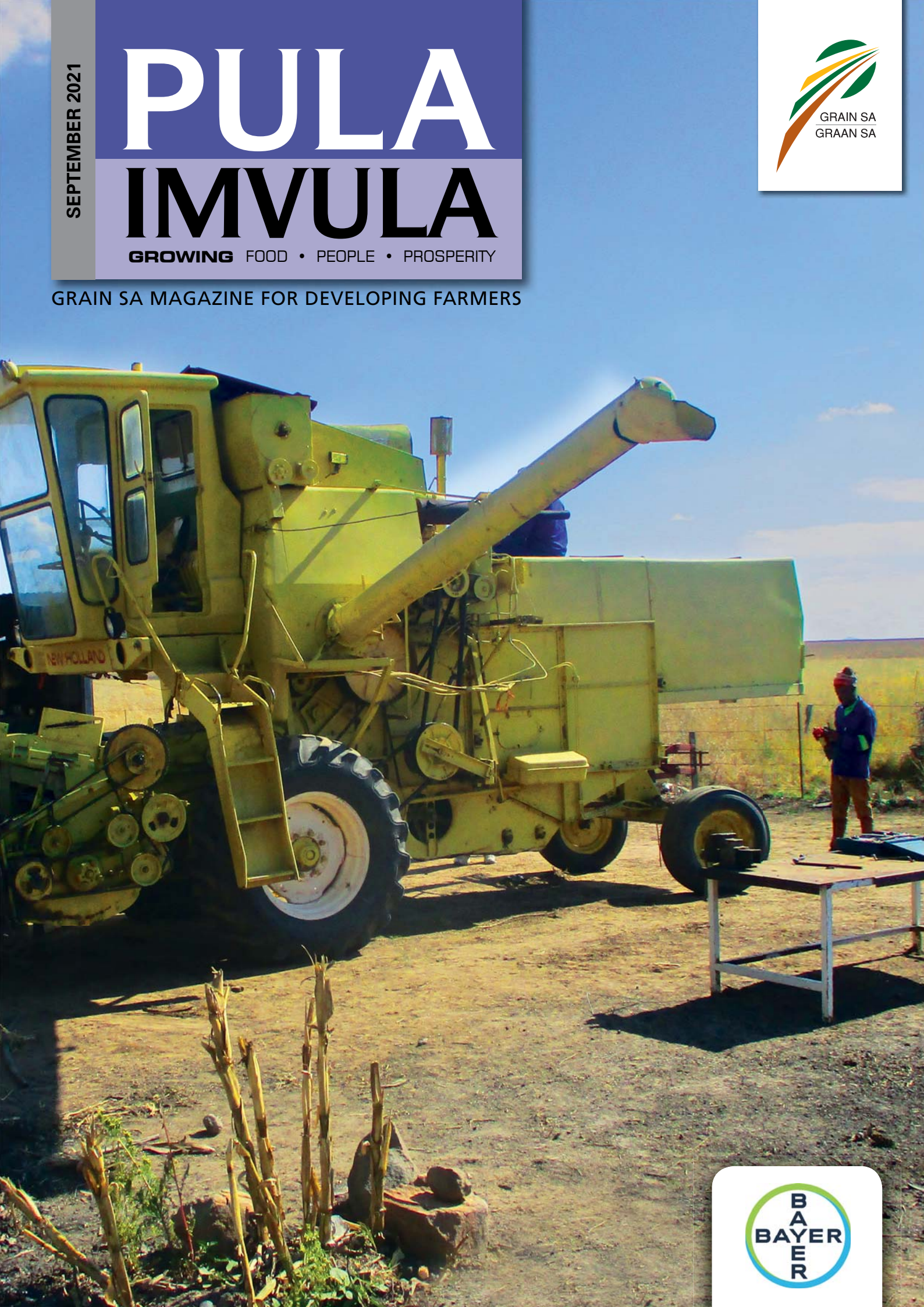
SEPTEMBER 2021

PULA
IMVULA

GROWING FOOD • PEOPLE • PROSPERITY

GRAIN SA MAGAZINE FOR DEVELOPING FARMERS

GRAIN SA
GRAAN SA



BAYER

PULA IMVULA

Editorial team

GRAIN SA: PRETORIA
PO Box 74087
Lynnwood Ridge
0040
■ 08600 47246
■ www.grainsa.co.za

MANAGING EDITOR
Sandile Ngcamphalala
■ 082 862 1991 ■ Office: 012 943 8296
■ sandile@grainsa.co.za

EDITOR AND DISTRIBUTION
Liana Stroebel
■ 084 264 1422 ■ Office: 012 943 8285
■ liana@grainsa.co.za

PUBLISHING PARTNER
INFOWORKS MEDIA PUBLISHING
Assistant editor – Louise Kunz
■ louise@infoworks.biz
Team leader – Johan Smit
■ 082 553 7806 ■ Office: 018 468 2716
■ johan@infoworks.biz
Publishing – Elizma Myburgh, Joritha Hechter

infoworks
your ideas can fly

Grain SA Farmer Development Programme

DEVELOPMENT CO-ORDINATORS
Johan Kriel
Free State (Ladybrand)
■ 079 497 4294 ■ johank@grainsa.co.za
Jerry Mthombothi
Mpumalanga (Nelspruit)
■ 084 604 0549 ■ jerry@grainsa.co.za
■ Office: 012 943 8289 ■ Smangaliso Zimbili
Jurie Mentz
Mpumalanga/KwaZulu-Natal (Louwsburg)
■ 082 354 5749 ■ jurie@grainsa.co.za
■ Office: 012 943 8218
Graeme Engelbrecht
KwaZulu-Natal (Dundee)
■ 082 650 9315 ■ graeme@grainsa.co.za
■ Office: 012 943 8287 ■ Nkosinathi Mazibuko
Luke Collier
Eastern Cape (Kokstad)
■ 083 730 9408 ■ luke@grainsa.co.za
■ Office: 012 943 8280 ■ Luthando Diko
Liana Stroebel
Western Cape (Paarl)
■ 084 264 1422 ■ liana@grainsa.co.za
■ Office: 012 943 8285 ■ Hailey Ehrenreich
Du Toit van der Westhuizen
North West (Lichtenburg)
■ 082 877 6749 ■ dutoit@grainsa.co.za
■ Office: 012 943 8290 ■ Lebo Mogatlanyane
Cwayita Mpotyi
Mthatha
■ 078 187 2752 ■ umthata@grainsa.co.za
■ Office: 012 943 8277

PULA IMVULA IS AVAILABLE IN THE FOLLOWING LANGUAGES:
English, Tswana, Sesotho, Zulu and Xhosa.

THIS PUBLICATION IS MADE POSSIBLE BY THE CONTRIBUTION OF THE MAIZE TRUST

CONTENTS

A Word From...

Luke Collier

THE PAST YEAR HAS BEEN A WHIRLWIND FOR MOST IN BOTH BUSINESS AND FAMILY LIFE. THERE HAVE BEEN LOSSES IN LIVES AND CROPS IN MANY OF THE FARMING COMMUNITIES ACROSS THE COUNTRY. WITH THIS, HARDSHIP HAS COME – ONE OF THE MOST PROLIFIC SEASONS, WITH RAIN MANY HAVE NOT SEEN IN SEVERAL YEARS.

