of how much of your beginning inventory comes from prior year production. Generally, lower numbers are better here, although some companies with good storage capability deliberately maintain carryover to minimize production risks in any given year. This should be measured consistently at one point in the year.

Average germination rates	Weighted average of germination rates for entire harvest of a crop and also for harvest that is ultimately accepted for sale (excluding seed that is rejected for low germ) (%)	It is important to watch these two measures over time and work to ensure they are as high as possible. If they deteriorate over time, it is an indication that your production quality is dropping, either due to poor production management or noncontrollable issues such as climate. (Note: Weighted average means that you will assign five times the weight to a germination measure from a 5t lot than from a 1t lot.)
Land under production	Hectares or acres	No explanation is needed here. However, companies with more than one growing season need to be careful to always compare like statistics, e.g., only compare full years or comparable growing seasons.
Realized yield percentage	Actual yield as a percentage of anticipated yield (%)	This is a good percentage to track over time as a measure of how successful your production year has been. You need to be honest about both your anticipated production up front and your actual results.
Crop loss percentage	Loss as a percentage of hectares, acres, or anticipated tonnage of yield (%)	For example, a company might calculate that it lost 30 percent of its crop to a combination of drought and animal damage. (This should = 100% when added to the above number.)
Total revenue	Local currency or USD if required by a financier	This comes from your income statement.
Operating income	Local currency or USD if required by a financier	This comes from your income statement.
Net income (also called net profit)	Local currency or USD if required by a financier	This comes from your income statement.
Operating income percentage	Operating income as a percentage of revenue (%)	This is a key profitability ratio to watch over time. As your company grows larger, it should be easier to improve this.
Agrodealer concentration	Percentage and number of your agrodealers (or other distribution points such as an NGO) required to account for 80 percent of your sales volume by revenue	For example, if 20 of your 60 agrodealers account for 80 percent of your sales revenue, your agrodealer concentration would be 33 percent (20 of 60 dealers).
Market growth rate	Estimated growth in hectares planted with the type of seed that you sell in your geographic market (%)	For example, if hectares planted of improved maize grew by 10 percent in a given year, but your unit sales of maize increased by 30 percent, you are doing better than the market growth rate. However, the opposite would be true if your growth was only 5 percent.

Related Tool Topic:

50

Source: Aline O'Connor Funk

#37 - Checklist If You Are Seeking Financing

When you are looking for outside financing and approach a bank or investment fund for a loan or equity capital, it will most likely require documentation of past performance as well as your projections about future performance. This will be particularly true if you are looking for a large sum of money. You will be given a specific list of the reports, statements, and other documents the bank or investment fund wants to see, but if you are a well-run, financially literate company, you will already have many of these items.

If you believe that you will be looking for outside financing in the coming years, it is wise to start now to collect the information you will be asked to submit.

This list will include items such as:

1. An audited income statement and balance sheet (possibly for more than one year)
2. A budget for the current year
3. Cash flow statements (historic and budgeted for the current year), including working capital needs (Working capital is the money you need to bridge the gap between differences in timing of expenses and revenues.)
4. An income statement forecast (most likely three to five years)
5. Cash flow and balance sheet forecasts for the same period of time, tied to the income statement forecasts
6. A product line summary
7. A list of key employees with a summary of pertinent experience for each person

Start Collecting Financial Statements Now

Even if you don't think you will need outside financing, it is still wise to collect such information. It will help you manage your business, plus it will speed up your loan application process, should your need for capital change.

8. A full explanation of how you will use the money you are requesting, including financial projections so that the lender/investor can assess future profitability
9. A capital investment forecast (e.g., what money you anticipate spending on capital items such as equipment and vehicles over the next five years)
10. A summary of your strategy, including:
 - a. Goals (financial goals, market position, and reputation)
 - b. Market segments where you will focus (geography, product, type of customer)
 - c. How you plan to beat the competition (including saved seed, if this is something you are competing against!)
 - d. Key strategy implementation steps
 - e. Your sense of timing for strategy implementation (How long do you anticipate it will take to reach your goals? What will be your phases?)
11. List of key outside advisors/professional support (accountant, etc.)

Related Tool Topics:

35, 36, 47, 51

Source: Aline O'Connor Funk

#38 - Avoid Dangerous Distractions



A surprising number of companies in a wide variety of industries fail because they take their managerial focus off of the main purpose of the business. In the seed industry, the core purpose is to serve farmers by providing high-quality seed in a convenient and timely manner every season.

Seed companies can lose their focus on this core purpose because of business distractions, which can ultimately become fatal if not managed. In the seed industry, dangerous distractions are sometimes more common than in other industries because the business cycle is so long. This long agricultural cycle can lull managers into a false sense of “there’s always more time, so I can afford the time to do <fill in the distraction>.” Nothing could be further from the truth.

Some of the most common dangerous distractions are:

Thinking that driving sales, marketing, and distribution are more important than ensuring seed quality.

Poor quality will always come back to cause problems because it breaks your bond of trust with your customers. While you need to perform all functions well, sales and marketing only become important once you have mastered the art of producing quality seed.

Paying too much attention to the current year at the expense of planning for next year’s foundation and certified seed production.

More than one company has had a great year, only to go backwards the next year because they failed to plan ahead sufficiently for production growth.

Focus on What Is Most Important

“It becomes all too easy to focus on internal challenges and lose perspective on why your business exists – to serve your customers.”

“The long agricultural cycle can lull managers into a false sense of ‘There’s always more time.’”

Spending too much time on other people's industry-wide "development" projects and not enough time on taking care of your own business.

Successful companies are often asked to participate in activities, conferences, and meetings that are important, but not sufficiently important to jeopardize their business. Good business managers sift through these requests extremely carefully, so as not to take their eye off of their top priority – the business and its customers.

Focusing too much on internal issues and not enough on customers, agrodealers and outgrowers.

It becomes all too easy to focus on internal challenges and lose perspective on why your business exists – to serve your customers. Spend time with them! Developing strong relationships with agrodealers and outgrowers is also key to your mission.

Doing anything rather than dealing with a bad employee.

These situations almost never get better, so don't get distracted and let them continue. Focus on fixing them and moving on.

Burying yourself in your computer rather than engaging with your team and your customers.

While computers are wonderful communication, research, and record-keeping tools, they can also become a very tempting distraction! You need to make sure that you do not substitute time at your computer doing things such as answering e-mails for quality time with your team. You must also be careful not to substitute doing research online for actively checking out your own outgrowers' fields and conducting production research.

Becoming what is commonly referred to as a "briefcase seed company."

We've probably all seen them. These are companies that start out with good intentions about serving farmers but get distracted along the way, losing sight of the basic need to perform well for their customers and grow. The managers look good, sound good, attend all the big meetings, and seem to have great connections. But can they really produce seed? Are they focused on their customers? Are they growing? The only good measure of a seed company's success is growing farmer demand based on past performance. Period.

Just as a good teacher is fully engaged with his or her students, a good seed company manager is fully engaged with the business – with quality, with customers, with cash flow, and with planning ahead – and is careful to avoid dangerous distractions in striving to accomplish goals.

Actual Fatal Attractions

In recent years, these distractions have seriously wounded one or more seed companies in sub-Saharan Africa:

- Premature diversification into non-seed businesses
- Overly aggressive expansion
- Lack of product focus
- Excessive travel and speaking commitments
- Lack of attention to future planning
- Over-dependence on wholesale customers such as NGOs at the expense of serving local farmers.

Source: Aline O'Connor Funk

#39 - Elements of A Good Partnership



Many businesses are based on a partnership structure. Partnerships are formal, legally binding arrangements that involve shared work, shared capital contributions, and/or equity ownership for each partner.

Partnerships can be highly beneficial because starting and running a business is extremely difficult, and a strong, effective partnership can increase the chances of business success. However, partnerships can also bring on a whole host of additional problems and can ultimately cause a business to fail if not structured properly initially.

There are many reasons why partnerships fail, including:

- Discovering that there are not strong shared values about how to run the business
- Differing levels of work discipline
- Divergent views of the best strategy for the company
- Inability of the partnership to deal with business stresses
- Risk-tolerance levels that are not compatible
- Financial hardships

For the above reasons, many businesspeople prefer not to engage in partnerships. They believe that business is a difficult undertaking and only becomes more difficult when partners are involved. For business managers who have a good skill set, financial backing, and the ability to build a capable team, avoiding a partnership can be a wise decision.

However, there are also many businesspeople who recognize that their success will depend upon a successful partnership. Perhaps they are missing key capabilities in the company or need a partner's financial backing. In this case, it becomes important to build the best possible partnership—one that is properly thought through and designed from the beginning.

Other Options

A partnership is only one way to structure outside involvement in a business. Other approaches include:

- Strong employee relationships
- Investors
- Lenders
- Consultants
- Advisors or outside board members
- Participation in a profit-sharing plan or commission-based growth plan in exchange for services

Think carefully about which approach will best suit your needs while giving you the greatest amount of business flexibility in the future.

Many business needs can be met by using one of the above approaches, which can be much more flexible than a formal partnership arrangement. If you are still planning to move ahead with a partnership structure, a general rule is to have as few partners as possible.

The key things to think about and discuss before starting a partnership include the items listed below.

Trust and Integrity: Can you trust this person absolutely? Do you have complete faith in his or her integrity? If the answer to either of these questions is “no,” you should avoid the partnership.

Common Values: Do you share the same values? Do you both have the same views about how to treat employees? Product quality? Spending money? Integrity? Customer focus?

Strategic Vision: Do you share the same long-term (e.g., five-year) vision for the company? Do you both understand the milestones that must be achieved to realize this vision? Do you both agree on how you will handle likely strategic setbacks?

Indispensable Talents: Do all partners bring something to the table that the others cannot bring? Since each partner will have equity in the business, it is critical that they bring talents and/or resources that are not available from the other partners.

Lifestyle Expectations: Are all partners open and honest about their lifestyle expectations? For example, is the family planning to move? Is a partner planning to take another job to make ends meet? Is a partner planning to go back to school? If the business requires more capital, will the partner be able to meet this requirement? Will the partner be willing to work hard to build the company?

Disappointments: How will you resolve issues that might arise when a partner is not delivering what was promised to the business?

Once you have discussed the previous issues, if you are still planning to form a partnership you must consider some very practical matters.

The first of these is **share ownership**. It is advisable for the founder and main driver of the company to maintain a majority ownership stake, even if it is simply a 51-49 percent split. In general, it is wise to give the smallest equity shares possible while still being fair. You can always choose to give more equity to partners later, based on performance, but you will not have the liberty of taking equity back if your partner does not perform.

#39 - Elements of A Good Partnership (Continued)

The second practical matter is **determining the exact business role of each partner**.

These roles should not overlap and should play to the strength of each partner.

