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GRAIN SA MAGAZINE FOR DEVELOPING FARMERS

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Graeme Engelbrecht, Grain SA regional development manager from the Dundee office, visited Lisbetdale, the farm of Lucky Khumalo. Khulekani, Lucky's son, took a break from harvesting the soybeans to chat to Graeme.

A WORD FROM...

Jerry Mthombothi

WATERLOGGING IS A CONDITION IN WHICH THE SOIL PROFILE GETS SATURATED WITH WATER EITHER TEMPORARILY OR PERMANENTLY. IT CAN REDUCE THE AGRICULTURAL AND ECONOMIC VALUE OF LAND, CAUSING YIELD REDUCTIONS OR AT TIMES TOTAL CROP FAILURE. WATERLOGGING IS ALSO A DRAINAGE PROBLEM.

Many farmers in South Africa have suffered total crop failure because of the high rainfall we received during the past few months. It has caused the flooding of arable lands, the washing away of crops and has resulted in waterlogged soils. Soil erosion has occurred and as a result gully erosion has taken place on farms and some farmers were left with nothing to harvest.

Waterlogging is a big problem to maize producing farmers as it affects the growth and development of the maize plant. The maximum grain filling rate decreases. It lowers oxygen levels in the root zone which reduces plant growth. It also increases the reduction potential of the soil, changes the chemical equilibrium of many elements which then enters the soil water solution in their ionic form. This results in soil acidity which is a big problem. Waterlogging can impact cereal plant growth indirectly by affecting the availability of nitrogen in the soil.

Strategies to deal with waterlogging:

- Plant cover crops as they are an excellent way to use excess water.
- A long-term strategy is to use a no-till method of planting that will improve the soil structure to help with drainage. There will be no soil compaction.
- Add organic material which will help with drainage. Aside from adding fertility, organic material is also great for breaking up heavy dense soils.
- Subsoiling is lifting the soil without mixing it or turning it over. It may seem contrary to going no-till. It will leave soil structure intact and create air space in the soil which will greatly improve drainage.
- Building a few raised beds can help you quickly create areas with good drainage. ■

The Mthethwa brothers of Milnedale Farm in the Dannhauser area in KwaZulu-Natal counting their soybean seedlings.

Make the most of your SOYBEAN HARVEST

PART OF THE PLANNING FOR THE EFFICIENT HARVESTING OF YOUR SOYBEAN CROP STARTS WITH THE CORRECT CHOICE OF CULTIVARS FOR YOUR SPECIFIC FARM BEFORE PLANTING.

The successful choice of the characteristics will largely decide the success of the harvesting process and the maximum yield attained. Hot and dry, or wet and overcast periods in the season can alter the expected date to harvesting to quite a large degree.

MAKE A DECISION

Some of characteristics to be taken into account include:

- Choosing the right maturity class as an indication of the length of the growing season for planting cultivar choices for early.
- Medium and late cultivars.
- Growth type being determinate or indeterminate.
- Pod height.
- Plant height which can range from 63 cm to 82 cm.
- Standability or lodging losses at maturity.
- Pod shattering resistance.

Remember that cultivars that have a **determinate growth habit** cease vegetative growth soon after flowering begins. Pod and seed development is more uniform than an indeterminate type. This implies a shorter window for the crop to be ready for harvesting or combining. The **indeterminate types** continue vegetative growth even after flowering begins which implies a longer maturity period to harvesting.

The detailed growth phases and their descriptions can be downloaded from the internet from numerous sites and production manuals. It is highly advised that producers know these phases and can identify them in the soybeans as they grow.

All these factors should be taken into account. Spreading the growing season maturity dates over a longer period so that you can harvest different lands in time over a longer period will alleviate the pressure of harvesting the whole crop within a short period. Any rain received when the crop is due to be harvested can lead to 20% to 50% losses as the pods shatter after drying off again.

Sizwe Ngewenya's soybean crop is growing well. He farms on Donkerhoek farm and is mentored by Jurie Mentz.

Organ Serema has tried his hand at planting soya for the first time with the help of SACTA. His fields are looking very good.

HARVESTING CONSIDERATIONS

Make sure that your combine harvester is in good condition or that you have a reliable contractor that will be on standby to move into the lands as soon as the soybeans are at the right stage.

At the **reproductive or R7 growth stage** the mature pods go from green to yellow to light brown, then dark brown with very dark spots depending on the cultivar type. The seeds are still at about 60% moisture content. If you can buy a proper seed moisture tester then you will know exactly. Alternatively take a sample to your nearest commercial silo operator and ask them to test it.

Farmers must visit their soybean lands every day to monitor the moisture content, as the rate of ripening can occur very quickly. Timely combining is critical to successful soybean production.

At the **R8 stage** 95% of the pods will be mature and the seeds can drop to 15% moisture within five to ten days. The optimum harvest moisture is 13% to 15% for maximum mass and minimum field losses. Soybeans should be harvested when the seed pods and the foliage are dry. Take a few pods and rub them in your hands to see how close they are to popping open if you are not sure.

Remember the following:

- Seeds will be crushed when harvesting takes place over 18%.
- Combining can start with filling a test tank to see if there are still any green seeds in the sample which will quickly go off and create storage and seed quality problems.
- Green beans can be left in stored seeds if the moisture and temperature are kept at the correct levels. If the levels are not just right combining must be delayed.
- Green seeds mainly occur when a late planted crop is frosted and will devalue your sample quality.
- Do not plant soybeans later than recommended but rather plant a fast variety of sunflowers instead. The yield on the late soybeans can really be below expectations as soybeans need enough heat units for high yield right throughout the growing season.

There is a delicate balance between too high and too low **optimum harvesting moisture**. Below 13% moisture, open seed pods will shatter and losses can be 10% or higher. At 10% there will be large shattering losses and the seeds themselves will split causing a loss of sample quality. Try and avoid this situation at all costs.

The **combine drum speed and wind strength** must be set for maximum cleaning but minimum losses from shattering. Always do a shattering percentage test before a combine has cut a swathe and then thereafter. You can then see if the combine is optimally set as the seed loss can be measured from the effect of the knife and table actions as well as the effectiveness of the internal threshing and loss of seed over the sieves. Try and reduce any seed splitting as much as you can. Adjust the combine settings as required.

DRYING AND STORAGE

The small farmer can clean and sort the crop on a small covered open sided shed. Then bag it and immediately sell it or keep for a short period. When the storage moisture is too high, rapid spoilage can appear in bulk seed that is too deep even if spread out on a concrete floor. Some producers will want to keep seed for next season's planting and the germination percentage can be very quickly reduced.

For storing less than a year a 12% to 13% moisture content is advisable as this also is optimum for delivery in bags or bulk for selling.

> *Timely combining is critical to successful soybean production.*

The larger producer can decide to process the crop in a proper facility, shed or silo complex. It is vital that all foreign material and seed part splits be thoroughly extracted before drying. Soybean seed coats are very fragile and can be easily damaged by warm air hotter than 60°C. Reduce the use of augurs to seed coat damage although the seeds in on farm silos, stored for later sale, must be periodically recycled and pest control must be carefully applied. The state of the stored seed must be checked weekly to prevent any quality problems that might arise.

If you do not have the facilities it is best to deliver you crop to your nearest commercial silo for proper cleaning, drying and classing. The farmer can then decide to sell at the current market price or later if hedging in the futures market. Storing on farm can lead to massive financial losses to quality deterioration!