By this time of the year both commercial and small-scale farmers have completed their harvests and will either be counting their profits or losses due to the recent 'wet' season we have had. Most have had great rains with not much damage to speak of. On the other side of the fence though many have lost up to half of their crop due to cob diseases (*Diplodia* and *Fusarium*) or yield reductions due to leaf diseases (grey leaf spot or rust).

However, as farmers we generally are a resilient type and thus tend to move on regardless of a great or poor season. The planning for the coming season should by now be complete, inputs acquired and soil corrections complete – if not we should be nearing the end. It must be kept in mind that most correctional products take time to become available to the plant and/or correct the soil, so the earlier we can apply them the better.

Finally, our equipment should be 'game' ready for the coming season. The last thing any farmer should be doing, is starting to repair and grease equipment a day or two before planting. It is around this time that our first rains will hopefully begin and this should mean the start of the tilling of the soil. Farmers need to be in a position to hitch their implements and go straight to the lands and begin working without any problems. This can only be achieved if pre-season maintenance has been done correctly. This will also apply to the balance of the equipment for the planting season.

As soon as the rains arrive in October (hopefully) and you would like to plant, you need to be able to plant. The sooner you get your crops in the ground (in the smallest possible window), the better your chance is for a good yield.

Let's keep each other motivated during these tough times. ■

By failing to prepare, you are preparing to fail

NEW MECHANISATION COMES AT A HUGE PRICE, SO IT IS IMPORTANT TO TAKE GOOD CARE OF WHAT ONE ALREADY OWNS. REMEMBER TOO, THAT BEING READY TO PERFORM CRITICAL FARMING OPERATIONS TIMEOUSLY CAN MEAN THE DIFFERENCE TO THE TONNES YIELDED ON YOUR EVENTUAL CROP – AND EVEN THE DIFFERENCE BETWEEN A PROFIT AND A LOSS IN A DRY SEASON.

In this month's activity report, you can read about the discussions Grain SA's farmer development mentors have been having with farmers on issues such as crop planning, budgeting and financial planning and insurances – and of course all mechanisation and implement needs are analysed. A fortunate few farmers are even in the position to buy new tractors and implements which make it easier to do an even better job on the farm.

PREPARATION OF SOILS

Whilst still harvesting, most farmers find they already have to focus on the new season ahead to ensure success.

A good example of important timing is the winter preparation of soils for your summer crops. If this is not done as soon as possible post harvest, much more pressure is added to your planting season in terms of time and tractor power required, to complete primary preparation and planting processes.

A **winter burn-down of weeds** that have continued to grow through the winter like thistle/'blou dissel' using chemicals like Roundup, is already the first step towards **conserving moisture** for the next crop. Ideally one should also do **primary soil preparation** like ripping or deep cultivation with for example a vibroflex. If you elect to go no-till then your spray programme is even more important at this stage.

The soil preparation is primarily intended to help with good moisture penetration when the first rains fall and to prepare a good seed bed for the seed. If you have not been able to get this done yet due to waiting for finances, then you have to focus on your soil preparations as soon as possible.

DOWN TIME IS A TIME THIEF

When one is busy with planting one cannot afford to stand because of breakages. So now is also the ideal time to service all your tractors and implements.

Neatly stored implements that are in good working conditions will help farmers perform the necessary farming operations timeously.

Implements

SOIL PREPARATION: Make sure all tillage equipment such as rippers and vibroflex – and if you are using plough and disc – are serviced and ready.

- New tines must be fitted.
- Check the tyres and wheel bearings on trail models.
- Grease all necessary parts for example on your disc harrow.

PLANTERS: If you start out with a poor stand due to malfunctioning planter bins, you are already losing on your potential yield. Ideally you should:

- Strip down each unit completely, replacing coater bearings, press wheel bearings and depth control wheel bearings.
- Check all chains and look for cogs with worn or bent teeth as these cause chains to slip and affect the accuracy of seed placement.
- If you have a pneumatic/air planter make sure there are no leaks or cracks in any of the pipes which will affect the suction on the bins.
- Check the augers and auger bearings of the fertiliser bins as these are an important part of the planter. Check the bins themselves which are prone to rust and leaks and patch or weld these weak spots.

If markers are used, remember these take a lot of strain and sometimes crack or bend. Make sure these are adjusted accurately and are strong enough to hold position which is critical to attaining even row widths across your fields. A badly placed 'joining' row is very frustrating when cultivating and may even mean that some rows will be cultivated out – another potential loss which can be avoided with correct preparation.

SPRAY: Effective weed control and timely spraying that immediately follows on planting is a huge step in the right direction of getting top potential yields, since achieving a weed free seed bed means your seedlings will have the best advantage in not having to compete for soil moisture, nutrients and light. Do the following:

- Check that the spray tanks have been properly washed, flushed and cleaned to ensure no residue from previous chemicals remain.
- Remove all nozzles and clean these separately while the pipes are being flushed as residues tend to block these. Use a strong soapy water to get them completely residue free and unblocked.
- Make sure all the filters have been thoroughly cleaned.
- Check your spray's frame for cracks or breaks. Remember the booms often bounce along the fields and develop weaknesses. Repair these immediately.

Also make sure that your spray width is matched to your planter so there is not too much (or too little) of an overlap when working. This wastes chemicals and may leave some zones in the field unsprayed. In order to match the spray width to the planter width you may need to block off some nozzles.

The most critical piece of equipment on the farm is your planter. It is the one implement that most impacts your potential yield.

Tractors

Start with an initial **general service** including oil change, oil filters, diesel filters, air filters, and even hydraulic and gear oil change if required. Check the following:

- All wearing parts such as fan belts, general greasing of steering systems and wheel bearings.
- Water pumps and water pump bearings.
- The cooling systems for leaks on radiator and pipes.
- Check that your tyres are not worn. Replace or repair as a flat tyre can be most inconvenient and cost you in time and yield when you are busy trying to get your crop timing perfectly right.

Larger repairs may be needed on tractors. If a tractor is using too much oil or there is excessive smoking it may indicate that a complete engine overhaul is needed. This may be more costly than a normal service, but you will likely still recover that cost by not having any downtime in the middle of the busy season. ■

JENNY MATHEWS,
MANAGEMENT AND DEVELOPMENT
SPECIALIST AND EDUCATOR

A CHECKLIST to use for post-harvest maintenance

THE CARE AND MAINTENANCE OF FARM EQUIPMENT IS IMPORTANT TO PROLONG THE LIFE OF YOUR MACHINERY. THROUGH PROPER CARE AND MAINTENANCE, YOU ARE MINIMISING THE RISK OF UNEXPECTED REPAIRS WHICH WILL COST YOU TIME AND MONEY.