The third practical matter is **putting your partnership arrangement in writing**. This is a critical step, no matter how comfortable you feel with your partner. Issues such as capital contributions, share of profits, partner decision making, additional partners, and withdrawal or death all need to be formally addressed and documented. It is extremely unwise to simply have a verbal understanding of the partnership, even if the partner is someone you have known for a very long time or a family member. There are many types of formal partnership agreements. They are generally drawn up by lawyers and clearly explained to and discussed with all partners. An example of a typical partnership

agreement that would be used for a small business in the United States follows.

The fourth and final practical matter you will need to address is **partnership communication**. Regular meetings, at least monthly, are recommended. In addition, there should be monthly financial reports outlining the activity for the period and accounting for all partnership fund expenditures. Regular discussions should be held about the strategic direction of the business and the key tasks that all partners should be performing if they are making work contributions to the business as well as financial contributions.

Addressing these steps thoughtfully and in a disciplined manner will help minimize the risks associated with a partnership structure in your business.

Read This Before Forming a Partnership

If you do not wish to operate the business on your own, your choice of a partner will be one of the most important choices you make. It is wise to move slowly and be extremely thoughtful. Some business owners prefer to have a trial period with a potential partner, choosing to collaborate first on

a specific project or limited joint venture before exploring a full, longer-term partnership agreement. Others are very smart about looking into their future partner's business history, paying special attention to any other business arrangements or partnerships in which the candidate is, or has

been, involved. It can be a mistake to engage in a partnership with someone who has never participated in one before, as the person's expectations may be unrealistic. Careful vetting of potential partners will be well worth your time. A strong, functional partnership is a valuable business asset.

Partnership Agreement - Sample

PARTNERSHIP AGREEMENT

THIS PARTNERSHIP AGREEMENT (“Agreement”) made and effective this *[date]*, by and between the following individuals, referred to in this Agreement as the “Partners”: *[list names of partners]*.

The Partners wish to set forth, in a written agreement, the terms and conditions by which they will associate themselves in the Partnership.

NOW, THEREFORE, in consideration of the promises contained in this Agreement, the Partners affirm in writing their association as a partnership in accordance with the following provisions:

1. Name and Place of Business.

The name of the partnership shall be called *[name of partnership]* (the “Partnership”). Its principal place of business shall be *[city and state of principal place of business]*, until changed by agreement of the Partners, but the Partnership may own property and transact business in any and all other places as may from time to time be agreed upon by the Partners.

2. Purpose.

The purpose of the Partnership shall be to *[describe business purpose]*. The Partnership may also engage in any and every other kind or type of business, whether or not pertaining to the foregoing, upon which the Partners may at any time or from time to time agree.

3. Term.

The Partnership shall commence as of the date of this Agreement and shall continue until terminated as provided herein.

4. Capital Accounts.

A. The Partners shall make an initial investment of capital, contemporaneously with the execution of this Agreement, as follows:

Partners and Capital
[list partners’ names and amounts invested]

In addition to each Partner’s share of the profits and losses of the Partnership, as set forth in Section 5, each Partner is entitled to an interest in the assets of the Partnership.

Partnership Agreement - Sample (Continued)

B. The amount credited to the capital account of the Partners at any time shall be such amount as set forth in this Section 4 above, plus the Partner's share of the net profits of the Partnership and any additional capital contributions made by the Partner and minus the Partner's share of the losses of the Partnership and any distributions to or withdrawals made by the Partner. For all purposes of this Agreement, the Partnership net profits and each Partner's capital account shall be computed in accordance with generally accepted accounting principles, consistently applied, and each Partner's capital account, as reflected on the Partnership federal income tax return as of the end of any year, shall be deemed conclusively correct for all purposes, unless an objection in writing is made by any Partner and delivered to the accountant or accounting firm preparing the income tax return within one (1) year after the same has been filed with the Internal Revenue Service. If an objection is so filed, the validity of the objection shall be conclusively determined by an independent certified public accountant or accounting firm mutually acceptable to the Partners.

5. Profits and Losses.

Until modified by mutual consent of all the Partners, the profits and losses of the Partnership and all items of income, gain, loss, deduction, or credit shall be shared by the Partners in the following proportions:

Partner and Shares

[list partners' names and percent of profits or losses]

6. Books and Records of Account.

The Partnership books and records shall be maintained at the principal office of the Partnership and each Partner shall have access to the books and records at all reasonable times.

7. Future Projects.

The Partners recognize that future projects for the Partnership depend upon many factors beyond present control, but the Partners wish to set forth in writing and to mutually acknowledge their joint understanding, intentions, and expectations that the relationship among the Partners will continue to flourish in future projects on similar terms and conditions as set forth in this Agreement, but there shall be no legal obligations among the Partners to so continue such relationship in connection with future projects.

8. Time and Salary.

Until and unless otherwise decided by unanimous agreement of the Partners, *[list time commitments]*. Each Partner shall nonetheless be expected to devote such time and attention to Partnership affairs as shall from time to time be determined by agreement of the Partners. No Partner shall be entitled to any salary or to any compensation for services rendered to the Partnership or to another Partner.

Partnership Agreement - Sample (Continued)

9. Transfer of Partnership Interests.

A. Restrictions on Transfer. None of the Partners shall sell, assign, transfer, mortgage, encumber, or otherwise dispose of the whole or part of that Partner's interest in the Partnership, and no purchaser or other transferee shall have any rights in the Partnership as an assignee or otherwise with respect to all or any part of that Partnership interest attempted to be sold, assigned, transferred, mortgaged, encumbered, or otherwise disposed of, unless and to the extent that the remaining Partner(s) have given consent to such sale, assignment, transfer, mortgage, or encumbrance, but only if the transferee forthwith assumes and agrees to be bound by the provisions of this Agreement and to become a Partner for all purposes hereof, in which event, such transferee shall become a substituted partner under this Agreement.

B. Transfer Does Not Dissolve Partnership. No transfer of any interest in the Partnership, whether or not permitted under this Agreement, shall dissolve the Partnership. No transfer, except as permitted under Subsection 9.A. above, shall entitle the transferee, during the continuance of the Partnership, to participate in the management of the business or affairs of the Partnership, to require any information or account of Partnership transactions, or to inspect the books of account of the Partnership; but it shall merely entitle the transferee to receive the profits to which the assigning Partner would otherwise be entitled and, in case of dissolution of the Partnership, to receive the interest of the assigning Partner and to require an account from the date only of the last account agreed to by the Partners.

10. Death, Incompetency, Withdrawal, or Bankruptcy.

Neither death, incompetency, withdrawal, nor bankruptcy of any of the Partners or of any successor in interest to any Partner shall operate to dissolve this Partnership, but this Partnership shall continue as set forth in Section 3, subject, however, to the following terms and conditions:

A. Death or Incompetency.

In the event any Partner dies or is declared incompetent by a court of competent jurisdiction, the successors in interest of that Partner shall succeed to the partnership interest of that Partner and shall have the rights, duties, privileges, disabilities, and obligations with respect to this Partnership, the same as if the successors in interest were parties to this Agreement, including, but not limited to, the right of the successors to share in the profits or the burden to share in the losses of this Partnership, in the same manner and to the same extent as the deceased or incompetent Partner; the right of the successors in interest to continue in this Partnership and all such further rights and duties as are set forth in this Agreement with respect to the Partners, the same as if the words "or his or her successors in interest" followed each reference to a Partner; provided, however, that no successor in interest shall be obligated to devote any service to this Partnership and, provided further, that such successors in interest shall be treated as holding a passive, rather than active, ownership investment.

Partnership Agreement - Sample (Continued)

B. Payments Upon Retirement or Withdrawal of Partner.

(1) Amount of Payments. Upon the retirement or withdrawal of a Partner, that Partner or, in the case of death or incompetency, that Partner's legal representative shall be entitled to receive the amount of the Partner's capital account (as of the end of the fiscal year of the Partnership next preceding the day on which the retirement or withdrawal occurs) adjusted for the following:

(a) Any additional capital contributions made by the Partner and any distributions to or withdrawals made by the Partner during the period from the end of the preceding fiscal year to the day on which the retirement or withdrawal occurs;

(b) The Partner's share of profits and losses of the Partnership from the end of the preceding fiscal year of the Partnership to the day on which the retirement or withdrawal occurs, determined in accordance with generally accepted accounting principles, consistently applied; and

(c) The difference between the Partner's share of the book value of all of the Partnership assets and the fair market value of all Partnership assets, as determined by a fair market value appraisal of all assets. Unless the retiring or withdrawing Partner and the Partnership can agree on one appraiser, three (3) appraisers shall be appointed--one by the Partnership, one by the retiring or withdrawing Partner, and one by the two appraisers thus appointed. All appraisers shall be appointed within fifteen (15) days of the date of retirement or withdrawal. The average of the three appraisals shall be binding on all Partners.

(2) Time of Payments. Subject to a different agreement among the Partners or successors thereto, the amount specified above shall be paid in cash, in full, but without interest, no later than twelve (12) months following the date of the retirement or withdrawal.

(3) Alternate Procedure. In lieu of purchasing the interest of the retiring or withdrawing Partner as provided in subparagraph (1) and (2) above, the remaining Partners may elect to dissolve, liquidate and terminate the Partnership. Such election shall be made, if at all, within thirty (30) days following receipt of the appraisal referred to above.

11. Procedure on Dissolution of Partnership.

Except as provided in Section 10.B.(3) above, this Partnership may be dissolved only by a unanimous agreement of the Partners. Upon dissolution, the Partners shall proceed with reasonable promptness to liquidate the Partnership business and assets and wind-up its business by selling all of the Partnership assets, paying all Partnership liabilities, and by distributing the balance, if any, to the Partners in accordance with their capital accounts, as computed after reflecting all losses or gains from such liquidation in accordance with each Partner's share of the net profits and losses as determined under Section 5.

12. Title to Partnership Property.

If for purposes of confidentiality, title to Partnership property is taken in the name of a nominee or of any individual Partner, the assets shall be considered to be owned by the Partnership and all beneficial interests shall accrue to the Partners in the percentages set forth in this Agreement.

Partnership Agreement - Sample (Continued)

13. Leases.

All leases of Partnership assets shall be in writing and on forms approved by all the Partners.

14. Controlling Law.

This Agreement and the rights of the Partners under this Agreement shall be governed by the laws of the State of *[state of governing law]*.

15. Notices.

Any written notice required by this Agreement shall be sufficient if sent to the Partner or other party to be served by registered or certified mail, return receipt requested, addressed to the Partner or other party at the last known home or office address, in which event the date of the notice shall be the date of deposit in the United States mails, postage prepaid.

16. General.

This Agreement contains the entire agreement of the Partners with respect to the Partnership and may be amended only by the written agreement executed and delivered by all of the Partners.

17. Binding Upon Heirs.

This Agreement shall bind each of the Partners and shall inure to the benefit of (subject to the Sections 9 and 10) and be binding upon their respective heirs, executors, administrators, devisees, legatees, successors and assigns.

IN WITNESS WHEREOF, the Partners have executed this Agreement the date first above written.