CONCLUSION

Knowing the growth phases of your crop in detail and monitoring the optimum maturity state for combining will lead to timely harvesting, handling, storage and selling the highest yield attainable for the best price possible. ■

RICHARD MCPHERSON, AGRIBUSINESS AND PROJECT MANAGEMENT CONSULTANT

HOW TO CHOOSE THE RIGHT PARTNER *for your farm*

THE CHOICE OF AND RELATIONSHIP WITH YOUR BUSINESS INPUT SUPPLIERS ARE PIVOTAL TO THE SUCCESS AND SUSTAINABILITY OF YOUR FARMING BUSINESS. PRODUCERS NEED TO SURROUND THEMSELVES WITH KNOWLEDGEABLE AND RELIABLE ADVISORS AND PARTNERS.

It might be challenging for a farmer that is new to an industry to start the process of finding assistance. Some areas are more commercial with many companies or agents to choose from and neighbours to guide you, where other areas are more remote with very little to no or unreliable options.

MAKE THE RIGHT CHOICE

In whichever situation you find yourself, you need to be pro-active. Here are a few pointers:

Do your homework

- It is strongly suggested that you investigate who to use. Talk to your closest commercial farmers and local agribusiness on the options and companies in your area. If you do not have access to these types of platforms, you can phone your Grain SA regional development manager for guidance.
- List your options and compare prices. Remember that the cheapest products might not always be the best, but the most expensive might not be what you need either. That is why it is so important to talk to other farmers and knowledgeable people with experience.
- Please guard against unknown suppliers or intermediary companies that buys and sells products. These suppliers rarely provide a service and bare absolutely no accountability if the products do not work or something goes wrong. Remember, the smaller you are, the higher your risk if something goes wrong! Very few farmers have the luxury to try out new products, so do not be a guinea pig. You most likely would not be able to replant, refertilise or respray. Do not lend your ears to products and practices that do not have a reliable footprint with various established farmers in your area.

Save by collaborating with other farmers

Whether you are a small, medium or large farmer, there are benefits in buying together. Larger orders usually allow for either discounts or have logistical benefits for a farmer. If you are in a remote area you can buy together with other farmers in your area to justify the route for the supplier.

LONG-TERM RELATIONSHIP

Once you have found an agent (remember that you can have more than one), there are certain business principles that are very important to always keep in mind when dealing with any partner. A few of these are:

Communication

Keep an open line of communication with your agent. You need to know your business and ask the right questions. Plan visits well in advance.

Ethics (honesty and integrity)

- Be open and honest about what you know and what you don't know to receive the right type of advice that suits your farm and your budget. Your agent needs to know your situation to advise accordingly so that you can achieve optimum results with what you have.
- Always pay on time.

Be serious about your business

Follow the expert's advice and stick to the timelines suggested. Not adhering to advice will negatively affect your yield and the relationship with your advisor. Never assume that you know everything or

adapt applications at your own discretion to save money. Recommendations are there for a reason. Farmers that grow very quickly tend to make this dire mistake. Always guard against this and keep your feet solidly on the ground.

Consistency in all of the above

You always need to remind yourself of these points when dealing with your suppliers. Consistency will build your relationships and track-record as a reliable farmer.

ACCOUNTABILITY IS A TWO-WAY STREET

- Ensure that the supplier is a known company with a good record.
- Keep records of recommendations. Any official recommendation is to be provided in writing on a letterhead or the company logo and contact details of the agent's company on it.
- Plant certified seed as far as possible.
- If seed is treated it should be done by the company itself or with certified seed treatment equipment.
- Ensure that the chemical company from which you buy and the one who distributes the products are members of CropLife SA.
- Ensure that the agent you use is qualified (FERTASA qualified for fertiliser, AFCASA qualified for chemical recommendations).
- Farmers need to follow recommendations very carefully on aspects like application rates, the timing of applications as well as the instructions on labels.

It is crucial that farmers are pro-active in building long lasting relationships with reputable input suppliers. Within the agricultural industry we are all reliant on each other to achieve mutual success. ■

LIANA STROEBEL, TRAINING AND OPERATIONS MANAGER, GRAIN SA FARMER DEVELOPMENT PROGRAMME

NAMPO 2022 – come experience it

Grain SA's **NAMPO Harvest Day**, the biggest agricultural show in the southern hemisphere, will take place again this year after a two-year interruption as a result of the COVID pandemic. The organisation announced on 4 March that NAMPO is set to take place in person this year, though in compliance with any national regulations that apply.

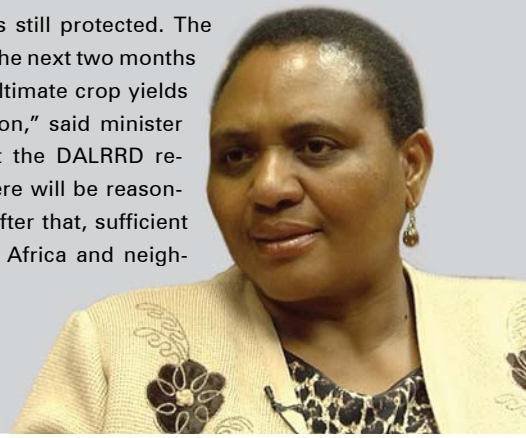
Visit NAMPO Park near Bothaville from **16 to 20 May 2022** to see what's new in agriculture. For the first time in the Harvest Day's history it will be presented over five days – from Monday tot Friday. The Farmer Development Team of Grain SA is looking forward to welcome our members at NAMPO 2022. ■

Minister proud of SA FARMERS

THE MINISTER OF AGRICULTURE, LAND REFORM AND RURAL DEVELOPMENT (DALRRD), THOKO DIDIZA, SAYS SOUTH AFRICAN SUMMER CROP PLANTINGS ESTIMATES PROVIDE HOPE DESPITE THE HEAVY RAINS. SHE SAYS THAT SOUTH AFRICAN FARMERS REVEALED THEIR RESILIENCE AND DEDICATION, AND PUSHED THROUGH THE CHALLENGES AND CONTINUED TO PLANT EVEN BEYOND THE USUAL OPTIMAL PLANTING WINDOWS.

Estimates released by the DALRRD's Crop Estimates Committee show that the 2021/2022 summer crop plantings are 4,21 million ha, which is 0,4% more than the 2020/2021 production season. 'This data is comforting and the first bit of information that suggests that while the recent rains have been destructive in many regions, South Africa's food security is still protected. The weather conditions for the next two months remain critical for the ultimate crop yields for the 2021/2022 season," said minister Didiza. She added that the DALRRD remain optimistic that there will be reasonably good yields and, after that, sufficient crop harvest for South Africa and neighbouring countries. ■

Source
Mzansi Agriculture Talk, 27 January 2022



IF WE FAIL TO ADAPT, WE FAIL TO DEVELOP

LATELY, INSTEAD OF MONITORING WEATHER REPORTS IN THE FACE OF THE NORMAL BLUE, SEARING HOT SKIES WHICH SEEMINGLY STRETCH FOREVER, WE ARE NOW ANXIOUSLY COUNTING THE DRY DAYS AND PRAYING FOR ENOUGH HEAT UNITS TO GROW OUR CROPS. NOTHING HAS REALLY CHANGED. FARMING IS STILL FULL OF CHALLENGES.

It's been a different season, hasn't it? It's not every day that you hear a farmer muttering about too much rain. In my neck of the woods the farmers have struggled to get into the lands to get their fields planted. It has even been a challenge nurturing the young summer crops like getting the maize, sunflowers and beans to emerge; or splash muddy tractors through muddy fields to wage the annual war against weeds and pests.