Here is a checklist to use for post-harvest maintenance of harvesters:

1. Consult the operator's manual for post-harvest maintenance and check points.
2. Conduct a quick look over of the machine and develop a to-do list.
3. Blow off dirt and debris both on the outside and inside. Harvest debris can attract rodents that can chew on wires and other electrical components.
4. For self-propelled harvesters:
   - Make sure to blow out radiators.
   - Give the inside of the cab a good cleaning, looking over door weather stripping, seats and other in-cab parts. Consider placing something to deter rodents in the cab.
   - Check the cooling system protection level for your climate.
   - Fill with fuel.
5. Only wash the outside and try to keep the water off bearings and other moving parts.
6. Touch up scratches and worn areas with paint or rust protectors.
7. Open inspection plates and look over the components.
8. Open concaves and sieves and look over for any issues.
9. Check bearings for any corrosion, spun on a shaft, or if they are loose. Replace all questionable bearings.
10. Change oil and filters while lubricating all grease fittings.
11. Make sure all lights are functioning properly.
12. Inspect all augers and conveyors for wear and damage. Replace the necessary components as soon as possible.
    - Check walkers and their bearings for damage, cracks or wear.
    - Check rotors while also evaluating alignment and bearings.
    - Make sure the straw chopper is balanced properly without excessive vibration.
13. Check and tighten all belts while inspecting for any cracks.
14. Inspect the feeder house chains and elevator chains for proper tightness and wear.
15. Look over the feeder house panelling (especially the floor) for excessive wear.
16. Check fountain and unloading augers for damage and any wear.
17. Grease all fittings and lubricate chains and other maintenance points outlined in the operator's manual.
18. Remove and store all drain plugs so that water does not accumulate in areas like grain tanks. ■

Lubricate all grease points to keep moisture out.

Belts should be tensioned according to the operator's manual.

Make sure that all chains are also lubricated to prevent rust.

Remove drain and store drain plugs to prevent water accumulation.

If your harvester is stored in a barn, place plastic bags or some sort of covering over it to protect the equipment from bird dung.

PIETMAN BOTHA, INDEPENDENT AGRICULTURAL CONSULTANT

Price hedging strategies using options

A MARKETING STRATEGY IS A CONSTANTLY EVOLVING PROCESS. EACH YEAR WILL NEED DIFFERENT TOOLS AND TECHNIQUES TO PROTECT AGAINST AND BENEFIT FROM PRICE VOLATILITY. THIS ARTICLE PROVIDES THE BASICS OF HOW OPTIONS WORK TO PROTECT GRAINS AND OILSEEDS FROM PRICE VOLATILITY.

An **option** is a contract whereby one party has the right, but not the obligation, to buy or sell the commodity at a predetermined price, at or before contract expiry. This contract or option gives the buyer the right, but not the obligation to exercise the contract, while the seller of the option has the obligation to honour the contract if the contract holder wants to exercise it. Options can be bought through a broker on Safex. There are two types of options, put and call options.

When an individual expects a futures contract to increase, they can purchase a call option that gives the holder an option to purchase the futures contract at a specific fixed price within a specified time frame. This fixed price is known as the 'strike price'. If the futures contract price increases above the strike price, the holder will make a profit.

A **put option** is the opposite. An individual who expects the futures contract to decrease from its current price in a specified time frame can purchase a put option. This put option enables the holder to sell the futures contract at a specified 'strike price'. If the futures contract price then declines below the strike price, the holder will make a profit. This strategy can be used before or after harvesting to protect the value of grain growing in the field or the value of grain in storage.

1 ***Time decay of options.***

Put option	Call option
In the money if strike is greater than futures price.	In the money if strike is less than futures price.
At the money if strike is equal to futures price.	At the money if strike is equal to futures price.
Out of the money if strike price is less than futures price.	Out of the money if strike price is greater than futures price.

2 ***Advantages of options.***

Put option	Call option
Eliminates price risk.	Take advantage of rising prices.
Allows producers to take advantage of rising prices.	Eliminate storage and interest costs.
Omits margin requirements.	Omit margin requirements.
Extends marketing year.	Extends marketing year.
High liquidity.	High liquidity.
	Limit maximum loss.

It is easier to buy and sell options when there are higher levels of open interest and volume. The price of options depends on the intrinsic value, implied volatility and the period before contract expiration.

- **Implied volatility** measures the likelihood that the contract price will change.
- **Intrinsic value** is the difference between the underlying asset (WMZ Dec'21) and the strike price of the options contract.
- **The time** affects the price when 'out of the money' options are very low when close to expiry due to the unlikelihood of the underlying asset ever reaching the strike price.

Marketing strategies depend on an individual's appetite for risk. Some disadvantages are that options may contain basis risks or include possible higher costs and require lots of data due to several options on each futures contract. Each marketing strategy demands knowledge of both the underlying market and options contracts to better protect against unforeseen circumstances. ■

3 ***Example of call option.***

AT THE MONEY CALL OPTION FOR DEC 2021 DELIVERY		
	WM	YM
Dec 2021 futures price	R3 171,00	R3 302,00
Call strike price	R3 180,00	R3 300,00
*Call premium	R207,75	R219,51
Breakeven Safex price	R3 387,75	R3 519,51

Data as at June 2021.
**Options premiums consist of intrinsic and time value.*
Source: BVG, Grain SA

4 ***Example of put option.***

AT THE MONEY PUT OPTION FOR JULY 2021 DELIVERY		
	WM	YM
Jul 2021 futures price	R3 271,00	R3 410,00
Put strike price	R3 280,00	R3 420,00
Put premium	R129,90	R113,11
Breakeven Safex price	R3 150,10	R3 306,89

Data as at April 2021.
Source: BVG, Grain SA

IKAGENG MALULEKE, AGRICULTURAL ECONOMIST AT GRAIN SA

Budget planning IS IMPORTANT

THE RESULTS OF THE SUMMER MAIZE CROP PLANTED IN 2020 AND HARVESTED FROM JUNE TO JULY 2021 CAN NOW BE ASSESSED. THE ACTUAL YIELDS ACHIEVED AND COSTS INCURRED WILL INDICATE WHETHER OR NOT THERE WAS SUCCESS ACHIEVED WITHIN THE PAST SEASON'S OPERATIONAL PLANNING AND CORRECT APPLICATION OF THE PLANNED INPUTS.

Producers sold their maize for around R3 200 per ton net in pocket value with many realising a higher than average yield. This is an unusual season in that a national high yield was coupled with a relatively high price.

Lessons for improvement of both efficiency in preparing the lands, planting, growing and harvesting the crop will lead to better assumptions in your budget for the current crop. These calculations should be finalised, at the latest by the end of September, so that the required inputs for maize and other cash crops to be planted can be ordered and the funding all the crops put in place.

DIRECT COSTS – IMPORTANT FOCUS POINTS

Depending on the accounting conventions used the critical costs included should be for seed, fertiliser including that placed at planting and side-dressed insecticides and herbicides under chemicals, diesel, crop insurance, seasonal labour, harvesting, marketing and transport.

Excluded are consultancy fees, salaries for permanent staff, repairs and maintenance and interest on the total direct input costs. These can be put under fixed costs or overheads.

The total income less the direct costs gives you the amount of financial benefit or 'gross margin' derived by the planting of any crop. The positive benefit derived will pay for the fixed costs including permanent staff, repairs and maintenance, interest, capital on long term loans, any other overheads and most importantly the return for labour and money used back to the farmer. Any money left over and above the direct and fixed costs, including the drawings by the farmer and family, would represent the real or net profit for the enterprise.

The objective to generate the sometimes elusive, net or real profit should be calculated and monitored by using a proper accounting programme. The budgets for all operations within enterprises should be set out on interactive spreadsheets for planning and then actual expenses also captured. This is all required for VAT claims or payments, and specific tax returns required. It is recommended that you employ an accounting person or firm to keep this information up to date if you are unable to do it yourself.