Source:

www.lawsmart.com

http://www.lawsmart.com/documents/partnership_agreement.shtml

Source: Aline O'Connor Funk

#40 - Trust and Ethics Checklist



Definitions

Trust: *reliance on the integrity, strength, ability, surety, etc., of a person or thing; confidence. (Source: Dictionary.com)*

Ethics: *a system of moral principles; that branch of philosophy dealing with values relating to human conduct, with respect to the rightness and wrongness of certain actions and to the goodness and badness of the motives and ends of such actions. (Source: Dictionary.com)*

For a seed company anywhere in the world to grow, the farmers must trust the company. It's that simple. When farmers lose trust in the provider of their seed, they make a logical decision and find another source for seed, possibly even saving it from last year's crop.

Trust is enormously important in the seed industry and is closely tied to company ethics. Companies that behave ethically will earn the trust of their customers. However, seed companies must go beyond ethics, always keeping the best interest of the farmer in mind. One simple way to test this goal is by asking yourself the following question about your products: "Is every single package of my company's seed good enough to plant on my own family farm?" If you cannot answer "yes" to this question, then it is not fair to ask your customers to plant your seed on *their* families' farms.

Ask Yourself:
"Is every single
package of my
company's seed good
enough to plant on
my family farm?"

One falsehood spoils a thousand truths.

African Proverb

Below is a simple checklist of questions that will help you think about how trust and ethics impact a seed company's everyday operations. Your team will benefit by sitting down and discussing this list together and understanding what it means relative to day-to-day activities.

Seed Quality

- ☐ Does our company have strong quality standards?
- ☐ Do we fully and completely adhere to our quality standards?
- ☐ When we have seed that does not meet our quality standards, do we remove it from our saleable inventory?
- ☐ Do we ensure that all quality tests are accurate? Do we take steps to double-check our testing processes?
- ☐ Do we communicate the company's quality standards to all employees and ensure that they adhere to them?

Farmer and Agrodealer Communication

- ☐ Is all of our seed truthfully labeled?
- ☐ Do we communicate our quality standards to the farmer and to the agrodealer?
- ☐ Are we truthful and honest about where, when, and how our seed should be planted so that a farmer can achieve the maximum value from the seed he or she has purchased?
- ☐ When we have a problem with our seed, are we open and honest with our customers and agrodealers about it?
- ☐ Are we honest with agrodealers about seed availability so that they have the information they need to make their own business decisions?

Employee Communication

- ☐ Are we open and honest with our team about our business?
- ☐ Do we share both the successes and the failures with our team?
- ☐ Do we always model ethical, trustworthy behavior for our employees?
- ☐ Do we openly acknowledge and commend trustworthy behavior?
- ☐ Do we talk frequently with our team about the importance of earning the trust of the farmers and agrodealers we serve and discuss how we can best do this?

Source: Aline O'Connor Funk

#41 - The Hidden Tool – Critical Thinking



Probably the most important tool you need to run your business is a tool you have with you constantly: your brain! While this might seem completely obvious, it is common for all of us to neglect to apply critical thinking skills to the problems we must solve. This happens because we have many demands on our time and are dealing with many issues simultaneously. However, it is always worthwhile to stop and think carefully about

what we are doing, what we plan to do in the future, and how we are spending our money.

Using your brain to anticipate, identify, and solve business problems is called critical thinking. It often involves a great deal of common sense and a willingness to ask the obvious questions. The best way to illustrate the use of critical thinking is by looking at a couple of examples.

Hiring Decision:

Mr. O needs a new production manager for his seed company. He hears about a promising new college graduate who has a degree in agricultural economics. He is further interested in this young man because he is the cousin of his wife's closest friend. He has seen the young man before and respects his polished, professional appearance.

Critical Thinking Questions:

- Does the candidate have any practical, hands-on experience in producing seed?
- Does the candidate like working directly with farmers and outgrowers? Is he interested in building a career in this area?
- Does the candidate possess problem-solving skills? Good communication skills? Is he willing to work very hard? Is he trustworthy?
- Is the candidate financially literate? Computer literate? If not, can he be trained, if necessary?

Outcome:

Mr. O asks the preceding questions and concludes that while the young man has a good academic credential and professional appearance, he is more interested in an office position than in "getting his boots muddy" and working directly in production. Furthermore, Mr. O discovers by asking more questions that the young man lacks maturity and is not ready to work independently with little supervision, a situation that would require a lot of Mr. O's time. Mr. O ultimately decides to look for someone who might not appear as polished but has more hands-on experience and maturity.

Production Costs Decision:

Mrs. M has a dilemma. She is depending upon local labor to assist in weeding her outgrowers' production fields, but the owners of nearby rice paddies are getting ready to harvest and also rely on local labor. The rice producers have decided to pay 15 percent more in daily wages than Mrs. M's outgrowers are willing to pay. While many of the workers from previous years want to return to help with the weeding rather than helping with the rice harvest, they have decided that they cannot pass up the additional wages. As a result, Mrs. M has been told by her outgrowers that her fields will not be weeded. The outgrowers are not happy about this, because their yields will be lower and they will not make as much on their seed crop, but they do not have the additional funds to pay the local laborers more.

Critical Thinking Questions:

- Approximately how much seed production will be lost if the fields are not weeded? (Seed tonnage will be lost because the weeds will compete for nutrients, moisture, etc., thus negatively impacting seed yield.)
- Would the lost seed tonnage negatively impact company sales? That is, is there sufficient demand for the seed to ensure that the additional production would definitely be sold?
- If so, how much revenue would be missed if the weeds are left in the field?
- Are there any other solutions that are cost effective, outside of employing the local laborers from the prior year?

Outcome:

Mrs. M gives careful consideration to the above questions and concludes that the lost production volume due to weed competition will hurt her sales in the following year. She estimates the value of the lost sales and realizes that it makes good financial sense for the company to assist the outgrowers in meeting the higher wages for local labor. After discussing the issue with her team, they decide to divert a portion of funds from a planned radio campaign and advance the money to the outgrowers to pay the local laborers. The advance will then be deducted from the final harvest payment. Mrs. M's company and the outgrowers will all benefit from the higher level of production. Mrs. M's marketing and sales manager suggests that he approach the radio station to see if it will agree to delay a portion of their payment until the farmers begin paying for their seed. He is optimistic that it will, because the company has built a good relationship with the manager of the station and has given him free seed in the past to use on his family's farm so that he could personally experience the value of the products.

Model Critical Thinking

As the above examples illustrate, reaching the best solutions to business problems requires critical thinking skills. A wonderful benefit of engaging in critical thinking with your team to solve problems is that you strengthen the ability of your team members to solve future problems on their own. You are setting an example of how to approach the challenging issues they face in businesses every day, and your team will learn from this process.

Source: Aline O'Connor Funk and Chuck Kuster



#42 - Fun is Important in Business, Too!

Customers, outgrowers and your company team all like to have fun. Fun bonds people together around a common cause, is a great reward for hard work, and is an important element of celebrating milestones. Fun activities and events can also generate goodwill with customers, employees, community leaders and even the media. Having fun is a great way to show your appreciation. It doesn't need to cost a lot – it's the spirit that counts.

Fun Ideas to Consider:

Customer recognition

Promote a highest yield or best field contest for customers. Provide a reward and generate publicity.

- Involve customers who had good results in your publicity and publications.
- Create “meaningful moments” with key customers and influence leaders. When experts visit your business, try to create opportunities for these visitors to meet local leaders. Your goal is to share your visitors with your business friends.

- Appreciation meals are fun, plus they create opportunities for you to deepen your relationship with customers.

Sales accomplishments

- Involve your staff in a sales “challenge” that includes a celebration if sales goals are attained.
- Develop a sales goal program that rewards key goals, such as total sales, sales growth, adding the most new customers, and providing the best customer service.



Agriculture is hard work and often lonely work. That makes it especially important to recognize and enjoy important business accomplishments.

Staff recognition

- Consider fun, inexpensive ways to recognize achievements, such as a special refreshment break for each 100 t of seed packaged.
- Have a special place where you post notices of employee accomplishments for the entire team to read and enjoy.
- Share stories of customer satisfaction with your team. Consider bringing some customers in to talk to your team about how your seed has helped their families.
- Develop some celebratory, employee-oriented awards such as “This Week’s Quality King or Queen” or “Best Idea of the Month.”

New facilities

- Consider holding an open house for customers.
- Invite local leaders to participate in a ribbon-cutting event and invite the media.
- Involve local musical groups, school classes, etc. in such events as entertainment. Children make events fun, and help encourage the attendance of parents, teachers, and other local leaders.



Children can generate a lot of energy and fun for your various events. Plus, when you invite children’s groups to provide entertainment, often they bring along their parents and other important influence leaders.

Source: Aline O'Connor Funk

#43 - Identify the Skills Your Company Needs



All successful businesses must have employees with good functional knowledge and good skills. What does this mean?

In the seed industry, functional knowledge is knowledge about the technical aspects of running the business. For example, employees must know about production or marketing or finance.

Skills, on the other hand, are general capabilities that are needed in any business setting. Examples are: language skills, computer skills, and organization skills. Without skills, it is difficult to apply functional knowledge to running a business. This is why skills are very important. Think about the following situations:

A university graduate has a degree in business management and understands finance (functional knowledge). But what makes her a strong candidate for the open position at a local seed company are her skills: computer usage, project planning, and risk management.

Two potential recruits are being considered for the position of production manager at a seed company. Both have good technical production training and experience (functional knowledge). However, one candidate also has strong skills in the areas of problem solving, managing people, and day-to-day execution, so he will be offered the position.

Not every employee will have every skill. However, the leader of the company will benefit from looking carefully at the skills needed to run and grow the business and thinking about which employees have specific skills. Why is this important?

1. It helps you determine where you have skills on your team that can be better utilized.
2. It helps you see what skills might be missing.
3. It allows you to better understand what skills you need when you are hiring new people.

It is a good idea to use a tool such as a skills matrix to identify the skills you have in your company and the skills you still need in your company. An example follows.

In the first hand column of your skills matrix, list all of the key skills you feel that you need to develop a strong company. Across the top row, list the employees you wish to include in the skills analysis. In each box, rank the skill level of each employee in each category. When you have finished, discuss the skills matrix with your senior team, including the following questions:

- Do we have the right mix of skills in the company to accomplish what we want to accomplish?
- If not, what is missing and how can we access these skills?
- Do we have people with good skills who are underutilized? Who can make greater contributions?
- If senior managers have skills that are missing in our younger employees (e.g., managing people), do we need to train or mentor the younger employees in order to develop these skills?

Just as farmers need certain inputs and tools to produce a good crop, businesses need inputs and tools too. These inputs and tools are represented by the skills in your employee base.

Spending the time to think carefully about the skills present and absent in your company will greatly improve your chances for sustainable growth.

Completed Seed Company Skills Matrix

Instructions: Place H (high), M (medium), or L (low) in each box, depending upon the skill level of each employee. If skill level is unknown, place “?” in the box.