RESILIENT FARMERS DO THE RIGHT THING

Farmers are still straddling two worlds – one outside, facing the elements and nurturing their crops; and the other in the office, keeping records and balancing the books. Skill is required to manage our businesses in difficult times since anxiety, stress and depression make farmers vulnerable. Vulnerable people don't always make the best decisions. A Colorado State University study revealed that among behavioural pattern spikes observed are increased family tensions, more substance abuse and more frequent on-farm accidents and injuries.

The quote by the American author Robert Jordan said: 'The oak fought the wind and was broken, the willow bent when it must and survived.' We all face hardships. The difference lies in how one reacts to difficult circumstances. It comes down to resilience. Resilient people are ones who have well developed leadership competencies and are most likely to choose the 'fight' rather than the 'flight' option. These individuals seek solutions and reach out for help. Resilience helps us to adjust our thinking away from a sense of lack towards a path where we concentrate on our options – it moves us from inaction to action on the farm and in our relationships.

A spirit of resilience spurs one on to do the right thing for example in managing the farm finances. After so many years of drought there are still farmers struggling to pay off their mountains of debt. A resilient farmer is one who does not bury his head in the sand and pretend it does not exist. Instead he faces his debtors and discusses his situation. Farming debt is not unusual but it requires an astute business mind and visionary to manage it properly. Once the books have been balanced there are two scenarios: (1) There is money to pay off the debt; or (2) There isn't money to pay off the debt.

In the **first case** the resilient farmer will do the right thing and repay the debts he can. This is empowering and has a lasting impact on building a good reputation which may be very helpful into the future.

Photo: Renette van der Merwe

THE HUDSON INSTITUTE NAMES TEN QUALITIES OF SELF-RENEWING ADULTS. THESE RESILIENT PEOPLE:

Are value driven – time is organised around critical priorities.

Are connected to the world – caring, communicating, networking, and seeking.

Make moments for quiet – solitude brings perspective.

Pace time well – life is about more than work! Quality and integrity matter.

Get into nature – use it to renew one.

Make time to be creative and playful – enjoy being alive!

Adapt to change – always pursue the best options.

Learn from the down times.

Always stay in training – learning awakens us to new possibilities.

Are future orientated – look for ways to deepen our experiences and make a difference to our world.

There is little to be said about the man who can repay but doesn't; and rather spends the money on something else more appealing... his reputation is also being established – and not in a good way!

In the **second scenario** where the debts are many and there is not enough money to spread around, then the right thing to do is to be brave. A resilient farmer will get his financial reports in order and go and discuss the situation with his financiers and try to make plans as to how the repayments could be made over a more realistic period of time. It is basically not helpful to stay quiet and hope the lender has forgotten that money is owed to them.

BECOME A LEADER

Bob Milligan of Cornell University believes we should constantly be challenging ourselves with how we do business today – we need to 'think outside the farm' as the way to lead our farms. Leadership says we know what direction we are moving in; we can focus on what is important and we view challenges as an opportunity rather than as a threat.

A leading futurist and a trends and innovations expert, Jim Carroll, observes, 'Some people see a trend, and see a threat. Innovators see the same trend and see an opportunity.' He believes we need to acquire 'business agility'. This empowers us to respond to external trends, to spot opportunity, ward off challenge and align resources for fast success. Farmers who maintain this is not relevant to them, make a mistake. This is exactly why some for example, have successfully embraced the futures trading platforms while others stand by frustrated and negative.

How do we achieve this business agility while we contend with issues which make us feel burdened and overwhelmed? We refocus on the big picture and get a vision for our operations where we can thrive within the change. Carroll suggests that we focus on the following issues:

- Rebuild our competitive intelligence capabilities.
- Abandon tradition and get more projects going on the leading edge.
- Be decisive.
- Be innovative.
- Develop unique partnerships and mix different generations.
- Adapt to new technology – rapidly!

In spite of the many ongoing challenges a farmer must face, it is important that he enjoys his life, family and work. The key to happiness, resilience and staying-power remains in our own hands.

Farmers cannot always know what they will be facing from one season to the next. Who could have imagined such a wet 2021/2022 season? Who could have predicted the pandemic we are dealing with right now? What resilient farmers can do, is make work of knowing themselves, knowing their business, and getting creative about addressing the constantly changing environment. Farmers need to decide what's important to them and do what it takes to chase after those things!

'If you want to make small changes, change the way you do things. If you want to make major changes, change the way you see things.' (Don Campbell, a Canadian rancher). ■

JENNY MATHEWS, MANAGEMENT AND DEVELOPMENT SPECIALIST AND EDUCATOR

WEED CONTROL:
Prevention is better than cure

THORN APPLE AND COCKLEBUR ARE VERY COMMON WEEDS IN MOST CROP PRODUCING REGIONS OF SOUTH AFRICA. THESE WEEDS ARE KNOWN TO BE POISONOUS TO HUMANS. IF GRAIN IS DELIVERED WITH SOME OF THE WEED SEED IN THE GRAIN, THE GRAIN WILL BE REJECTED AND SENT FOR CLEANING. THE CLEANING COST IS FOR THE PRODUCER'S POCKET – AND IT CAN BE A HIGH PRICE TO PAY.

A young thorn apple plant.

This is not the only cost for farmers as these weeds can have a severe negative impact on the crop yield if left unmanaged. Fortunately in maize, these weeds are not as difficult to manage as in broadleaf crops.

CONTROLLING THORN APPLE AND COCKLEBUR

The weeds are sensitive to the most broadleaf herbicides. If the correct herbicides are applied on time these weeds will not be a problem. There will however always be some weeds that germinate very late in the season and it is these weeds that will cause the problem at the silo.

Thorn apple or *Olieboom* and cocklebur or *Kankerroos* are known to grow aggressively. The weed germinates easily and can become a big headache for farmers. These two weeds will germinate early in the season and will keep on germinating until late in the season, which makes it a difficult weed to control.

> *Farmers should always have a good weed control programme which will control the establishment of these weeds.*

Farmers should always have a good weed control programme which will control the establishment of these weeds. If chemical control is not effective, then mechanical methods should be implemented, even if it means hoeing by hand. If farmers fail to do this then they will suffer the consequences when it comes to harvesting time and the following years.

2,4-D Amine

In **maize** there is a herbicide that will control the pest after germination. 2,4-D Amine is an example of a herbicide that will control it effectively. It is important to contact your herbicide representative for more information because if it is not used correctly 2,4-D can harm your maize crop. It is a costly action to control the weed chemically.

Hoeing by hand

Hand hoeing is also a costly exercise as minimum wages have to be paid. If the weed is controlled by hand with hoeing it is important to collect the weeds and to take it out of the fields. It does not help hoeing the weed down but leaving it in the field and allowing the weed to spread its seed when it is dry.

Seed pods

- If there is any developed seed pods on the plants the seed will keep maturing. These seeds will germinate the following year.
- It is also important to make sure that these weeds don't get into the

Cocklebur seedlings.

*Although the Cocklebur (***Xanthium strumarium***) has many medicinal properties, it is not a crop farmer's friend.*

Thorn apple's scientific name is Datura species. The name datura comes from the Hindu word, **dhatura***, which means thorn apple.*

combine harvester. If the harvester is pulled by a tractor, the driver should stop to collect the weeds before it gets into the harvester. If a contractor is used to harvest or a self-propelled combine harvester is used it is however not an option to collect the seed before it ends up in the harvester.

BEST AGRICULTURAL PRACTICES ARE KEY

The control of Thorn apple and Cocklebur in **sunflower** is very difficult in the case of conventional cultivars. There are herbicides that can control the weeds. Planting Clearfield sunflower cultivars makes it possible to control these weeds easily and effectively. In the case of **soybean** production these weeds are not a problem if a Roundup ready cultivar is planted.