1 ***Guideline for direct cost incurred per hectare.***

Input	Direct cost (R/ha)
Seed	1 000 - 1 500
Fertiliser	1 800 - 2 500
Chemicals	750 - 1 500
Diesel	1 000 - 1 500
Crop insurance	500 - 800
Casual labour	300 - 500
Harvesting	800 - 1 200
Marketing and transport	300 - 500
Total cost range	6 450 - 10 000

ESTIMATED RANGE OF COSTS

It is recommended that proper quotes be obtained from trusted and established suppliers for each of the input costs. If several suppliers for each are approached the conversations involved for the different the physical recommendations made will point to a general consensus on the inputs required for your soil potential and targeted yields. The budget for a dryland crop of 4,5 t/ha will be much less than one of 8 t/ha.

The range for each direct cost incurred per hectare, depending on potential and targeted yield, is shown as a guideline in **Table 1**. Use your own accurate total to work out both cost per hectare and cost per ton of estimated yield.

CONCLUSION

Work out very carefully, your input cost budget using your actual production history and soil potential keeping a conservative long-term yield potential in mind. ■

RICHARD MCPHERSON, AGRIBUSINESS AND PROJECT MANAGEMENT CONSULTANT

WORDS OF WISDOM

I see Madiba in our farmers. I see it in how they tackle each new day with perseverance and dedication despite all elements. Remember, he was a farmer himself. He showed great compassion to those who cultivated the land.

~ ZELDA LA GRANGE
(former private secretary to Nelson Mandela)

Manage your BUSINESS RISKS

ANY BUSINESS FACES RISKS. A RISK BEING THE POSSIBILITY THAT AN UNFORESEEN, UNPLANNED, UNNATURAL, OUT OF THE ORDINARY, UNEXPECTED EVENT MAY OCCUR AND MAY CAUSE A LOSS OF SOME NATURE. ALTHOUGH RISKS CANNOT BE PREVENTED, ATTENTION MUST BE PAID TO ACTIONS TO REDUCE THE NEGATIVE EFFECTS THEREOF.

Farming is a high-risk business. During the production process numerous events can occur such as unfavourable weather conditions (droughts, flooding, hail, severe frost) and the occurrence of disasters such as veld fires and the outbreak of plant and livestock diseases. During the marketing process events may occur that could disrupt the marketing process and/or affect prices adversely. The loss can be physical – you cannot market your product, or negative price changes.

You may also experience unpredicted negative conduct by your employees. Thoughtless behaviour by either the farmer or his employees could lead to unnecessary disruptive action, resulting in an interruption of the production and/or marketing of products. Financial risks could be a lower income and/or problems with maintaining a positive cash-flow position, thus affecting the financial success of the business. Production, marketing and financial risks are closely interrelated.

AGRICULTURAL RISKS ARE GROWING

Unfavourable weather conditions are not unknown to us in South Africa, but we have experienced more adverse effects the last couple of years in the form of extreme temperatures, extreme floods, and more severe droughts. Even the soil as a production medium in South Africa is a risk factor. Research indicates that some 60% of South Africa's soils are degraded, largely because of poor farming practices, both on lands and grazing.

Theft of inputs, products and machinery and equipment are on the increase and has become a severe risk. Do not forget load-shedding which will still be with us for quite some time.

Marketing risks have also intensified. Infrastructures such as roads, railways and even harbours are deteriorating. Transport by trucks are risky due to hi-jacking. Even the risk of labour unrest has increased. Stringent labour laws increases the possibility of strikes due to the difficulty to adhere to all the laws. Disputes regarding salaries are on the increase.

Our government is very unsympathetic towards agriculture with little support in case of disasters. Ever changing policies and the random application of policies creates uncertainty and poses additional risks.

To summarise, agriculture is a far riskier business than ever. Take note, forecasts of future tendencies indicate that circumstances will become even more challenging in future.

Manage your...

HOW TO LIMIT ADVERSE EFFECTS

1 Attempt to create an emergency fund for the sudden additional costs created by a risk. Or establish a credit reserve with your bank to provide for the sudden additional costs.

2 Livestock farmers must provide for a feed reserves, silage and/or hay.

3 It makes sense to invest in a second business which must be of non-agricultural nature.

4 To counter theft as the risk, list all your assets – even the number 13 spanner. Better still take a photo of every asset and mark and/or number all assets. Remember you are obliged by law to brand and/or tattoo livestock. Take stock of all your assets on a regular basis. Livestock should preferably be counted every day.

5 Apply the correct production methods and use heat, pest or disease resistant cultivars as are available. Apply regenerative production methods to improve your soil health.

6 Establish proper waterways and contours to limit the damage of flooding and pay attention to dongas.

7 Do everything on time and in time and as correctly as possible. Apply precision farming which basically means to do everything as precise as possible with the means available.

8 Diversify your farming if possible.

9 Consider your marketing and use more than one channel if possible.

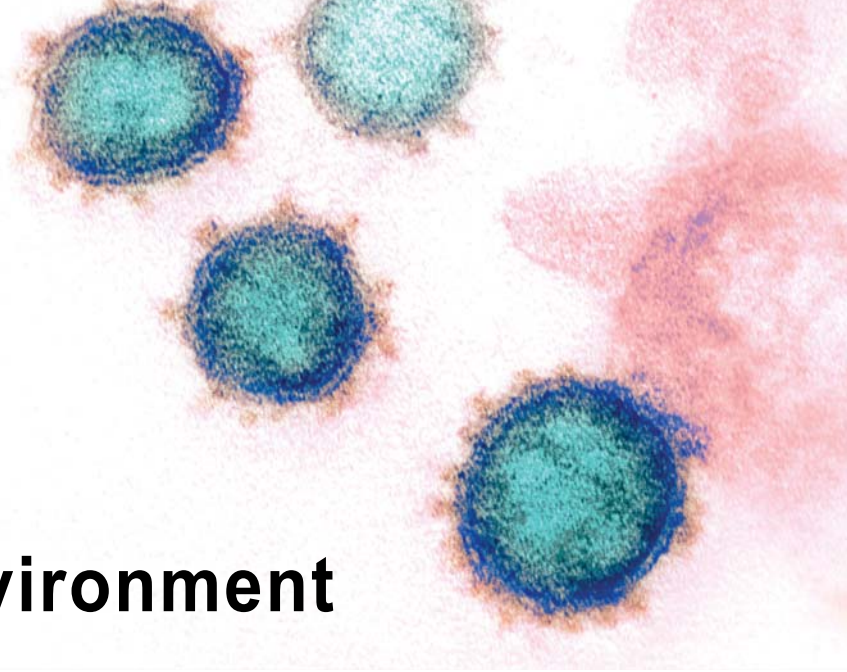
10 Manage your employment affairs strictly according to the labour laws and do not neglect discipline.

11 Although perhaps costly consider, insurance of your crop(s) and your assets.

These are only a few possible steps to limit the adverse effects of negative events. Circumstances on farms differ and each farm will require different steps.