	CEO	Production Manager	Marketing & Sales Manager	Financial Manager	Etc...
General Skills:					
Computer Usage	L	L	H	H	
Writing	M	L	H	L	
Oral Presentation	H	L	H	M	
People Skills:					
Managing People	M	H	H	L	
Motivating a Team	H	M	H	L	
Communication	M	M	H	L	
Teaching/Mentoring	L	H	L	M	
Execution Skills:					
Planning	M	H	M	H	
Organization	L	H	M	H	
Day-to-day Execution	L	H	L	H	
Creativity	H	?	M	L	
Managing Change	L	M	L	L	
Negotiation	H	?	L	M	
Analytic Skills:					
Analyzing Numbers	M	L	L	H	
Problem Solving	H	H	M	H	
Managing Growth	M	M	M	M	
Strategic Thinking	H	?	L	L	
Risk Management	M	M	L	H	

Please Note: A blank Seed Company Skills Matrix is on your CD-Rom.

Related Tool Topic:

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#43 - Identify the Skills Your Company Needs (Continued)

Blank Seed Company Skills Matrix

Instructions: Place H (high), M (medium), or L (low) in each box, depending upon the skill level of each employee. If skill level is unknown, place “?” in the box.

	CEO	Production Manager	Marketing & Sales Manager	Financial Manager	Etc...
General Skills:					
Computer Usage					
Writing					
Oral Presentation					
People Skills:					
Managing People					
Motivating a Team					
Communication					
Teaching/Mentoring					
Execution Skills:					
Planning					
Organization					
Day-to-Day Execution					
Creativity					
Managing Change					
Negotiation					
Analytic Skills:					
Analyzing Numbers					
Problem Solving					
Managing Growth					
Strategic Thinking					
Risk Management					

Source: Aline O'Connor Funk

#44 - Key Positions To Be Filled In Your Company



The most important contributor to the success of your company will be the **team** that is put in place to build and run the company.

Jim Collins, a popular American business writer, wrote a book called Good to Great. In it, he talks about building a good business team in terms of “getting the right people on the bus” and then “making sure that everyone is in the right seat on the bus.” This is a very good analogy, as starting a business is a lot like taking a long and difficult safari. Who you have with you on your safari, and whether or not they have the right job, will make all the difference between arriving at your destination and failing to arrive.

The list of failed businesses contains many companies whose leaders made bad decisions about their teams. Building a good team is perhaps the most important job of a leader.

How do you go about doing this for a seed company? What senior jobs need to be filled?

A good place to start is by looking at the tool titled Seed Company Growth Checklist (Tool #30). This tool lists the key jobs that need to be done in a seed company. As you get larger, you will have more people working in each area of responsibility. However, when you are just starting or still small (e.g., roughly 500 t or less of seed sales per annum) it is essential to make sure you are at least covering the following key areas:

Long-Term Strategic Planning

This will most likely be the job of the CEO, aided by the senior team.

Product Management

Initially, this will most likely be covered by the CEO and the production manager, with support for specific projects when needed (e.g., assessing seed treatment options).

Key Positions:

- **CEO/General Manager**
- **Production**
- **Marketing and Sales**
- **Research and Development**
- **Finance**
- **Administrative**

Related Tool Topics:

30, 41, 46

Production

This area warrants a **dedicated team** managed by a knowledgeable, skilled **production manager**. In some companies, the CEO will start out doing this, but it really is too time-consuming for the CEO to manage. Having a dedicated person is the best approach.

Market Planning and Marketing

For a larger company, this is a full-time job, but for a smaller company it can be difficult to justify paying a full-time person. However, to do this job right requires skill, expertise, hard work, and a strong customer focus. The best companies will recognize from the start why it is important to get a good person into this position, and they will quickly grow to the point where they can justify the resources to employ a **full-time person or team** to do this work. A good person in the market planning and marketing area will more than pay for himself or herself. So, it is best to give someone full-time responsibility for this job as soon as you feel that you will be a reliable producer of a meaningful volume of quality seed.

This person or team will recruit and train agrodealers, coordinate product packaging with production, set up distribution, handle collections, develop customer education materials, organize field days, determine demonstration sites and collaborators, oversee agrodealers during the selling season, plan other promotional efforts such as radio advertising, interface with customers to determine how to best meet their needs, work with the CEO and finance manager on pricing, and participate fully in helping to set the production plan and develop plans to sustainably grow sales.

Finance

A **financial accountant** will be needed to generate the required financial statements, but this person can initially be part-time if the information flow within the company is well organized and there is a capable bookkeeper in place even if part-time, initially. However, it is advisable to get a full-time bookkeeper—ideally, one who is able to use a computer—as soon as possible to ensure controls over expenditures, revenues, payables, etc.

Management accounting, including analyzing results, budgeting, keeping track of sales, etc., is a critical function, and an approach must be put in place to handle this. This can be done by the financial accountant, if the person is knowledgeable about management accounting, or it can initially be done by other senior managers if they are financially literate. It is also possible for a strong bookkeeper who is good at working with numbers to help with management accounting analysis under good supervision. However, you will want either a full-time or part-time, capable person on your staff relatively soon to develop management accounting figures for you.

Finance is an area where you can either have your own dedicated staff from the start or you can employ a team approach with various people taking on different responsibilities, even using part-time professional help if it is available. Either way, the responsibilities must be carried out, and it is the job of the CEO to ensure that they are. As with marketing, a good company will quickly grow to the point where it will need a full-time finance person. So, if you do not start out with a dedicated person in this position, you will need to put one in fairly quickly to handle both financial and management accounting.

#44 - Key Positions To Be Filled In Your Company (Continued)

Human Resource (HR) Management

This is a position that will not need to be filled until the company grows larger. However, the accounting functions of HR (payroll, etc.) will need to be handled in finance, and the senior managers will need to take on general HR responsibilities, such as compensation policy and recruiting, as part of their duties. The CEO will ultimately be responsible for oversight in this area.

Extension Work/Agronomic Support

This can be outsourced or handled by production staff.

Information Technology (IT)

A full-time person is not needed here until the company is larger. Outsourcing is a good solution in the meantime.

Facilities Management

Storage and processing can be handled by production staff, and office space can be handled by office staff.

Policy/Regulatory Advocacy

This should fall under the responsibilities of the CEO.

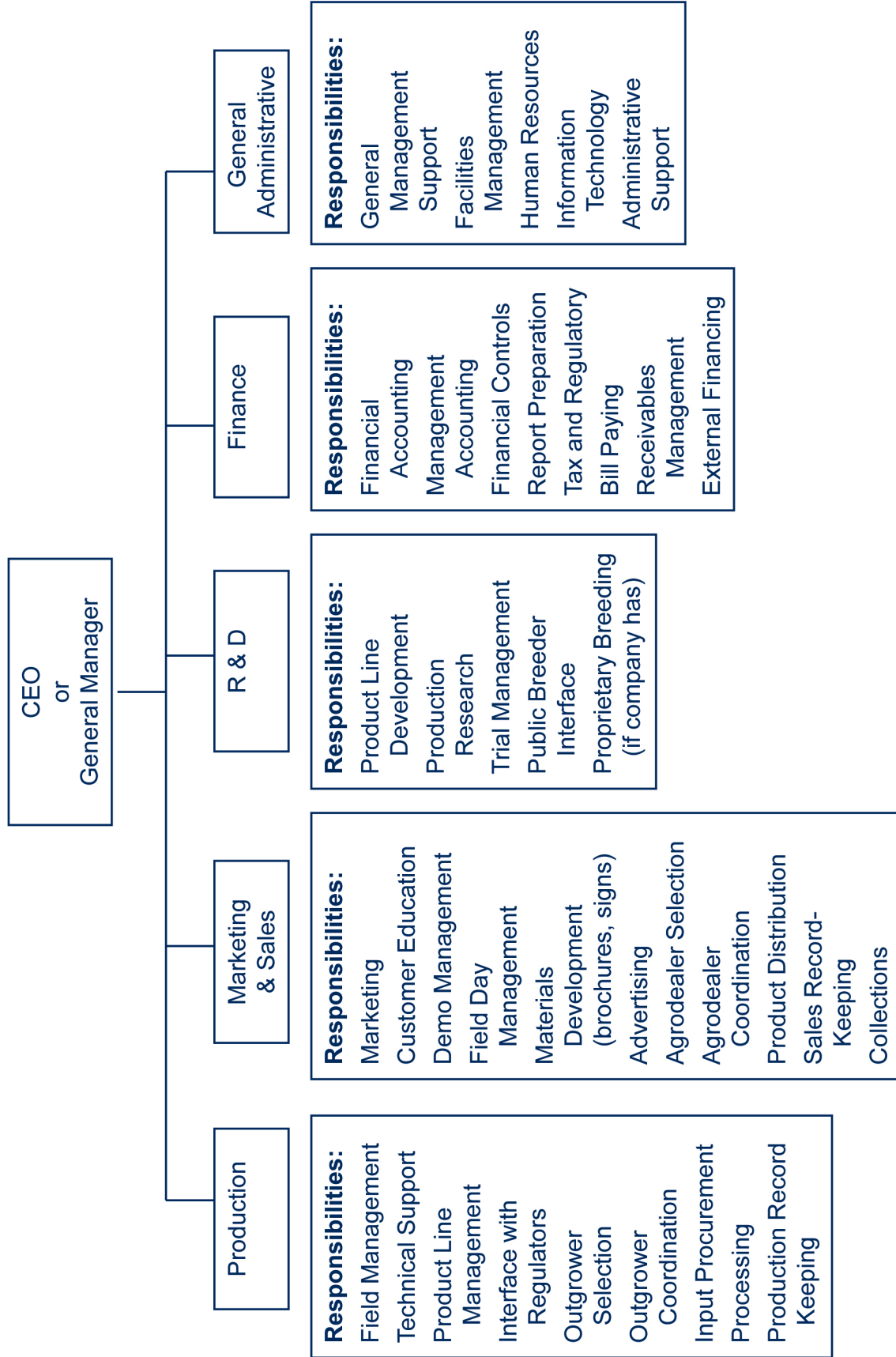
Be Strategic When Hiring Talent

A key point to remember is that while the company is starting, senior managers must wear several hats until the company grows large enough to employ a larger team with specialized skills. However, it is not advisable to be understaffed in the key areas of production, finance, and marketing.

An illustrative senior management organization chart for a young seed company is on the next page.

"Sticks in a bundle are
unbreakable."
African Proverb

Seed Company Organizational Chart - Illustrative



Source: Aline O'Connor Funk

#45 - Guidelines for Aligning Titles and Responsibilities



Managers of new companies often find it difficult to think clearly about how to organize their young enterprise. They read phrases in a newspaper or a business magazine such as:

“Mr. N, a director...”

“Mrs. R, the treasurer...” or

“Mr. W, a vice president...”

and then think that these are functions or titles that make sense for their organization.