From the above information it is clear that the effective control of Thorn apple and Cocklebur starts the year before the crop is planted. At the end of the year look for these common weeds in the fields. Select a crop that is able to control the weeds.

It is clear that the prevention of the weeds growing is important for the delivery of weed free grain to the silo. There is no excuse for delivering weed seed in grain to the silo other than not applying the best practices available to farmers. ■

PIETMAN BOTHA, INDEPENDENT AGRICULTURAL CONSULTANT

SENSITIVITY ANALYSIS of SOYBEAN ENDING STOCKS

THE SIGNIFICANT INVESTMENT IN THE SOYBEAN SECTOR IS SHOWING POTENTIAL WITH INCREASED HECTARES PLANTED, YIELD INCREASES AND ESSENTIALLY PRODUCTION, COUPLED WITH GOOD GROWING CONDITIONS, ESPECIALLY IN THE PAST SEASON AND POTENTIALLY GOOD PROSPECTS FOR THE COMING SEASON.

This article suggests different scenarios using the Crop Estimate's Committee's (CEC) preliminary area planted estimate for soybeans for 2022 and average yield as the baseline to determine the stocks to usage ratio (**Table 1**).

1 ***Baseline figures for soybean supply and demand.***

Soybeans (2022/2023)	
CEC preliminary area planted	910 000
Average yield (t/ha)	2,00
Carry out 2021/2022 (t)	182 093
Local consumption (t)	1 650 000
Pipeline requirements for (± 1,5 months) (%)	13%

STOCKS TO USAGE RATIO

Table 1 table shows the 2021/2022 consumption of 1,6 million tons of soybeans, which is about a 15% increase compared to the previous three-year average of 1,4 million tons.

Preliminary area planted has also increased by about 10,02% compared to the previous season, which is the highest area planted to soybeans in the history of South Africa. This comes as no surprise given the price incentive for soybean as well as the excessive increases in fertiliser and agrochemical costs in the market, which does not bode too well for maize production and rather favours oilseeds, given the lower input costs. Although, it is not advised that farmers plant oilseeds without applying fertiliser, especially if long term effects are considered.

LOCAL CONSUMPTION

Table 2 indicates the sensitivity analysis of soybean ending stocks as percentage of local consumption given different area and yield scenarios for the 2022/23 marketing season. The CEC estimated soybean area of production at 910 000 ha (horizontal axis), with an average yield of 2 t/ha (vertical axis), which gives ending stocks as a percentage of local consumption at 21%.

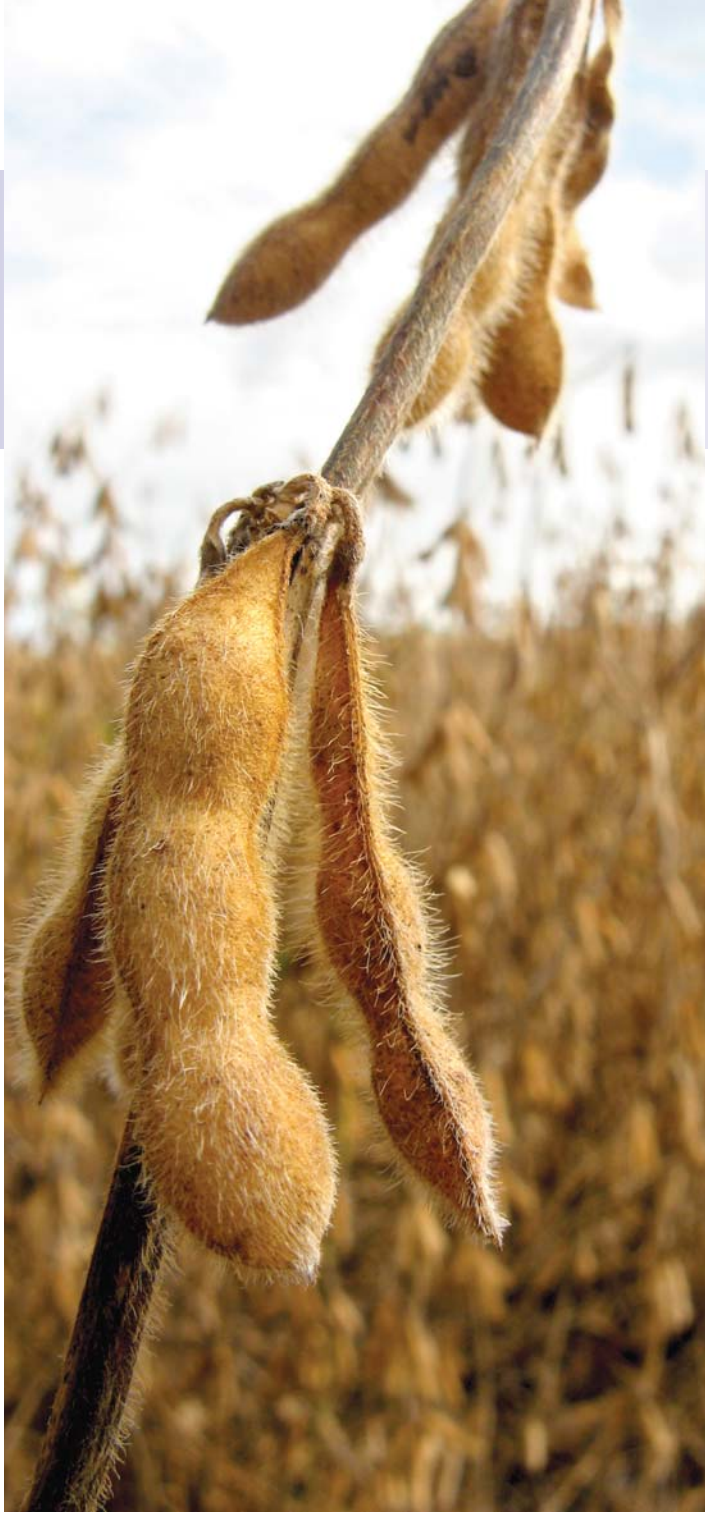
When the sensitivity analyses indicate a stock to usage ratio of less than **13% it is low, above 13% is high and 13% is optimal**. The stocks to usage ratio is a convenient measure of supply and demand interrelationships of commodities. The stocks to use ratio indicates the level of carryover stock for any given commodity as a percentage of the total demand or use.

2 ***Sensitivity analysis of soybean ending stocks as percentage of local consumption given different area and yield scenarios for the 2022/2023 marketing season.***

		Area planted (ha)					
		-20%	-15%	-10%	Preliminary area planted	+10%	+15%
		728 000	773 500	819 000	910 000	1 001 000	1 046 500
Yield (t/ha)	1,55	~~-21%~~	~~-16%~~	~~-12%~~	~~-3%~~	5%	9%
	1,70	~~-14%~~	~~-9%~~	~~-5%~~	5%	14%	19%
	1,85	~~-7%~~	~~-2%~~	3%	13%	23%	28%
	2,00	~~-1%~~	5%	10%	**21%**	32%	38%
	2,15	6%	12%	18%	30%	41%	47%
	2,30	13%	19%	25%	38%	51%	57%
	2,45	19%	26%	33%	46%	60%	66%
	2,60	26%	33%	40%	54%	69%	76%

Key

Only SA consumption *<20%*
Carry out as per Supply and Demand Estimates Committee *>20%*
No exports accounted for *<0*



Going towards the right of Table 2, if area planted deviates by +10%, or +15% above the preliminary area planted at the average yield of 2 t/ha, this would leave us with a stock to usage ratio of between 32% and 38%.

Going towards the left of the table, if area planted deviates by -10%, -15% or -20% less than the preliminary area at an average of 2 t/ha, the stocks to usage ratio will be less than optimal as it would be less than 13%.