Tomorrow must be managed today (as far as practically possible) to limit adverse effects. Prevention is better than cure. Risks will always be with us – at least attempt to limit the negative effects. ■

MARIUS GREYLING,
INDEPENDENT AGRICULTURAL MANAGEMENT CONSULTANT



COVID-19

A safe working environment is essential

DUE TO THE COVID-19 PANDEMIC AND THE CONSEQUENT RESTRICTIONS, EVERYONE HAS HAD TO ADAPT QUICKLY TO A CHANGING WORLD. NOT ONLY ARE OUR PERSONAL LIVES AFFECTED BY THE VIRUS, BUT ALL ASPECTS OF BUSINESS AND EDUCATION. DURING THE COVID-19 PANDEMIC, A SAFE WORKING ENVIRONMENT HAS BECOME EVEN MORE IMPORTANT THAN BEFORE.

It is important that both the employer and employees take responsibility for a safe working environment. According to legislation, employers must ensure a healthy and safe working environment, determine the threats and risks at the workplace and take the necessary steps to eliminate or control them. Under occupational health and safety legislation employees' responsibilities include taking reasonable care of their own safety and health and that of other persons who may be affected by their actions or omissions. They must also work with their employer to ensure a work environment that is free from hazards and health risks.

PANDEMIC CHANGES THE RULES

According to advocate Bernard Lombard of the Excelsis Group, the pandemic resulted in changes being made to certain legal aspects surrounding occupational safety. 'It is crucial to have the most relevant information about lockdown regulations.'

He says COVID-19 has brought uncertainties within the work environment about what is permissible. In the past, an employer could not ask an employee about his medical condition because the employee's right was greater than the employer's need for information. With COVID-19 this has changed as a safe working environment is now of critical importance. 'A safe working environment is therefore now much more important than any individual's right to privacy,' says advocate Lombard. 'The employee has the responsibility of keeping the work environment safe for his colleagues by being honest if he/she has experienced any symptoms or had contact with a person who tested positive for COVID-19.'

GOOD COVID-19 MANAGEMENT PRACTICES

The most important management practice is to draw up guidelines on procedures and the implementation thereof so that it can be applied consistently. Producers must ensure that adequate arrangements are made for the necessary hygiene practices and other basic provisions to combat COVID-19. The provision of the required personal protective equipment as well as the application of sanitiser in strategic places is required by law.

Bernard suggests that producers regularly conduct a risk analysis to determine where potential risks may arise. This information will help put measures in place to limit risks. Continuous monitoring of staff by completing daily health questionnaires can also assist to identify risks quickly.

The employer must also have proper controls or protocols in place for when an employee shows any COVID-19 symptoms or has been in contact with someone who has tested positive. These guidelines then also determine what 'contact' is. Close contact means that a person within 1 m had face-to-face contact or was in an enclosed space for more than 15 minutes with a person with COVID-19 who was still 'contagious' – that is from two days before to ten days after the onset of symptoms. According to the Department of Health, isolation is seen as sick leave and a medical certificate is not required. There must also be a suitable place for staff to be able to isolate where other employees are not exposed.

Vaccinations against COVID-19 have provoked much discussion worldwide. According to Bernard, pro forma policies on vaccinations are currently being issued. Most of the Excelsis Group's agricultural clients leave the decision to the employees. 'Those who want to go for the vaccinations must be given a day off to do so. Help them to register and provide transport to and from the vaccination centre,' says Bernard. If someone experiences side effects, he/she must also be given two to five days sick leave to recover.

Bernard suggests that producers look at each job description to determine what impact the vaccinations will have on the farming business. 'An employer may decide that the vaccination is compulsory for those in essential positions,' he says. ■

LOUISE KUNZ,
PULA IMVULA CONTRIBUTOR

QUALITY HYBRIDS
yield high oil content

OILSEED CROPS ARE THE SECOND-LARGEST SOURCE OF FOOD AFTER CEREALS, WITH A LARGE EXPANSION WORLDWIDE DUE TO HIGH DEMAND FOR VEGETABLE EDIBLE OIL. SUNFLOWER IS ONE OF THE FOUR MOST IMPORTANT OILSEED PLANTS IN THE WORLD, ALONG WITH PALM, SOYBEAN AND RAPESEED.

In South Africa sunflower (*Helianthus annuus L.*) is the most significant oilseed crop – it is the largest source of vegetable oil followed by soybeans and canola. Annually, almost the entire local sunflower crop is intended for the processing industry to be converted to sunflower oil. In the 2018/2019 marketing year, South Africa produced 315 406 tons of sunflower oil, which is the most widely consumed vegetable oil in the country. In the same year 379 395 tons of oilcake were produced.

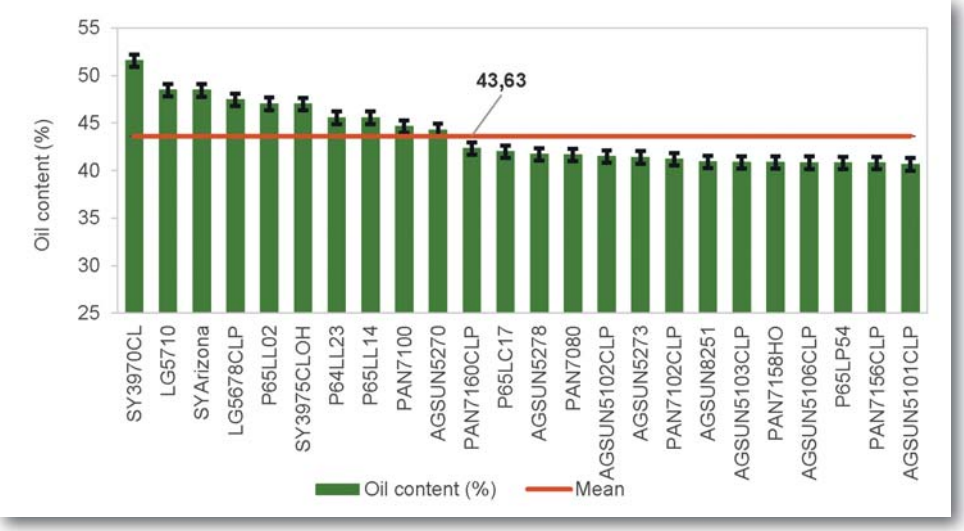
Oil-type sunflower seeds contain from 38% to 50% oil and about 20% protein. Sunflower oil consists mainly of a combination of mono-unsaturated and polyunsaturated fats with low saturated fat levels, making it a healthy and high performance non-transgenic fat and a desirable option for human consumption. Moreover, studies have shown that sunflower oil is healthier than most other food oils on the market; it is light in taste and appearance and supplies more vitamin E than any other vegetable oil.

The oil concentration of the sunflower seeds at maturity is known to vary among cultivars, therefore much effort by plant breeders are aimed at increasing the oil concentration in mature achenes of modern oilseed cultivars. The oil content and oil yield are complex quantitative traits, determined by genetic and environmental factors, along with interactions between them.