A good businessperson will clearly understand the difference between titles and responsibilities in businesses. What is ultimately important in a well-functioning business is what an individual or manager DOES, not what he or she is CALLED. With this in mind, here are some guidelines for developing meaningful job titles.

Functional job titles

Functional job titles are titles that clearly convey the responsibilities of the individuals who hold them. Examples are:

Production Manager

Production Technician

Marketing Support Coordinator

Chief Executive Officer

Finance Manager

Communications Coordinator

Legal titles

Legal titles are titles that may be required for legal or corporate reasons. These convey only legal responsibilities or positions, not functional working responsibilities. Examples are:

- President
- Vice President
- Treasurer
- Secretary
- Director

Financial stakeholder titles

Financial stakeholder titles, such as shareholder or owner, convey only a legal shareholding relationship with the company. By themselves, they do not convey any functional responsibility. You might have an owner of a company who has no responsibility within the company. Generally, becoming a shareholder requires a financial investment of capital, although in some cases shares are given in exchange for work. It is important that shares be given as a reward for work done, not in advance of work that is to be done!

Conclusion

Thinking carefully about titles that convey responsibilities and are not simply generic “power titles,” such as vice president, will help you organize your company well.

Source: Aline O'Connor Funk, with special thanks to Remington Seeds for sharing their job descriptions

#46 - How to Write a Good Job Description



Clear job descriptions benefit everyone involved – the employee, senior management, customers, and the company at large. The purpose of a job description is to describe the responsibilities of the position.

A good job description is important because it:

- Allows you to clearly communicate responsibilities to current and potential employees
- Provides a foundation for performance reviews with each employee (Did they fulfill the responsibilities of the position? If so, how well did they do it?)
- Gives you a format for thinking through how you will allocate the responsibilities in the company and change your approach as the company grows

A good job description will have the following:

Clarity

It will be written in simple language that is easily understood by the employee and also by any manager in the company.

Brevity

It will be roughly one to two pages in length. Good job descriptions should not be cumbersome, overly detailed, or too long to be easily understood.

Specificity

The job description will include specific actions and deliverable results that can be clearly observed and/or measured.

Reference to higher-level values of the company

In the seed industry, trust, integrity, and commitment to quality and customers are so important that they become part of the job requirement. This should be clearly communicated to all employees.

Several sample job descriptions follow. They represent different approaches but will give you some ideas about what you might want to consider when developing job descriptions for your company.

Listing of Position Requirements

There are items that are sometimes included in a job description that are more appropriate for a listing of the position requirements, as they do not relate to the responsibilities of the job. Some of these expectations, which you might choose to include in a separate listing of position requirements, are:

- Hours to be worked
- Compensation
- Probation period, if any,
- Confidentiality requirements
- Company rules

Sample Job Description: Quality Assurance Manager

This position reports to the General Manager.

The Quality Assurance Manager is responsible for establishing processes and policies to ensure that the company is producing and selling the highest-quality product possible and is also responsible for implementing these processes throughout the company. The Quality Assurance Manager is responsible for bringing any quality issues to the attention of senior management as soon as they are identified.

Responsibilities of the Quality Assurance Manager include, but are not limited to, the following:

- Develop company Quality Assurance policies and procedures; gain sign-off on these from senior management; train employees in implementing all QA standards; ensure all employees are following guidelines for QA follow-up procedures
- Monitor preliminary production results by location; test and sample product according to company policies
- Follow through with conditioning and production locations on items falling out of specification (all nonconforming product)
- Prepare a weekly list of existing or possible out-of-tolerance items for senior management; devise an action plan from this list for follow-up by senior management
- Conduct germination testing
- Work with all outside third-party labs in implementing company procedures for sample submission and data retrieval, including internal preliminary samples as well as finished product samples
- Make sure all invoices related to quality assurance are properly approved and submitted to Accounts Payable in a timely manner
- Work with the Production Manager on seed stock allocations, planting instructions, and any other QA-related items
- Work with the Production Manager during planting, growing, and harvesting to promote the highest production standards possible in order to minimize QA issues with harvested product

The Quality Assurance Manager serves as a representative of the company and is expected to act on the company's behalf with complete integrity and with the company's and customers' best interests in mind at all times.

Related Tool Topic:

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#46 - How to Write a Good Job Description (Continued)

Sample Job Description: Director of Finance and Administration

This position reports to the CEO of the company

Finance

1. Daily accounting operations, including accounts payable, invoicing/accounts receivable, fixed assets/depreciation, general ledger and banking/cash management, expense administration
2. Timely preparation of company financials and all financial reporting requirements, including reports for management and bank
3. Financial analysis, including pricing analysis and cash flow analysis
4. Development and tracking of KPIs (key performance indicators)
5. Budgeting and variance analysis for both operating and capital budgets
6. Coordination with accountants on all matters
7. Tax preparation and payment
8. Bank reporting/administration of outside financing
9. License procurement and submission of required reports

Administration

1. Payroll and benefits analysis and administration
2. Insurance analysis and administration
3. Compensation planning and administration
4. Germplasm contract negotiation and administration

Company Management

(After basics of financial and administrative responsibilities are mastered)

- Full member of Company Management Team
- Participation in Growth Planning and Implementation
- Participation in Strategy Development

The Director of Finance and Administration must uphold the values of the company at all times and take an active role in building the quality and integrity of both the company and the products we sell.

Anticipated Projects – First 18 Months

1. Implement new accounting system
2. Establish monthly reporting process
3. Aid in designing consistent sales compensation program
4. Computerize record-keeping
5. Conduct detailed review of company expenses; make recommendations for savings
6. Institute budgeting process
7. Develop financial reports that will be required by potential lenders
8. Other projects as agreed

Legal Contract of Employment

Your home country might require you to develop and sign a contract of employment for key employees. If so, you will need to ensure that you are following all of the required steps to meet the legal requirements of your

country. Even if you do have a formal contract, it is still important to develop a simple job description and review it with the employee. Many legal employment contracts only require a brief description of the position. A complete

and thoughtful description will serve as the foundation for performance discussions with the employee and will also help you clearly communicate your expectations.

Sample Job Description: Processing Location Manager

This position reports to the Operations Manager of the company.

The Processing Location Manager acts as the “owner” of the location and, therefore, is responsible for all activities that occur at the location and for maintaining the functionality, safety, and security of the location. The Processing Location Manager focuses on all aspects of business success, including customer satisfaction, financial responsibility, process efficiency, employee safety, and employee development. Other responsibilities include, but are not limited to, the following:

- Hire, train, and supervise all employees at the facility
- Conduct annual reviews with all employees
- Provide a safe work environment for all employees through complete implementation of company safety programs

- Ensure complete customer satisfaction for seed produced, processed, and/or distributed from their location
- Maximize production of seed that meets all quality specifications
- Communicate overall business and location strategy to location employees
- Ensure adequate staffing of location processes to meet customer and business needs
- Develop the annual location budget and monitor spending throughout the production year
- Evaluate location capacity vs. needs and recommend capital improvements
- Initiate problem solving to improve location performance as needs arise

The Processing Location Manager serves as a representative of the company and is expected to act on the company’s behalf with complete integrity and with the company’s and customers’ best interests in mind at all times.

Source: Aline O'Connor Funk

#47 - Two Vital Financial Statements



Accurate financial statements are essential for all businesses. Two of the most important financial statements are the income statement and the balance sheet.

Income Statement

This is also called the profit and loss statement (P&L) or the statement of operations. It presents the revenue and expense of a business, plus any other income that is not strictly revenue, such as the proceeds from selling an asset, and then presents the resulting profit. This statement is always tied to a period of time, such as a month or a year.

Balance Sheet

This statement presents a “picture at one point in time” of a company’s assets, liabilities, and resulting owner’s equity. It outlines what a company owns and owes as of a specific date. It is usually presented for the last date of the company’s fiscal or business year, but should be recorded monthly.

The year-end income statement and the balance sheet must be constructed according to professional accounting standards and therefore, are almost always prepared by professional accountants.

Both statements should be compared with the same statement from prior time periods in order to determine whether or not the company is growing and becoming financially stronger.

Why is it important to carefully construct these two statements? There are some very strong reasons.

1. These statements represent the company’s “scorecard” and present an accurate measure of what has happened over the course of the business year.
2. All companies that wish to obtain outside financing are required to submit these two statements—in addition to other documents—to the lender as a basic requirement for funding.
3. These statements provide an accurate and consistent picture of company performance that can be discussed with senior managers. Just as football players need to know what the score of the game is, seed company senior managers need to know the company’s score each year.
4. Your country’s tax or regulatory authorities might require you to file these statements.
5. When properly understood, they can help you and your senior team understand the company’s prospects for growth, particularly when statements are compared across multiple time periods.

Examples of a typical format for a seed company income statement and balance sheet follow.

Related Tool Topic:

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Income Statement

COMPANY NAME		NOTE: SHADED CELLS ARE FORMULAS AND WILL CALCULATE AUTOMATICALLY		
200X Income Statement				
Date				
Name of Preparer				
Sales Tonnage		20XX Actual	20YY Budget	20YY Actual
Maize				
Tonnage:				
Gross Shipped				
Returns				
Wholesale				
Demo Tonnage				
Sample or Free Tonnage				
Other Tonnage Used				
Net Full Retail Tonnage (FR)		0	0	0
In the Ground Tonnage (ITG)		0	0	0
Supply similar tonnage figures for all major crops (might not be worthwhile for minor crops)				
Sales				
Maize Revenue:				
Retail				
Wholesale				
Gross Maize Revenue		0	0	0
Volume and Other Discounts				
Net Maize Revenue		0	0	0
Other Major Crop Revenue (repeat above for other major crops)				
Other Revenue (minor crops, other)				
Other Pricing Adjustments				
Total Revenue		0	0	0
Cash Discounts				
Bad Debts				
Net Revenue		0	0	0

Total tonnage initially distributed for retail sales
 Net tonnage sent back or picked up after planting season, if any
 Tonnage sold to NGOs, government, another seed company, etc.
 Tonnage used for demos or given to others for demos
 Tonnage used, if any, as agrodealer incentives, etc.
 List all other nonretail tonnage distributed
 FR (full retail) should include all tonnage for which you charge full retail price; therefore, it will exclude wholesale, demo, and free tonnage
 ITG (in the ground) should include all tonnage that gets planted

Should include your standard price times tonnage
 Revenue from sales to government, NGOs, etc.
 Any pricing discounts you have approved
 This is your gross revenue less the discounts, above
 If crop is large enough, you can use the same detail you are using for maize; otherwise, combine
 Any other revenue adjustments you have given
 This is to record reductions in pricing for early payments received
 This is money that you should have been paid and counted as revenue but were not paid
 Equal to your Total Revenue less Cash Discounts

Note: This Income Statement is a multiple page spreadsheet. See the CD-Rom.