Table 2 only accounts for local consumption and does not take any possible exports into consideration. If exports take place the stocks to usage ratio at the end of the 2022/2023 season could be totally different.

PRICES

Fundamentally supply and demand of a commodity – in this instance of soybeans – has a direct impact on prices. With a stocks to usage ratio of above 13% (high), prices will tend to be closer to export parity level (lower); this is due to higher ending stocks. With a stocks to usage ratio <13%, prices would tend to be closer to import parity level (higher); this is due to lower ending stocks.

With the current weather conditions, production is most likely going to be according to CEC preliminary planted area or just above the preliminary area, which could keep the prices closer to export parity. ■

IKAGENG MALULEKE, AGRICULTURAL ECONOMIST AT GRAIN SA

WORDS OF WISDOM

Agriculture is our wisest pursuit, because it will in the end contribute most to real wealth, good morals, and happiness.

~ THOMAS JEFFERSON
(president of the USA from 1801 to 1809)

ALTERNARIA LEAF BLIGHT – in search of an integrated control system

ALTERNARIA LEAF BLIGHT (ALB) OF SUNFLOWER IS CAUSED BY *ALTERNARIA ALTERNATA*, A SEED-BORNE PATHOGEN ON SUNFLOWER, ABLE TO INFECT SEEDLINGS FROM A VERY YOUNG AGE. HOWEVER, THE MAJORITY OF INFECTIONS TAKE PLACE DURING HEAD FORMATION. ALB OCCURS IN ALL MAJOR SUNFLOWER PRODUCTION AREAS, NAMELY LIMPOPO, MPUMALANGA, NORTH WEST AND THE FREE STATE.

In severe infections, lesions caused by ALB become irregular by coalescing, leading to blight and premature defoliation and can furthermore decrease sunflower yield due to loss of photosynthetic leaf area.

In 2021 Dr Godfrey Kgatle completed his PhD study on this disease, with the aim to improve the understanding of the causal organism, the epidemiology of ALB and to attempt to develop an integrated control system centralised around fungicide sprays.

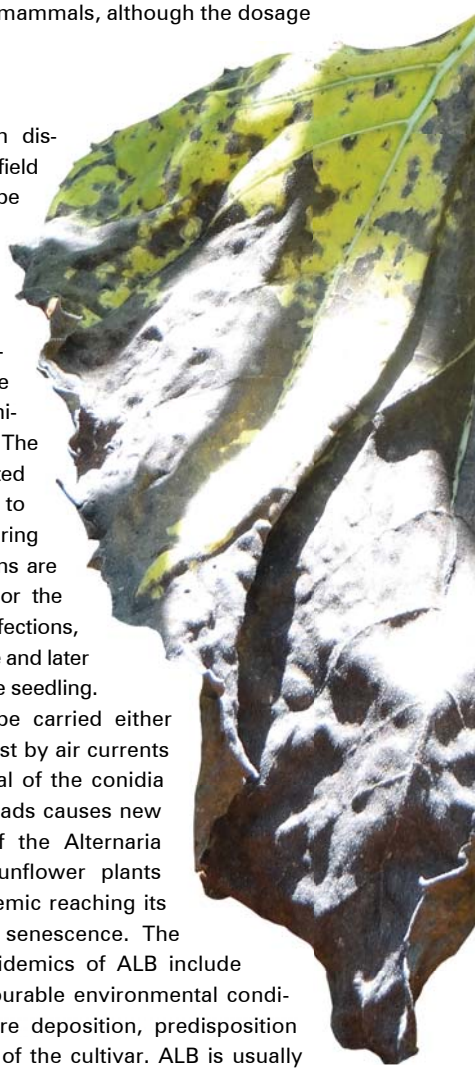
Furthermore, *A. alternata* are known to produce mycotoxins and there are currently no regulations anywhere in the world for the presence of Alternaria toxins in food or feed. Research done by Flett *et al*., shows that Alternaria-infected harvested grain in South Africa is contaminated by two mycotoxins, namely tenuazonic acid and tentoxin, which were frequently found in both the shelled and unshelled sunflower seed samples. Tenuazonic acid has been found to have acute toxic effects on various mammals, although the dosage is unknown.

2

Stem lesions of Alternaria showing large elliptical sunken lesions.

EPIDEMIOLOGY

Alternaria spp. overwinter on diseased stubble retained in the field and have been reported to be seed-borne. These infected sunflower seeds distribute the primary inoculum, which brings about the initial infections. The pathogen may contaminate the seed surface or the seeds may be infected systemically from the mother plant. The husk of the seeds are infected before the infection spreads to the embryo of the seed. During seed germination the pathogens are transmitted to the cotyledon or the seed coat. During systemic infections, the fungus grows into the ovule and later develops from the seed into the seedling.

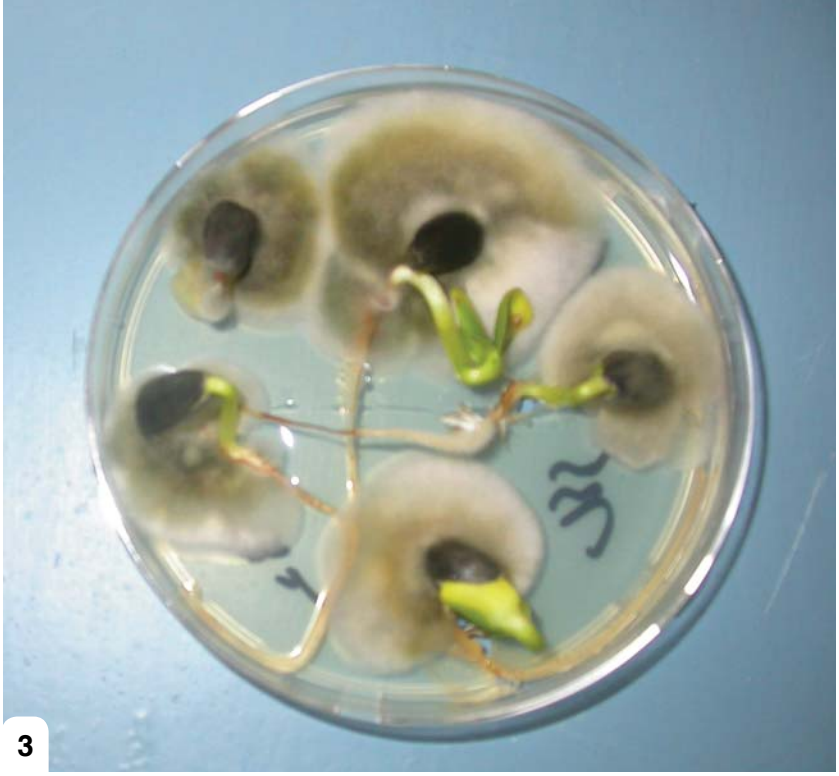


The pathogen can also be carried either passively or actively to the host by air currents and rain splash. This dispersal of the conidia to young florets of healthy heads causes new infections. The epidemics of the Alternaria pathogen start when the sunflower plants start flowering, with the epidemic reaching its maximum intensity at plant senescence. The factors that contribute to epidemics of ALB include an increase in inoculum, favourable environmental conditions, elevated levels of spore deposition, predisposition to wounds and susceptibility of the cultivar. ALB is usually favoured by temperatures between 25°C to 30°C and twelve hours of leaf wetness. The disease is initiated when spores land on leaves or stems, germinate in the presence of moisture and directly penetrate and infect the leaves.