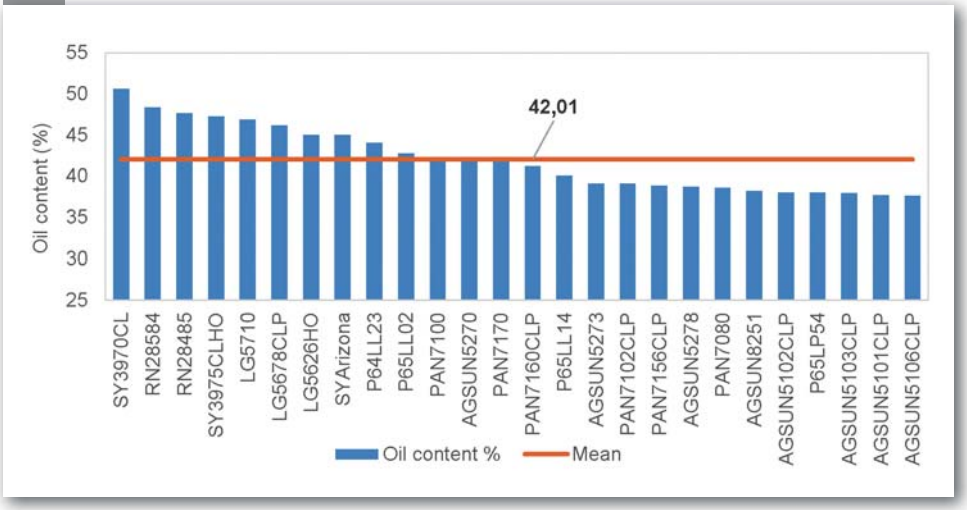
According to the Bureau for Food and Agricultural Policy (BFAP), South Africa's sunflower oil consumption increased by 63% since 2008. Over the next decade, an increase of 41% in sunflower oil consumption has been projected and although slower than the past decade, it remains significant. As domestic consumption is projected to remain higher than production, South Africa will remain a net importer of sunflower crude oil.

Currently South Africa does not necessarily see higher premiums being realised for a higher oil yield, compared to countries like the United States, where a 2% premium is paid for each percentage point of oil content exceeding 40%. However, good-quality sunflower hybrids can

1 ***Oil content (%) and the grand mean of 24 different sunflower hybrids evaluated during the 2018/2019 growing season.***



2 ***Oil content (%) and the grand mean of 26 different sunflower hybrids evaluated during the 2019/2020 growing season.***

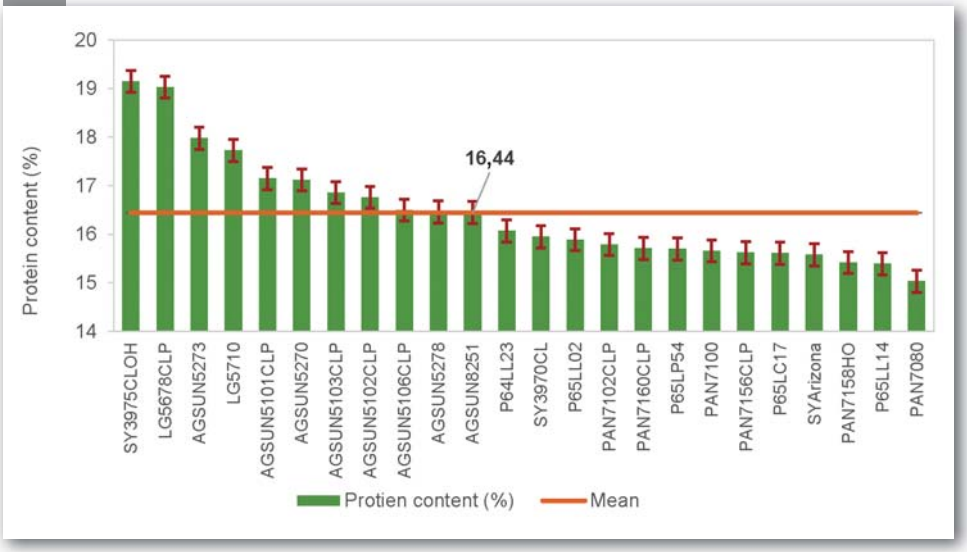


be advantageous to increase sunflower production in South Africa.

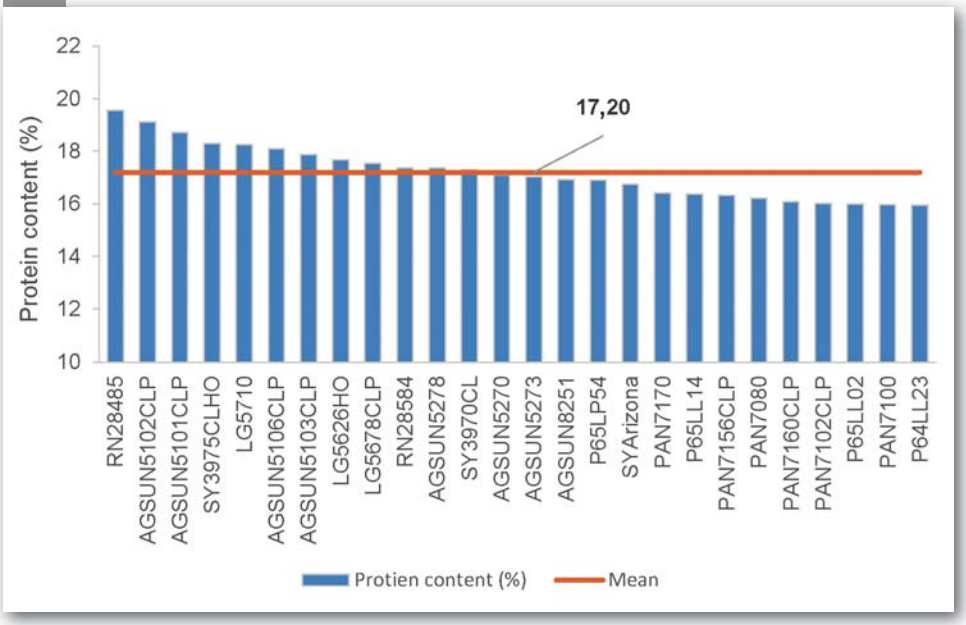
The national sunflower cultivar trials conducted by the ARC-Grain Crops assist producers to choose the correct cultivar that is best suited to their respective environments. This in turn ensures higher profits at no extra cost.

To investigate the performance of commercially available sunflower hybrids from different seed companies, hybrids were evaluated for oil and protein content in the Free State and North West. 24 sunflower hybrids were evaluated at seven sites during the 2018/2019 growing season and 26 hybrids were evaluated at eleven sites during the 2019/2020 growing season. A randomised complete block design with three replicates was executed for each site. Seed yield was recorded for each site individually and seed samples were sent to the Southern African Grain Laboratory (SAGL) for oil and protein content analyses. Seed oil yield was calculated by multiplying oil content (%) with seed yield (t/ha).

3 ***Protein content (%) and the grand mean of 24 different sunflower hybrids evaluated during the 2018/2019 growing season.***



4 ***Protein content (%) and the grand mean of 26 different sunflower hybrids evaluated during the 2019/2020 growing season.***



RESULTS OBTAINED

Oil content (%)

Obtaining varieties with higher oil concentration appeared to be an alternative track for enhancing sunflower production and could become a plus value for South African producers. Significant differences were observed among tested hybrids during both growing seasons. In the 2018/2019 growing season and across hybrids, the moisture-free oil content varied from 40,65% (AGSUN 5101 CLP) to 51,53% (SY 3970 CL) with an overall mean of 43,63%.