Income Statement (Continued)

COMPANY NAME		NOTE: SHADED CELLS ARE FORMULAS AND WILL CALCULATE AUTOMATICALLY		
200X Income Statement				
Date				
Name of Preparer				
		20XX Actual	20YY Budget	20YY Actual
Cost of Goods Sold:				
Salary and Benefits for Production Employees				This should be for full-year employees only All money paid to contract growers
Contract Grower Payments				
Land Preparation				
Fertilizer and Chemicals				
Other Production Supplies				
Field Labor Wages				
Other Labor Wages (e.g., for processing)				
Foundation Seed Expenses				For example, to pay costs for breeder to come out to supervise FS production
Shrinkage & Obsolescence				Old product that has lost germ, product to be discarded, etc.
Bags, Tags, Pallets, etc.				
Warehousing				
Inspection and Testing				
Delivery/Freight				Cost of shipping all product during production cycle, up to shipping for sale
Other				
Total Cost of Goods Sold		0	0	0
% to Net Sales		#DIV/0!	#DIV/0!	#DIV/0!
Gross Profit		0	0	0
% to Net Sales		#DIV/0!	#DIV/0!	#DIV/0!
Research Expense:				
Company Plots to Test Products				This should be expense for looking at product line expansion
Travel to Look at New Products				
NARS-Related Expenses				
Other Research Expenses				
Total Research Expense		0	0	0
% to Net Sales		#DIV/0!	#DIV/0!	#DIV/0!
				Whatever money you spend to research existing/new products

Note: This Income Statement is a multiple page spreadsheet. See the CD-Rom.

Income Statement (Continued)

COMPANY NAME		NOTE: SHADED CELLS ARE FORMULAS AND WILL CALCULATE AUTOMATICALLY			
200X Income Statement					
Date					
Name of Preparer					
		20XX Actual	20YY Budget	20YY Actual	
Sales and Marketing Expense:					
Salaries and Benefits					Of full-time employees devoted to sales and marketing These are commissions paid to salaried sales people, if any For sales and marketing activities Includes expenses of demos, field days, etc. T-shirts, hats, etc. Brochures, posters, etc.
Commissions					
Travel and Vehicles					
Meetings					
Premiums and Sales Aids					
Publications					
Communications (phone & computer)					
Signs					
Advertising					
Other Sales and Marketing Expense					
Total Sales Expense		0	0	0	
% to Net Sales		#DIV/0!	#DIV/0!	#DIV/0!	
Administrative Expense:					
Salaries and Benefits					Of employees devoted to administrative functions, including management Part-time and/or seasonal labor Internal company meetings, meetings with accountants, etc.
Other Labor					
Meetings					
Travel and Vehicles					
Office Building/Rent					
Insurance					
Depreciation					
Communications (phone & computer)					
Office Supplies, Machinery, etc.					
Professional Services					
Other Miscellaneous					
Total Administrative Expense		0	0	0	
% to Net Sales		#DIV/0!	#DIV/0!	#DIV/0!	For example, accountant fees

Note: This Income Statement is a multiple page spreadsheet. See the CD-Rom.

Income Statement (Continued)

COMPANY NAME		NOTE: SHADED CELLS ARE FORMULAS AND WILL CALCULATE AUTOMATICALLY		
200X Income Statement				
Date				
Name of Preparer				
		20XX Actual	20YY Budget	20YY Actual
Other Income and Expense:				
Interest Expense				
Interest Income				
Intangible Amortization				
Other				
Total Other Income & Expense		0	0	0
% to Net Sales		#DIV/0!	#DIV/0!	#DIV/0!
Operating Income		0	0	0
% to Net Sales		#DIV/0!	#DIV/0!	#DIV/0!
Provision for Income Taxes				
NET INCOME (after-tax)		0	0	0
EBITDA		0	0	0
				Earnings before Interest, Taxes, Depreciation, Amortization

Note: This Income Statement is a multiple page spreadsheet. See the CD-Rom.

Balance Sheet

200X Balance Sheet

Date

Name of Preparer

NOTE: SHADED CELLS ARE FORMULAS AND WILL CALCULATE AUTOMATICALLY

Assets		
Cash		
Accounts Receivable		
Seed Inventory		Money owed to you, net of bad debts
Supplies Inventory (e.g., bags, pallets)		Market value of your seed inventory
Prepaid Expenses		Market value of your supplies
		Something you have paid for in advance
Total Current Assets	0	
Net Property, Plant and Equipment		That is, net of depreciation
Total Assets	0	
Liabilities and Owners' Equity		
Accounts Payable		Money you owe to vendors
Accrued Expenses		For example, money you have spent, but just not yet billed for
Taxes Payable		
Short-Term Debt		Debt that is due soon, e.g., within one year
Total Current Liabilities	0	
Long-Term Debt		Debt with a maturity longer than, e.g., one year
Total Liabilities	0	
Contributed Capital		Money that has been put in by equity holders
Retained Earnings		Your cumulative profit or loss since starting the business
Total Owners' Equity	0	
Total Liabilities and Owners' Equity	0	This line should always equal your assets

Note: This Balance Sheet is on the CD-Rom.

Source: Aline O'Connor Funk

#48 - Simple Financial Framework



This tool presents a very simple but very effective framework for looking at your profitability and tracking how it changes over time. To use it, you will need to calculate expenses and profit as a percentage of total revenue. The basic formula is illustrated in the following example:

	USD Value (\$)	Percentage of Total Revenue	Comments
Total Sales Revenue	\$200,000	100%	Includes all revenue of the company tied to products and customers (e.g., should not include revenue such as the gain on the sale of a storage building)
(-) Cost of Goods Sold (COGS)	-\$100,000	50%	Includes all costs related to producing the products you are selling
(-) Marketing and Selling	-\$40,000	20%	Includes the costs of marketing and selling your products (e.g., demo plots, field days, marketing salaries, brochures, etc.)
(-) Research and Development	-\$10,000	5%	Includes all costs related to production research, testing new products, researching new product introductions, and breeding (if any)
(-) General and Administrative	-\$30,000	15%	Includes all costs of company administration, such as finance, senior management, office and support staff, rent, etc.
Operating Income	\$20,000	10%	Calculated as revenue minus the four expense categories listed above

Related Tool Topic:

47, 51

After each year is completed, laying out your financial performance in this simple framework will provide insights for you and your senior team about your economic business model. Can you make money? If not, why not?

Here are some additional questions to think about:

- As a manager, you will need to think about the profitability target for your company. What is realistic for you at your current stage of growth? Breakeven? 5 percent? 10 percent?
- What are your target expense percentages for the categories in the framework?
- When you look at your financial performance in this framework, which categories are in line with your targets? Which are not and are hurting you?

- How does growth of the revenue line impact your percentages? That is, as you achieve more scale, do the expense percentages drop, thus increasing the operating income percentage?

If you are not comfortable talking about the actual values for revenue, expenses, income, etc., with your team, you can always talk about the economic model more generically by using only the percentages. For example, in U.S. dollar terms, you could say, “For every dollar of revenue we receive, we spend 50 cents of it to produce our product, 20 cents on sales and marketing expenses, 20 cents on other expenses, and have 10 cents remaining in profit to reinvest in growth.”

Examples of companies with varying levels of profitability—and especially varying levels of COGS—follow.

Business Economics – Examples

	Company		
	A	B	C
Total Sales Revenue	100%	100%	100%
Cost of Goods Sold	69%	55%	43%
Selling Expenses	18%	18%	22%
Research & Development	3%	13%	8%
General & Administrative	17%	8%	7%
Operating Income	-7%	6%	20%

Company A: This company is not profitable (bleeding), most likely because of its high cost of goods sold (COGS) and high general and administrative expenses. If this is a small company it is possible that these percentages will improve as the company grows.

Company B: This company is profitable. However, there is room for improvement, which would give it more profit to reinvest in growth. Many companies aim for operating income of 10 percent, which can demonstrate good business economics to lenders and investors.

Company C: This company is very profitable, due primarily to low COGS. The percentages for Company C most likely represent a larger, well-run company.

Source: Aline O'Connor Funk

49 - Ten Profit Pitfalls to Avoid, or Fix



1. Excessively high COGS (cost of goods sold)

Does it cost you more to produce your product than the price at which you can sell it? If so, look closely for the main drivers of high COGS: 1) poor crop management and harvest practices, 2) poor outgrower selection and oversight, 3) poor yields due to weather, 4) high obsolescence due to poor storage, 5) loss of outgrower production due to outgrower not honoring production agreement, and, perhaps most important, 6) not recording and analyzing production costs.

2. Excessive distribution costs

Are your distribution locations (e.g., agrodealers and others) too spread out geographically, making it hard to service them?

3. Poor collections

Are you going through the hard work of producing your product and delivering it to agrodealers but then not collecting all of your revenue? If so, you should take a close look at the credit worthiness of agrodealers, as well as your own collection policies and processes.

4. Poor-quality product

If you put substandard product out to your customers, your sales the following year will be negatively impacted and may never recover if farmers have other options for seed. A reputation for poor-quality seed is very hard to overcome.

5. Producing the wrong product

If you fail to read your customers' demand properly and produce the wrong product, you will be left with carryover seed at the end of the sales season. For example, you are producing sorghum seed yet farmers are increasingly demanding pigeon pea seed. Carryover seed is expensive to store and retest, and in tropical and subtropical environments will most likely deteriorate when stored for long periods of time, driving up your obsolescence costs.

Drivers of High COGS

Poor crop management and harvest practices

Poor outgrower selection and oversight

Poor yields due to weather

High obsolescence due to poor storage

Loss of outgrower production

Failure to analyze production costs

Related Tool Topics:

31, 36, 47

6. Too many pricing concessions

Many salespeople decide to make pricing concessions to either get or maintain business. If not monitored and controlled, these can have a large negative impact on revenue and thus profitability.

7. Slow processing

If processing is delayed or out of synch with farmer demand, sales will be missed and “last minute” distribution costs will be much higher than necessary.

8. Not understanding market pricing

How to price is one of the most difficult tasks a seed company must tackle. Pricing decisions must be based on a combination of factors, such as product value to the customer (also expressed as the opportunity cost of not using the product), the company’s cost structure and profitability goals, and competitive pricing (or the cost to the farmer of pursuing other options).

9. Management teams at seed companies that are not financially literate

For a good start on financial literacy, see Two Vital Financial Statements (Tool #47), and Essential Numbers You Must Know About Your Business (Tool #36).

10. Keeping employees in positions of responsibility who are not performing well

This can really cost you! (Some people say that you should “hire slow and fire fast.”)

“A reputation for poor quality seed is very hard to overcome.”

“The thing that will hurt you will always keep on coming back even if you try to avoid it.”

African Proverb

Source: Aline O'Connor Funk

#50 - The Importance of Management Accounting



Many seed company managers come from either a seed production background or are classic entrepreneurs. Few managers come from a strong financial background. This is not necessarily a problem, as long as the manager learns to understand business financial numbers and uses this knowledge to strengthen how he or she runs the business. However, all too often this does not occur.

Instead, the seed company manager hires an accountant and simply delegates responsibility for putting together the necessary financial statements, thinking that this will take care of the accounting needs of the company. It will not!