When the environmental conditions are favourable, the *Alternaria conidia* are able to germinate within three hours. The conidia are able to produce multiple germ tubes; these tubes penetrate the leaf cells. The pathogen overwinters or endures as spores or mycelium on decaying plant debris or as dormant infections in seeds.

1

Leaf symptoms of Alternaria showing circular, dark brown lesions with concentric rings.



3

Alternaria alternata ***are seed-borne on sunflower grain as seen on this petri dish.***

DISEASE CONTROL

- The disease can be controlled through cultural practices such as crop rotation, destruction and burial of plant debris and tillage operations that bury and rapidly promote residue decomposition.
- The disease can also be controlled by planting resistant or tolerant varieties and correct plant spacing.
- Chemical seed treatment with fungicides significantly reduces the incidence of Alternaria seedling blight. Unfortunately, no fungicides in South Africa have been registered to be used to control ALB. ■

DISEASE SYMPTOMS

Alternaria spp. cause disease lesions on leaves, petioles, stems, sepals and petals of sunflower plants. Leaf symptoms appear as circular, dark brown to black lesions with concentric rings ranging from 0,2 mm to 0,5 mm in diameter. Lesions will eventually enlarge in size and coalesce, causing blighting of leaves (**Photo 1**). Some lesions can be identified by distinct yellow halos, particularly on young plants.

Stem lesions start as dark flecks that enlarge to form large elliptical to diamond-shaped sunken lesions (**Photo 2**). Dark brown oval to circular spots with a target-board appearance can form on heads. If the disease is severe, plants may be defoliated prematurely and die or frequently lodge.

DR BRADLEY FLETT, ARC-GRAIN CROPS, POTCHEFSTROOM AND DR MAHLANE GODFREY KGATLE, FORESTRY AND AGRICULTURAL BIOTECHNOLOGY INSTITUTE (FABI), UNIVERSITY OF PRETORIA.
FIRST PUBLISHED IN SA GRAAN/GRAIN APRIL 2021

Feedlot or not?

SUCCESS starts with calf quality

FARMING IS ALL ABOUT MAKING THE BEST PROFIT WITH THE RESOURCES AVAILABLE. PRODUCERS MUST MAKE THE DECISION WHETHER TO SELL THEIR GRAIN AND WEANER CALVES OR ADD VALUE TO BOTH BY FEEDING THE CALVES IN A FEEDLOT.

Self-produced calves or bought-in calves can be fattened in a feedlot or in pens or larger camps using commercially bought feed or home-grown feeds like maize, soybeans and hay. The profitability of the feeding calves will determine if it is possible to feed them or rather sell the grain and calves. Producers must not make the mistake to think inputs for the feedlot are for free – there is always a cost attached to inputs.

Four distinct factors that will influence the profitability of a feedlot are:

- the buying price of weaner calves or store cattle;
- cost of the feed;
- selling price of the finished cattle; and
- the performance of the cattle as influenced by management.

1 ***Feedlot cost structure.***

Feedlot cost structure	Percentage of total cost
Cost of cattle	61%
Feed cost	28,6%
Overheads	8,9%
Transport	0,7%
Mortalities	0,8%

Source: (SAFA, 2019)

2 ***General feedlot benchmarking ranges.***

Factor	Range
Initial weight	220 kg to 240 kg
Average daily feed intake	10 kg/day to 12 kg/day
Average daily gain (ADG, kg/day)	1,5 kg/day to 2 kg/day
*Feed conversion ratio	5:1 to 6:1
Days in feedlot	90 days to 150 days
Target end weight	460 kg
**Dressing percentage – lean	49%
**Dressing percentage – finished	56% to 60% (ave: 58%)
Mortality	<1%

**Feed conversion ratio is the amount of feed (kg) it takes to produce 1 kg of live weight.*

***The dressing percentage refers to the weight of the carcass after the animal has been slaughtered.*

Table 1 shows the industry cost structure. Feedlot management influences the profitability and cattle performance through its effect on feed intake, weight gain and overall health. General feedlot production targets which will influence the profitability of a feedlot are presented in **Table 2**.

3 ***Breakeven price at different scenarios.***

	Scenario A: baseline	Scenario B: Price of weaner calves too high	Scenario C: The impact of feed cost on gross margin
Start weight (kg)	230	230	230
Daily gain (kg)	1,7	1,7	1,7
Days on feed	135	135	135
Dressing percentage	58	58	58
Feed conversion ratio (FCR)	6:01	6:01	6:01
Kg feed used (kg)	1 380	1 380	1 380
Feed price (R/ton)	R4 119,22	R4 119,22	R 4 943.06
Mortalities (%)	1	1	1
End weight (kg)	460	460	460
Carcass weight (kg)	266,8	266,8	266,8
Weaner calf price	R37,00	R44,40	R37,00
Processing cost (R/calf)	R200	R200	R200
Weaner calf cost	R8 510	R10 212	R8 510
Feed cost (R/calf)	R5 684,52	R5 684,52	R6 821,43
Overhead cost	R442,24	R442,24	R442,24
Total cost per calf in feedlot	R14 836,76	R16 538,76	R15 973,67
Breakeven price including 1% mortality	R56,17	R62,62	R60,48

BASIC FEEDLOT ECONOMICS

A feedlot operation's profitability calculation is based on the price margin, the feed margin and other expenses. The price margin includes the difference between the purchase price and selling price of cattle, influenced by beef price fluctuations and improvement in carcass quality due to feeding. The feed margin is defined as the profit or loss made by a feedlot as a result of live mass gain in relation to the cost of feed consumed. Good management, the best quality feed at the best price and the use of growth stimulants can improve the feed margin by achieving optimal growth rates. Other expenses will include:

- abattoir costs and losses;
- transport;
- interest on capital;
- labour and operational costs;
- processing costs;
- healthcare; and
- mortalities.

Normally the feed needed for a feedlot calf will consist of 73% maize, 12% roughage and 15% beef fattening concentrate, for example Beef Fat 33 from Molatek or SB 100 from Voermol. Usually, a calf of 230 kg growing up to 460 kg will eat 1 380 kg feed in 150 days.

Proper feedlot management is critical to profitability.

PRICING CALCULATION EXAMPLE

If a dressing percentage of 58% is assumed for a weaner calf of 230 kg at a price of R38,00/kg, it would mean that the producer actually could sell the carcass for R65,52/kg whilst the market price for an A2/A3 carcass is R50,00/kg. This will result in a negative price margin. The feed margin is calculated as the income from the added carcass weight above the costs to produce the added carcass weight. With a finalised weight of 451 kg, the added carcass weight during the 130 days in the feedlot will be 128,20 kg.

For a small-scale feedlot capital expenditure for infrastructure can be kept to a minimum.

Using the A2/A3 carcass price of R50,00/kg, the income from the carcass will be R6 410,00. The feed cost to produce the added carcass weight is calculated by using the weight added during the growth period, feed conversion ratio and the cost of the feed. In this scenario the feed cost will be calculated as 221 kg (added weight) x 6 (FCR of 6:1) x R3,80 (feed cost/kg) = R5 038,80. This will result in a feed margin of R1 371,20.

The total gross margin can then be calculated using the following equation: (price margin + feed margin) x the loss factor less other costs like dipping and dosing of about R100 per calf. The loss factor is calculated from the mortality percentage. (If the mortality is 1%, the loss factor will be 0,99.) In the above scenario, the total gross margin will be a loss of R829,78 per calf. To calculate the net margin, the other expenses including the income from the fifth quarter (skin and tripe) must be included in the calculation. **Table 3** (on page 17) gives three examples with varying weaner prices and the effect of feed cost on breakeven prices.