Ten sunflower hybrids produced more than the average oil content (SY 3970 Cl, LG 5710, SY Arizona, LG 5678 CLP, P 65LL02, SY 3975 CLOH, P 64 LL 23, P 65 LL14, PAN 7100 and AGSUN 5270) as shown in **Graph 1**. In the 2019/2020 growing season across hybrids, the moisture-free oil content varied from 37, 62% (AGSUN 5106 CLP) to 50,61% (SY 3970 CL) with an overall mean of 42,01%.

The following hybrids produced higher or even oil contents than the average: SY 3970 CL, RN 28584, RN 28485, SY 3975 CLHO, LG 5710, LG 5678 CLP, LG 5626 HO, SY Airzona , P 64 LL 23, P 65 LL 02, PAN 7100, AGSUN 5270 and PAN 7170 as shown in **Graph 2**.

Protein content (%)

Sunflower seeds are mostly used for their oil, but as with other oilseeds, the meal left behind after oil extraction is a valuable by product because of its high protein content. Protein represents the main subproduct of the sunflower oil industry and its concentration in the grain can vary between 15% and 19%, depending on the oil content (oil and protein concentration are inversely related). **Graph 3** shows the moisture-free protein content for the 24 cultivars evaluated at elven localities during the 2018/2019 growing season.

Protein content varied from 15,03% to 19,15% with an overall mean of 16,44%. SY 3975 CLOH produced the highest protein content (19,15%) among cultivars and calculated across localities, followed by LG 5678 CLP (19,03%). The following hybrids produced higher or even protein contents compared to the average: SY 3970 CLOH, LG 5678 CLP, AGSUN 5273, LG 5710, AGSUN 5101 CLP, AGSUN 5270,

AGSUN 5103 CLP, AGSUN 5102 CLP, AGSUN 5106 CLP, AGSUN 5278 and AGSUN 8251.

In the 2019/2020 growing season, the moisture-free protein content varied from 15.95% to 19,56% with an overall mean of 17,20%. RN 28485 produced the highest protein content (19,56%) among cultivars and calculated across localities, followed by AGSUN 5102 CLP (19,12%). The following hybrids produced higher or even protein contents compared to the average: RN 28485, AGSUN 5102 CLP, AGSUN 5101 CLP, SY 3975 CLHO, LG5710, AGSUN 5106 CLP, AGSUN 5103 CLP, LG 5626 HO, LG 5678 CLP, RN 28584, AGSUN 5278, SY 3970 CL and AGSUN 5270 as shown in **Graph 4** (op bladsy 13).

Oil yield (t/ha)

Oil yield per unit area is the product of grain yield and seed oil content (t/ha) and was calculated by multiplying oil percentage with seed yield. Significant differences were recorded among the sunflower hybrids during both growing seasons (**Graph 5** and **Graph 6**). The oil yield for the 24 sunflower hybrids at the seven localities during 2018/2019 varied from 0,98 t/ha to 1,26 t/ha with an overall mean of 1,10 t/ha.

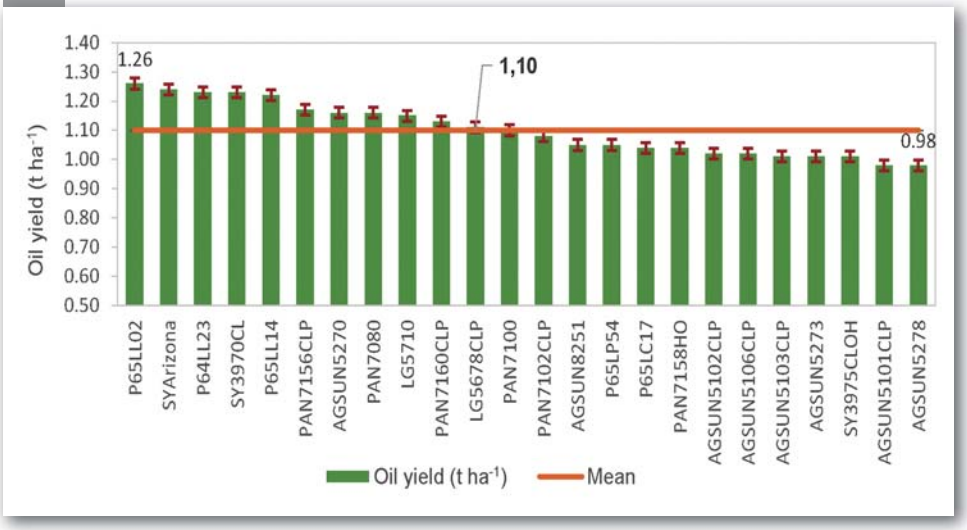
During the 2019/2020 growing season, the oil yield varied from 0,91 t/ha to 1,18 t/ha with an overall mean of 1,03 t/ha. P 65 LL 02 produced the highest oil yield during the first growing seasons followed by SY Arizona and P 64 LL 23 while during the second growing season P 64LL23 produced the highest oil yield followed by SY 3970 CL and RN 28584. Our results showed that 50% to 46% of the tested hybrids are above the oil yield average for both growing seasons (Graph 5 and Graph 6).

CONCLUSION

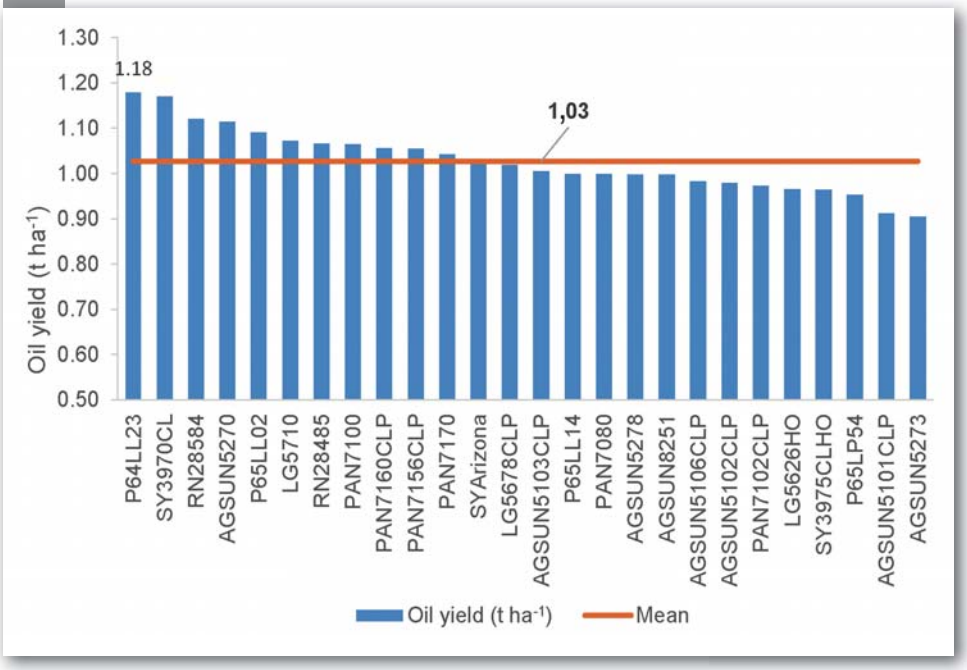
This study identified sunflower hybrids that can produce high oil contents in the North West and Free State production areas, that are well above the current norm (36% oil content with moisture percentage of less than 10%) as required for the industry at South African silos.