Good seed company managers understand that there are two different kinds of accounting – financial accounting and management accounting – and any good company needs both of them. Simple definitions of the two types of accounting are:

Financial Accounting

This is the type of accounting needed to produce financial statements for people outside the company, such as stockholders, lenders, and government agencies. It is generally governed by formal accounting standards, which all companies must follow, and deals with historical performance. The main financial accounting statements are:

- Income statement (also called a profit and loss, or P&L, statement)
- Cash flow statement
- Balance sheet

Management Accounting

This is the type of accounting used by managers in the company to run the business. Management accounting is concerned with providing good information for decision making. It is generally forward-looking, although it depends upon historical information for many of its inputs to decision making. Key examples of management accounting include:

- Annual budgeting
- Pricing scenarios
- Product profitability (or product margins)
- Sales scorecards
- Buy vs. lease analysis
- Cost/benefit analysis

While financial accounting is an essential need for any seed company, since it is imperative that good companies generate the required financial statements, the type of accounting that managers really use on a daily basis to run the business is management accounting. Designing the company's management accounting system is the job of the senior team. A CEO who is a competent manager will be very involved in this design.

Running a company without good management accounting is a bit like trying to run a hospital without any patient thermometers, stethoscopes, X-ray machines, or blood analysis measures. These tools all provide doctors with numbers that illuminate what is going on inside the patient (e.g., management accounting) versus providing facts about the age of the patient, how the patient looks during the visit, and what the patient has experienced over the last year (e.g., financial accounting).

The following table summarizes some of the key differences between financial accounting and management accounting.

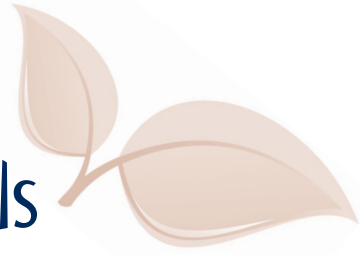
Management Accounting	Financial Accounting
Done by many people throughout the company	Generally done by the company's finance staff and/or outside accounting staff
Key outputs are percentages, ratios, growth rates, and margin calculations, such as year-to-year sales growth rates, profit margins, and return percentages	Key outputs are flat dollar amounts, e.g., measures of revenue, salary expense, or inventory on hand
Key measures are generally calculated after the end of an annual season, capturing measures of business performance over the entire cycle	Major statements, such as the balance sheet, income statement, and cash flow statement, can be constructed at any point, e.g., monthly, quarterly, annually
Not subject to strict accounting rules; can be designed to meet company needs	Generally subject to strict accounting rules
Important for key managers to understand these numbers, e.g., to be financially literate	Not critical for key managers to understand the financial accounting statements, although it helps
Can involve estimates, forecasts, and "what if" scenarios	Fact-based
Is used to drive good decision making in the company	Statements are constructed "after the fact" and are generally too late to influence decision making
The key audience is internal to the company, and the numbers are generally confidential	The key audience is outside the company

Related Tool Topics:

35, 36, 47

Source: Aline O'Connor Funk

#51 - Financial Planning Tools



Every business requires planning! Financial planning is particularly important because it enables businesses to:

- Spend their money wisely
- Make good decisions about what is working and what is not working in the business
- Ensure that the business can operate in future years
- Grow!

Managers use a wide variety of financial planning tools. Examples of two of the most important for a seed company are presented on the following pages.

Income Statement Budget and Forecast

This is a two-page statement that is simply a modified version of a company's income statement. However, instead of just one or two columns of numbers it has five or six. Most managers find it extremely helpful to look at an income statement budget and forecast because it is a single spreadsheet with key numbers in one place, including actual company results for one or more years, the budget for the next year, and several years of forward-looking estimates. Filling in this kind of planning tool will help you think through the future of your business.

Business Economics Summary

This is a very simple tool that summarizes some of the percentages presented in the income statement budget and forecast over time. Specifically, it looks at various expense categories and operating income as a percentage of revenue. It is best if a company records these percentages over time to track progress or lack of progress. It is also useful if a company sets goals based on these percentages. For example, does the company aim to have operating income that is 8 percent of revenue? 12 percent of revenue? What is a realistic and appropriate goal for cost of goods sold (COGS)?

"Financial planning tools will help you think through the future of your business."

Related Tool Topics:

35, 47, 48

Business Economics Summary

Note: shaded cells are formulas and will calculate automatically

Example:

AAA Seed Company			
	2007	2008	2009
Total Sales Revenue	100%	100%	100%
Less Cost of Goods Sold	-65%	-56%	-49%
Less Selling Expense	-16%	-18%	-17%
Less Research and Development	-3%	-10%	-7%
Less General and Administrative	-17%	-11%	-15%
Equals Operating Income	-1%	5%	12%

Blank Format:

To enter expense percentages, calculate each expense category as a percentage of your total revenue. Then enter the resulting percentage into the table below as a negative decimal.

E.g., 50% should be entered as -.50

The operating income percentage will calculate automatically

<Your Company Name>			
	2007	2008	2009
Total Sales Revenue	100%	100%	100%
Less Cost of Goods Sold	0%	0%	0%
Less Selling Expense	0%	0%	0%
Less Research and Development	0%	0%	0%
Less General and Administrative	0%	0%	0%
Equals Operating Income	100%	100%	100%

"Talking doesn't fill the basket in the farm."

African Proverb

Income Statement Budget and Forecast

COMPANY NAME
200X Income Statement Forecast
Date
Name of preparer

NOTE: SHADED CELLS ARE FORMULAS AND WILL CALCULATE AUTOMATICALLY

	20XX Actual	20XY Actual	20XZ Budget	20-- Estimate	20-- Estimate	
Crop Revenue						
Crop #1						
Volume (kg)						Actual or estimated sales volume
Net Price/kg						Retail price per kg less discounts, etc., i.e., the net price
Subtotal Crop #1 Revenue	0	0	0	0	0	0
Crop #2						
Volume (kg)						
Net Price/kg						
Subtotal Crop #2 Revenue	0	0	0	0	0	0
Crop #3						
Volume (kg)						
Net Price/kg						
Subtotal Crop #3 Revenue	0	0	0	0	0	0
Etc...						
Total Crop Revenue	0	0	0	0	0	0
						All other revenue related directly to your seed operations, e.g., do not include income from the sale of a used vehicle or interest from a bank account
Other Operating Revenue						
Total Operating Revenue	0	0	0	0	0	0
Expenses						
Production Expense (COGS)						
Grower Payments						All payments made to outgrowers and to grow seed on company-owned land
Inputs						Cost of all inputs purchased for production
Salaries and Benefits						S&B of your production staff
Transportation Expense						All transportation costs required to produce the seed, bring it in for processing, etc.
Foundation Seed Expense						All costs required to either purchase or produce foundation seed
Processing Expense						All costs related to processing and bagging the seed
Bags, Tags, Pallets						The cost for these items used each year, so if you buy extra and save some for future years, your accountant will need to advise you of the accounting treatment
Other Production Expense						
Subtotal Production Expense (COGS)	0	0	0	0	0	0
% to Total Operating Revenue	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Note: These financial planning tools are a multiple page spreadsheet. See the CD-Rom.

Income Statement Budget and Forecast (Continued)

COMPANY NAME
200X Income Statement Forecast
Date
Name of preparer

NOTE: SHADED CELLS ARE FORMULAS AND WILL CALCULATE AUTOMATICALLY

	20XX Actual	20XY Actual	20XZ Budget	20-- Estimate	20-- Estimate	
Gross Margin						An important business figure, this is revenue minus the COGS and is a measure of what a company has to spend to market its products, administer the company, etc.
% to Total Operating Revenue	0 #DIV/0!	0 #DIV/0!	0 #DIV/0!	0 #DIV/0!	0 #DIV/0!	This percentage is also a very important business measure
Sales and Marketing Expense						
Salaries and Benefits						All salaries, benefits, and other compensation related to sales, marketing, and distribution
Transportation						All transportation expense related to the above functions
Other Sales and Marketing Expense						Other expenses such as the cost for field days, brochures, signs, etc.
Subtotal Sales and Marketing Expense	0 #DIV/0!	0 #DIV/0!	0 #DIV/0!	0 #DIV/0!	0 #DIV/0!	
% to Total Operating Revenue						
Research and Development Expense						
Trial Expense						All costs for trials you conduct for research purposes
Other R&D Expense						
Subtotal Research and Development Expense	0 #DIV/0!	0 #DIV/0!	0 #DIV/0!	0 #DIV/0!	0 #DIV/0!	
% to Total Operating Revenue						
General and Administrative Expense						
Salaries and Benefits						Compensation for all people who work in company administration, e.g., financial manager, office assistant, general manager, etc.
Transportation						Transportation cost for any of the above people
Other General and Administrative Expense						All other G & A expenses, such as rent, office equipment, office supplies, accounting fees, etc.
Subtotal General and Administrative Expense	0 #DIV/0!	0 #DIV/0!	0 #DIV/0!	0 #DIV/0!	0 #DIV/0!	
% to Total Operating Revenue						
Total Operating Expense	0 #DIV/0!	0 #DIV/0!	0 #DIV/0!	0 #DIV/0!	0 #DIV/0!	
% to Total Operating Revenue						
Net Operating Income	0 #DIV/0!	0 #DIV/0!	0 #DIV/0!	0 #DIV/0!	0 #DIV/0!	This is your operating profit
% to Total Operating Revenue						This percentage is an important measure of profitability

Note: These financial planning tools are a multiple page spreadsheet. See the CD-Rom.

Source: Aline O'Connor Funk

#52 - Read This Before Making Capital Investment Decisions



Capital investments are major purchases that will be used by the company for multiple years, such as a building, vehicle, or equipment. These purchases become fixed assets for the company and are listed on its balance sheet. Seed companies can require large capital investments, especially as they grow.

Many companies get into trouble because they weigh themselves down with capital investments before their business is strong enough to support the cost of these

investments. Performing careful analysis upfront and using it to make a logical, objective decision about a large fixed asset purchase is essential to a company's financial health.

The key steps to performing a good capital investment analysis are shown in the example below of a seed company that is attempting to decide whether or not it should purchase a tractor to prepare fields for planting.

Steps	Sample Answers – Tractor Purchase for Land Preparation
1. Identify all possible alternatives for improving land preparation	Alternatives include purchasing a tractor, leasing a tractor through the bank, co-purchasing a tractor with another entity, hiring someone else with a tractor to come and prepare the land, using manual labor to prepare the land, etc.
2. Develop full annual cost estimates for each alternative for a period of multiple years tied to the useful life of the purchase you are analyzing or a five-year period, whichever is less	This includes the full purchase cost of the tractor; the interest on any money that must be borrowed to finance the purchase; and the cost of operating, insuring, and maintaining the tractor. Calculate the fully loaded cost of: - Leasing, including all related expenses - Co-purchasing or hiring - Doing the work reliably with manual labor - Etc.
3. Identify the risks—financial and nonfinancial—associated with each option	Risks include: - The tractor breaking down, requiring manual labor to get the work done - Labor not being available when needed - Etc.