These scenarios illustrate the sensitivity of a feedlot's profit. According to information in Table 3 the breakeven prices for different scenarios fluctuate. It is important not to pay too much for weaner calves. Producers should also make sure that the price of the feed is not too high and they must focus on the consumer in order to get a better price. This will have a big impact on the gross margin.

Producers can do all this according to the book, but if the feeding calf does not have the potential to grow, the profit will be under pressure. The quality of a calf is important and plays a major role in the profitability of the feedlot – faster, efficient-growing cattle will require less feed and will spend fewer days in the feedlot to achieve the required final weight.

CARCASS AND WEANER CALF PRICE PROJECTIONS

According to Table 3 the breakeven prices differ dramatically. It is important to understand that the price of beef is influenced by factors beyond the control of the producer. In **Table 4** the expected carcass and weaner calf price projections done by Absa are shown. These prices can change, but still give an indication of what to expect.

Compare the breakeven prices with the expected prices and make a decision.

The use of planted pastures can further contribute to profitability.

4 *Carcass and weaner calf price projections (R/kg).*

2022	Carcass price projection – class A (R/kg)	Weaner calf price projection (R/kg)
Mar	50,97	36,65
Apr	50,76	37,35
May	50,40	36,90
June	50,33	36,80
July	49,48	35,72
August	50,50	37,05
September	50,99	37,70
October	50,96	37,60
November	51,20	37,95
December	52,29	39,35

OTHER RULES OF THUMB

- The weaner price must be less than 65% of the carcass price, with a calf price:beef price ratio of <0,55.
- To profitably finish a calf in a feedlot, 1 kg of carcass must be at least the value of 14 kg of maize. A maize:beef ration of 14:1 and higher is advantageous.
- The feed margin must be positive.
- A positive price margin is ideal, but it rarely happens in industry.
- Mortalities must be kept at a minimum, <0,8%. ■

PIETMAN BOTHA, INDEPENDENT AGRICULTURAL CONSULTANT. FIRST PUBLISHED IN SA GRAAN/GRAIN JUNE 2021

SA Graan Grain

CONSISTENCY IS THE ONLY WAY to remain authentic

IN 2020, IKAGENG MALULEKE, AGRICULTURAL ECONOMIST AT GRAIN SA, JOINED THE SYNGENTA LEADERSHIP FOR AGRICULTURE ACADEMY. AS A RESULT OF LOCKDOWN RESTRICTIONS, THE GRADUATION CEREMONY FOR THE 2020 CLASS WAS POSTPONED AND ONLY TOOK PLACE ON 8 OCTOBER 2021. IN THIS ARTICLE SHE SHARES HER THOUGHTS ABOUT THE ACADEMY.

All I remember from the opening night are the words from the then CEO of Grain SA, Jannie de Villiers, that 'leaders make things better'. I found myself in a room filled with a diverse group of people. It was intimidating at first, but the common thread was our love for agriculture and the need to see things get better in our lifetime. What we all brought to the table was an open mind and a willingness to learn. Little did we know how much our lives were about to change for the better.

MORE ABOUT THE PROGRAMME

The programme aims to develop personal and leadership capacities in individuals so that we can individually and collectively reframe the context within which we lead. That is in all four zones of influence, namely leading a team; being a team member and follower; being a leader and mentor as well as leading yourself. This will help to positively impact the leadership culture of our enterprise or organisation.

To achieve this goal, 13 themes were covered and grouped into four clear and sequential development clusters. The content covered was quite dense, with a lot of reading and self-study. The classes were interactive and required a lot of introspection and vulnerability, which became easier once we were acquainted with one another. We shared life stories and events that shaped who we are today, many of which were tragic. We confronted many fears and unresolved emotions that hindered our growth. Participating in the academy has changed my outlook on life and how I view leadership.

WHAT IS A LEADER?

Henna Inam said: 'Authentic leadership is leading adaptively from your core, choosing whom you are most inspired to be to serve the greatest good at this moment.' This statement sits at the heart of all that I have learnt, the majority of which was about self-discovery. I now understand that leaders set a strategy, motivate, create a mission and build a culture, all of which lead to results. Before one can even start to implement the different leadership styles, emotional intelligence is a primer to becoming a better leader. This involves emotional self-awareness, self-management, social awareness and social skills. These form good bases when one exercises the different leadership styles.

Leaders create an environment conducive to growth and continuous learning to get the best results out of followers. We were encouraged to find our authenticity and focus on our strengths, with self-development as a key driver – 'Readers are leaders and leaders are readers'. Consistency is the only way one can remain authentic. Discovering my core values was the ultimate cherry on top. I now have a blueprint to check continuously if what I do aligns with my values. I realised that I am not willing to compromise on my values, no matter the circumstances.

AN INCREDIBLE JOURNEY

When I left the academy, I committed to be present in all my engagements and mindful of others and my surroundings. To listen effectively and focus on my vocal delivery in every conversation that I have. I will continue to reflect weekly in my journal as it helps me monitor my growth. I will also evaluate my values yearly to see if my actions align with my core values.

Overall, this was such an amazing journey – filled with self-discovery and understanding one's purpose and core values, before you can even lead. We have been equipped with tools that will help us navigate through the world of leadership. The diversity of the group allowed us to get different perspectives. Throughout the sessions, we were vulnerable with each other, which fostered understanding and trust amongst us. This platform allowed us to break stereotypes and to start having constructive discussions about a future that we want to see in agriculture.

We redefined expectations and considered ourselves as part of the solution to the crisis facing agriculture today. As young people, we are determined to shape the future of agriculture by pledging to be better leaders and committing to thinking and doing things differently to break the status quo. Over and above this, we have built strong networks and friendships that will last a lifetime. ■

IKAGENG MALULEKE, AGRICULTURAL ECONOMIST AT GRAIN SA

THE CORNER POST

MIRRIAM SWAEDI

'Farming is my passion and calling'

A UKRAINIAN PASTOR, SUNDAY ADELAJA, BELIEVES THAT YOUR PASSION AND CALLING IS WHATEVER MOTIVATES YOU MORE THAN MONEY. TO MIRRIAM SWAEDI (48) FROM SEHLAKWANE IN THE STOFFBERG AREA, BEING A FARMER IS NOT JUST A MEANS TO PROVIDE FOR HER FAMILY. 'I ACTUALLY BECAME A FARMER WHEN I WAS A CHILD BECAUSE MY PARENTS WERE FARMERS AND IGNITED THE PASSION FOR FARMING WITHIN ME. IT IS MY CALLING.'

GOING ABOVE AND BEYOND

Mirriam's path crossed with that of Jerry Mthombothi, regional development manager at the Mbombela office, in 2013 when she joined Grain SA. Jerry became her mentor who guided her to become a better farmer by applying better agricultural practices. 'Grain SA has helped me a lot. I have learned a lot about farming and my harvest is much higher than before,' she says.

No task is too big or too small for Mirriam. She has one goal – to become a successful commercial grain producer in South Africa and she is doing everything possible to realise this dream.

Jerry says that Mirriam is an energetic, hands-on farmer who is a workaholic. 'She leads by example and will always be the first one to perform any task. She is a good listener who is always ready to learn. She follows advice and is keen to apply correct production practices,' Jerry says about his mentee.

He believes that the following practices have contributed to her success:

- Ripping the field before planting.
- Doing soil corrections by applying lime.
- Planting maize and dry bean varieties that are suitable to her area.
- Planting in the planting window.
- Planting correct plant populations.
- Spraying both pre and post emergence herbicides, insecticide and fungicides especially on the dry beans.
- Applying the advised amount of fertiliser.
- Following all the production practices as she has been advised.

OBSTACLE CAN BE OVERCOME

When you follow your passion and really enjoy what you do, nothing will stop you from getting your work done. This is the way to achieve your goals, says Mirriam who has not allowed obstacles from detracting her attention from her focus. She trusts that finances and climate challenges will not be stumbling blocks in her road to reaching her dream of being a landowner.

Although she does not own a farm yet, Mirriam dreams of owning her own piece of land one day. 'I love being a farmer. Farming is not just a business for me. It is my calling.' Currently she cultivates 6 ha on communal land in the Zaaiplaas Village in Sehlakoane near Stoffberg in Mpumalanga. Here she plants maize and dry beans.

After meeting Jerry and joining Grain SA she realised very quickly that better agricultural practices mean a higher yield. She was amazed at the difference healthy soil made to her harvest. 'I never knew about taking soil samples so that I could repair my soil and get it ready for planting. Now that I know how to prepare the soil, my yield has improved,' she shares. Last season she realised 6 t/ha and she hopes to reach an even higher yield this season. 'I realise my land was not 100% clean last season. To achieve an even better yield, a clean field and healthy soil is important,' she says.

MAKING A DIFFERENCE

This study group leader is so passionate about farming that she is making sure others learn the importance of correct agricultural practices so that they can have higher yields and improve their living conditions. Mirriam loves guiding hopeful emerging farmers and giving them advice on improving their cultivation methods. She is always willing to share her knowledge with other farmers, whether it is at a study group meeting or in the village. She knows that improving the skills of rural farmers is crucial to ensuring food security in the country.

She is the lady who set the ball rolling for Limpopo becoming part of the Farmer Development Programme. Limpopo now has eleven study groups consisting of 427 farmers farming on 750 ha arable land who are learning more about best agricultural practices for maize production. She also helps farmers in Limpopo who want to join Grain SA.

Mirriam is proof that success does not come easy even if you are passionate about what you are doing. It is hard work, perseverance, learning and sacrifice to reach your goal.

CONCLUSION

Although money is great and can buy us all the things that will temporarily make us happy, no amount of money can buy time. Time is our most valuable asset and it is something that, while on this earth, we should spend most wisely. You shouldn't feel like you're mindlessly wasting your life away. ■

LOUISE KUNZ,
PULA IMVULA CONTRIBUTOR

A programme that is changing lives

‘Input cost’ is the farmer’s new buzz word

ACCORDING TO GRAIN SA ECONOMISTS, INPUT PRICES HAVE RISEN ON AVERAGE OVER A ONE-YEAR PERIOD, WITH SEED BY 6%, FERTILISER BY 128%, AGROCHEMICALS BY 18% AND FUEL BY 40%. INTERNATIONALLY, A BASKET OF ENERGY COMMODITIES HAVE BASICALLY DOUBLED IN THE PAST SIX MONTHS. A TYPICAL GRAIN PRODUCER’S DIRECT INPUT COSTS ARE 50% HIGHER YEAR-ON-YEAR.

Our farmer’s dependence on international markets, since more than 80% of agricultural inputs are imported, together with local infrastructure and unrest challenges, amplifies local input price increases. The impact on small-scale producers is detrimental because these farmers do not necessarily have the opportunity to make early purchases or have the benefit of economies of scale.

For South Africa to be competitive in the future, actions will have to be taken to mitigate the risks of rising input costs. The short term solution is to increase productivity and ensure optimal profitability is achieved which means more efficient, accurate utilisation and placement of inputs. This all requires expertise, sophisticated knowledge and access to modern technology. Here the Grain SA Farmer Development team can make a significant impact toward mitigating these challenges.

We cannot neglect to note here that in the medium- to long-term, local value chain, role-players and the South African government will have to work together to implement plans effectively to ensure the risks of international availability of inputs and price increases are mitigated. The need exists to ensure the resources which are indeed available, such as phosphates, are effectively exploited and processed to ensure local availability.

BFAP's analysis reflects that droughts have a significant impact on competitiveness and local producers need affordable and multi-risk insurance. Increases in fuel costs and on-going load shedding also present challenges that affect profitability for example the development and operation of necessary infrastructure such as silo complexes and processing plants are hampered, placing further pressure on costs.

The international crisis has once again shown that South Africa's food and fibre production is directly dependent on international factors. It is critical to ensure that all available South African resources are processed and utilised effectively to make them more affordable and available timeously.

Private sector and government must work together to mitigate these risks. The main goal is clear – ‘to enable farmers to place sufficient quantities of safe and high quality food, timely and affordably, on every citizen's table’ (Grain SA press release: 12 November 2021).

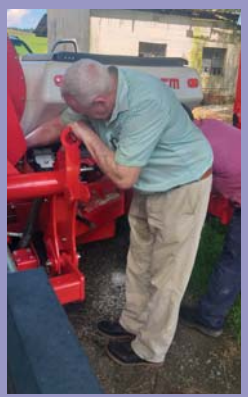
The pressure on the profit margins on the farm means that farm management has to be excellent. There is no room for mistakes or misjudged actions and no question of calling a weak decision ‘school fees’ – it could break the bank and mean the ‘death’ of yet another budding farming enterprise.

Sustainable food production is under pressure and new farmers and small farmers will bear the brunt of the situation. We have to lobby for more investment into support and mentorship being made available to the developing agriculture sector. Grain SA Farmer Development has an excellent track record having built wonderful relationships with so many farmers in key grain growing regions of South Africa.

AT GRASS ROOTS

Ntombizethu Dorcas Shongwe from Smutsoog Farm in Mpumalanga, received a new planter. The team will ensure that she learns how to work with it.

Bheki Mabuza managed to plant 100 ha of maize and 40 ha of soybeans. He struggled to apply his second herbicide application as it was very wet.



Grain SA mentor Chris de Jager assists Richard Shelembe of Klawervlei to calibrate his planter accurately so as not to waste seed.

Raphael Masuku busy preparing his spreader for calibration.

Jabulanyi Ngwenya planting maize.

Face to face mentoring

THE Grain SA team made **143 farm visits** to lend support and face to face mentoring to farmers during January 2022. The team also touched base with different study group members **91 times** during January.

As a result of the high rainfall received in many areas, the Grain SA Farmer Development team faced many challenges that had to be crisis managed during the months of December and January. Although most farmers experienced difficulties like not being able to plant, nutrient deficiencies due to waterlogging and some farmers in the Eastern Cape experiencing hail damage at least three times, it's not all doom and gloom though. With the right support and timeous action on the part of the farmers there are many beautiful crops thriving in the fields. We are hopeful that with correct management procedures, there will still be many good yields.

This lime was delivered to the field but it has been too wet to get the tractors rolling through the fields to apply it.

These mealies are struggling to stand upright in the waterlogged fields. The sandy soil was waterlogged and the maize plants stunned as there is no air in the root zone.

Farmer Boy Nzimande is a recap farmer who farms on Sterkfontein Farm near Amsterdam. He could not get all his fields planted because of the wet fields. However the planted maize looks good and he has applied topdressing on all his maize. Knapsacks have been used to apply herbicides as he can't get into the fields with his tractor and boom sprayer.

A closer look at THIS WET SEASON

WHAT an amazing year it has been. We had all hoped for a wet summer grain growing season but who could have predicted this amount of rain and all the accompanying challenges. Perhaps this is preferable to the endless blazing heat of a drought season. Our poor farm bakkies all need some extra tender loving care and servicing as they have had to plough their way through rivers of water and mud that are supposed to be the farm roads.

The roads on farmer Thomas Sibiya's farm at Schurwepoort in Mpumalanga are rivers of mud. (Photo taken on 5 January 2022)

The fields are very wet on Koornfontein, the farm of Alfred Manqoba.

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