Steps	Sample Answers – Tractor Purchase for Land Preparation
4. Identify the likely increased revenue tied to each option and the resulting profitability increase/decrease, if any, over the useful life of the item being analyzed or a five-year period, whichever is less	Identify the profit per hectare of land cleared under each option. This will represent incremental profit to the company, and can be used to offset the expense of the capital purchase. In the case of a tractor, you can say that it would be reliably used for 15 years, so why look at increased profitability for only five years? Of course, you can make this judgment call, but, in general, when business risk is high, it is not wise to use excessively lengthy time periods to justify capital investment purchases.
5. Identify the residual value of the item after you are finished using it or at the end of the period of analysis	For example, a building might still have a pretty strong value after five years, but a small truck that has been used heavily might not. In the case of the tractor, you would need to make the estimate based on local demand for used tractors plus some estimate of how well maintained the tractor will be under your stewardship at the end of the five-year period.
6. Review answers to all of the steps above, especially #2, to determine the most prudent approach to improving the company's land preparation capacity	The goal of the exercise is to make the decision that will have the most positive impact on company profitability while helping to manage risk and increase the company's operating flexibility. Many companies feel that they are growing successfully because they are making major capital purchases. It is important to remember that it is profitability that fuels growth, and attaining it requires good, clear-headed decision making, especially about capital investments!

"Only a wise person can solve a difficult problem."

African Proverb

Related Tool Topics:

41, 47

Websites and Links

Below is a list of websites which might be useful for seed company managers. Some of them are African-based, while others are not and therefore will not be directly applicable but may be useful nonetheless.

African-based websites

AfricanCrops

<http://www.africancrops.net/>

African Crops focuses on the improvement of African crops and seed systems. It has many other useful links as well as information on plant breeding and variety release. It also enables readers to request information from other readers.

Alliance for a Green Revolution in Africa (AGRA)

www.AGRA-alliance.com

AGRA's programs focus on seeds, soil health, markets and policy. The website contains information about AGRA's strategy and focus, as well as its grant-making efforts.

FIPS Africa – Farm Input Promotion Systems

<http://www.fipsafrica.org/>

FIPS-Africa is committed to improving the crop productivity of small-scale farmers in sub-Saharan Africa through the dissemination of appropriate farm inputs, and information on their most effective utilization. The website describes methods to empower farmers to experiment with improved seeds and other inputs, and also provides examples of advisory materials.

Maize doctor

<http://maizedoctor.cimmyt.org/>

The Maize Doctor website provides a simple, stepwise method for identifying maize production problems, pests and diseases and suggests ways you can overcome your problems. Maize Doctor asks questions about your crop and gives a series of choices.

Link: An Analysis of the Bottlenecks Affecting the Production & Deployment of Maize Seed & Deployment of Maize Seed in Eastern and Southern Africa, by Langyintuo, A.S., W. Mwangi, A.O. Diallo, J. MacRobert, J. Dixon, and M. Bänziger.

http://www.cimmyt.org/english/docs/eco_paper/ssanalysisAfrica.pdf

The publication describes outcomes of a study conducted in 2007/08 to analyze the bottlenecks affecting the production and deployment of maize seed in eastern and southern Africa. The study identified a number of institutional bottlenecks affecting the maize seed value chain, in particular in the area of policy, credit availability, seed production, germplasm and marketing. The report contains interesting charts and data on the seed sector in sub-Saharan Africa.

Websites and Links (Continued)

The Drought Tolerant Maize for Africa Initiative (DTMA)

<http://dtma.cimmyt.org/>

DTMA seeks to significantly scale-up efforts to reach a greater number of poor farmers in SSA with maize varieties that have increased levels of drought tolerance. website has a GIS module, datasets and a table of some of the drought tolerant open-pollinated maize varieties and hybrids released in sub-Saharan African countries.

International Maize and Wheat Improvement Center (CIMMYT)

<http://www.cimmyt.org/>

As its name suggests, CIMMYT develops better maize and wheat seed and cropping practices, and also builds capacity and shares knowledge to promote development.

“Seed Business Management for Africa” by John MacRobert of CIMMYT

“Seed Business Management for Africa” by John MacRobert of CIMMYT j.macrobot@cgiar.org or <http://www.cimmyt.org/>

John MacRobert of CIMMYT, Harare, has written a book which will be useful for seed company managers. At the time of Toolbox publication, the book was expected to be published late in 2009, and it may possibly be available online. The working title is “Seed Business Management for Africa.” For further information we suggest contacting John MacRobert directly at the above address.

Handbooks for Small-Scale Bean Seed Producers

These publications were developed by the International Centre for Tropical Agriculture (CIAT) for small-scale farmers interested in producing bean seed for sale. It is written for farmers who have no formal training or experience in bean seed production. The following three handbooks can be used together.

Producing Bean Seed, Handbook One http://www.ciat.cgiar.org/africa/pdf/handbook_1_english.pdf

Business Skills for Small-Scale Seed Producers, Handbook Two http://www.ciat.cgiar.org/africa/pdf/handbook_2.pdf

Business Skill for Small-Scale Seed Producers: A Trainer’s Guide, Handbook Three http://www.ciat.cgiar.org/africa/pdf/handbook_3_english.pdf

International Centre for Tropical Agriculture (CIAT)

<http://www.ciat.cgiar.org/africa/>

CIAT is involved in many aspects of agricultural development, including seed. A major focus for CIAT is the legume crops.

Africa Rice Center (WARDA)

<http://www.warda.org/>

WARDA researches and develops better rice varieties for farmers in SSA.

Websites and Links (Continued)

African Agriculture Blog

<http://africanagriculture.blogspot.com/>

This blog covers news about African agriculture, critiques competing agricultural paradigms, encourages/motivates African agriculturalists and shares experiences from outside Africa. It attempts to contribute to the debate on Africa's food security needs, asks tough questions and expresses strong opinions.

Instituto de Investigação Agrícola de Moçambique/National Agricultural Research Institute (IIAM)

<http://www.usaid.gov/mz/ieha.htm>

<http://www.aec.msu.edu/fs2/mozambique/index.htm>

Overview of programs supported by IIAM and Michigan State University.

International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)

<http://www.icrisat.org/Achievements/SubSaharan.htm>

ICRISAT focuses on crop breeding and development in the semi-arid tropics, and works on the staple food crops of the poor: sorghum, millet, groundnut, chickpea and pigeonpea. In particular, the following link to two manuals is useful for seed company managers involved with groundnut production:

http://www.icrisat.org/tropicallegumesII/Groundnut_Manuals.htm (Groundnut Seed Production Manual and Improved Cultivation Practices for Groundnut Manual)

Asian-based website

International Rice Research Institute (IRRI)

www.irri.org

IRRI's website covers IRRI's research, projects, education, statistics, publications and also contains a knowledge bank on maize, wheat and rice.

European-based websites

YARA

www.yara.com

Yara is an international firm producing and selling mineral fertilizers. The website provides information on agricultural issues such as crop nutrition, crop-specific advice, and fertilizer management tools.

The Formal Seed Sector - Seed Processing, Storage and Marketing

<http://www2.hu-berlin.de/agrar/ntoe/asia/lectures-phil/crop-prod/10/form-seed.pdf>

This is a useful paper on seed processing, and covers all the steps necessary to prepare harvested seed for market, i.e., seed drying, seed cleaning and upgrading, seed treatment, seed packaging and handling, seed storage, seed marketing, seed testing, seed sampling, determination of seed purity, seed germination, seed viability, and seed moisture.

Websites and Links (Continued)

U.S. Sites: University Extension Programs

Chat n'Chew Cafe (Purdue University, LaFayette, Indiana)

<http://www.agry.purdue.edu/ext/corn/cafe/>

The Chat 'n Chew Cafe offers an up-to-date “menu” with the latest crop production newsletters and news releases compiled from universities and other public Web sites across the U.S. The information you'll find at the Café originates primarily from reputable crop experts from landgrant universities around the U.S. Be aware that if you farm in an area far different from that of the source institution, you may want to consult with your own local crop experts about the geographic applicability of the information provided in an article.

Iowa State University – University Extension

<http://www.extension.iastate.edu/ag/>

The Iowa State University Extension website covers agronomy topics such as corn production (growth & development, cropping systems and rotations, planting, etc.), nutrient topics, soil and land use (tillage management), as well as publications and reports.

Michigan State University – Extension

<http://fieldcrop.msu.edu/>

The Michigan State University Extension program focuses on field crops – corn, soybeans, small grains, dry beans – and covers insects, disease, weeds, soils, and management issues.

University of Nebraska, Lincoln - Extension

<http://www.extension.unl.edu/agriculture/crops>

Extension program website covers cropping systems, marketing opportunities, soils and environmental health.

Websites and Links (Continued)

Other U.S.-based seed and business websites and links

Sorghum, Millet and Other Grains Collaborative Research Support Programs (CRSP)

<http://intsormil.org/>

Seed Processing and Storage Manual

http://www.savingourseed.org/pdf/SeedProcessingandStorageVer_1pt3.pdf

Manual covers the principles and practices of seed harvesting, processing, and storage.

SeedQuest.com

<http://www.seedquest.com/>

SeedQuest gathers information for seed professionals, including articles by region, and provides resources and solutions for a variety of agricultural issues.

QuickMBA

<http://www.quickmba.com/>

QuickMBA is an online knowledge resource for business administration. (Note: MBA is an abbreviation for Masters in Business Administration.)

Tanned Feet

<http://tannedfeet.com/>

Tanned Feet is geared to inexperienced business people and distributes basic information on legal, financial, and management issues that commonly affect people who are just starting up their businesses. As it is US-based, it has limited applicability in Africa, but does contain some material which might be useful.

Entrepreneurship.org

<http://www.entrepreneurship.org/>

The Ewing Marion Kauffman Foundation and the U.S. Commerce Department's International Trade Administration (ITA) joined together to leverage best practices in entrepreneurial leadership to advance economic growth around the world. Entrepreneurship.org distributes information on accounting/finance, marketing/sales, human resources, business operations, products/services.

Entrepreneurship.com

<http://www.entrepreneur.com/>

Entrepreneurship.com contains information on starting a business, including Human Resources (HR) and sales/marketing.

Websites and Links (Continued)

About.com – Business

<http://about.com/money/>

Part of the About.com website, the business section focuses on business practices – Finance, HR, Management, Entrepreneurship, etc.

Mint.com

www.mint.com

Free online personal money management and budgeting tool. It is not sufficiently sophisticated to be a formal budget for a seed company, but new users of budgets will find it useful.

Know This

www.knowthis.com

A good resource for marketing information and ideas.

QuickBooks

www.quickbooks.com

QuickBooks is basic U.S. business accounting software – with it you can organize your finances, create invoices, track payments and manage expenses. Software must be purchased, but this site is very helpful.