In the 2018/2019 growing season, 25% of the tested hybrids achieved more than the required protein content by the processing industry which is approximately 17% or higher. However, in the 2019/2020 growing season, 54% of the tested hybrids achieved more than the required protein content for the processing industry. ■

5 ***Oil seed yield (t ha^{-1}) and the grand mean of 24 different sunflower hybrids evaluated during the 2018/2019 growing season.***



6 ***Oil seed yield (t ha^{-1}) and the grand mean of 26 different sunflower hybrids evaluated during the 2019/2020 growing season.***



DR SAFIAH MA'ALI, ARC-GRAIN CROPS, POTCHEFSTROOM.
FIRST PUBLISHED IN SA GRAAN/ GRAIN SEPTEMBER 2020

Biosecurity systems UNDER PRESSURE

IT IS ESTIMATED THAT PESTS AND PATHOGENS DESTROY BETWEEN 10% AND 40% OF FOOD PRODUCTION GLOBALLY. THERE ARE WAYS TO DEAL WITH THIS PROBLEM, STARTING WITH BIOSECURITY AND PLANT HEALTH MANAGEMENT SYSTEMS. BUT THIS IS YET ANOTHER SYSTEM THAT'S BEEN PUT UNDER TREMENDOUS PRESSURE BY THE EMERGENCE OF COVID-19.

Under restrictions on human movement – necessary to curb the spread of the virus – the field and laboratory work that are crucial for surveillance and management of plant diseases have been severely curtailed.

Research and specialist services delivered by universities, for example, have in many cases temporarily closed or are operating at minimal levels. Skipping even a few months could mean missing a key moment in a pest's life cycle and a chance to intervene and slow its further spread. The pressure on government funding that is required to sustain these systems is also threatening to bring these programmes to a standstill.

Plant diseases require as much attention now as ever to ensure that food systems are in place in the next season.

UNDER THREAT

Plant health epidemics can be caused by viruses, bacteria, fungi, nematodes or insects. Many of these organisms originate in one part of the world and rapidly spread to threaten food crops or trees globally. They often jump from a host plant on which they do not cause significant epidemics, to a different plant that does not have resistance to them.

Global biosecurity systems are under pressure to deal with the scale of the problem. For example, trade in plants and plant parts is known to be a major pathway of spread of pests and pathogens. But even well-resourced systems in the United States cannot cope with the inspection of the billions of plants traded annually. The problem is bigger in developing economies, including many in Africa, because of a lack of capacity.

Biosecurity relies on four things: prevention (at port of entry); preparedness (early detection, diagnostics and control); response (to contain and eradicate or manage plant pests and diseases) and recovery (systems for regulating eradication, management or restoration).

Unfortunately, insect and fungal pests can spread naturally across borders. Once a pest is introduced into one country a whole continent's food, forestry and native systems could be threatened. An example is the fall armyworm, which was first reported in West Africa in 2016 and spread across the continent, reaching South Africa one year later.

Estimates in 2017 put potential losses in maize production in Africa due to this pest at between $2,4 to $6,2 billion. Such production losses could lead to food insecurity in many African countries.

PLANT HEALTH CRISIS EXAMPLES

There are hundreds, if not thousands, of pests and pathogens threatening African countries. Here are just three examples:

On a main food crop: Maize lethal necrosis disease is caused by the joint infection of more than one virus and can completely devastate a maize crop. The disease first emerged in Kenya in 2011; it has since spread to surrounding countries with devastating yield losses. Identification requires highly specialised laboratory analysis to confirm the identity of the viruses.

In plantation forestry: The Sirex wood wasp is native to Europe, but has caused damage of billions of dollars since it was introduced in New Zealand around 1900 and eventually around the world. A biological control programme that uses a parasitic nematode to sterilise the wasp is widely applied, and has saved the South African forestry industry hundreds of millions of rand. This programme depends on thorough national monitoring of the wasp infestation levels and the timely release of the biological control nematode.

On native, urban and agricultural trees: The polyphagous shot hole borer is a tiny ambrosia beetle that introduces a fungal symbiont into trees on which its offspring will feed. In South Africa it has been recorded on more than a 100 different tree species and on fruit crops such as avocado. It can kill some mature trees in a matter of months.

Tracking of the spread, the physical removal of infested trees and the development of biological control are all urgent needs and require specialist knowledge and laboratory support for identification. Monitoring also includes citizen science initiatives in urban areas, and it requires researchers to travel to confirm new infestations.

All of this has been set back by restrictions on human movement designed to contain the spread of COVID-19. Researchers must now work out how to catch up, and plan for the coming years in which the virus is likely to continue being a global concern.

WHAT SHOULD BE DONE?

Firstly, an assessment is needed of the impact of the original COVID-19 responses on plant health biosecurity systems, so as to plan for coming months and years. We would argue that in future, existing biosecurity systems must remain in full operation. This can be done safely, in line with global guidelines around protection from the virus.

Secondly, it is critical to recognise that the future of food security is linked across borders. Weak biosecurity in one country threatens neighbouring countries and whole continents. It is important to review regulations and their implementation to secure food supply, industries and the environment. Countries also need strong research funding and capacity. ■

This article was originally published in The Conversation (*www.theconversation.com*).

DR MARINDA VISSER, DIRECTOR: STRATEGIC PROJECTS AND PARTNERSHIPS IN AGRICULTURE – INNOVATION AFRICA@UP, PROF BERNARD SLIPPERS, DIRECTOR: FORESTRY AND AGRICULTURAL BIOTECHNOLOGY INSTITUTE AND FUTURE AFRICA, PROF JOLANDA ROUX, EXTRAORDINARY PROFESSOR, FORESTRY AND AGRICULTURAL BIOTECHNOLOGY INSTITUTE. ALL FROM THE UNIVERSITY OF PRETORIA.
FIRST PUBLISHED IN SA GRAAN/GRAIN SEPTEMBER 2020

Farmers are the heartbeat of our nation

BEING A FARMER IN SOUTH AFRICA HAS TO BE ONE OF THE HARDEST PROFESSIONS. THE CHALLENGES FARMERS GO THROUGH ARE OVERWHELMING, TO SAY THE LEAST. THEIR HOST OF PROBLEMS INCLUDE FARM SAFETY, INFRASTRUCTURE, ACCESS TO MARKETS, FINANCIAL CONSTRAINTS PERPETUATED BY DROUGHT CONDITIONS, UNCERTAINTY IN POLICY DIRECTION AND A TEETERING ECONOMY.

In 2020 Ikageng Maleluke, agricultural economist at Grain SA had the privilege to travel around the country and visit 20 black grain producers in five provinces, namely Mpumalanga, KwaZulu-Natal, the Eastern Cape, North West and the Free State. She shares her experience.

'Given my background of being an agricultural economist in the grain sector, I work with farmers daily, but I am based in the city in an office set-up. Our means of communication is via phone or email. We often visit regions, but typically meet in a central location, usually in a town of that region. My exposure to farm life is rather limited and the farms I have visited in the past were more commercial and well developed. We visited different-sized farming operations – from smallholder to new era commercial farmers.

WORKING HARD TO MAKE A DIFFERENCE

Firstly, I was amazed at the state of the road infrastructure – if there was any – to reach some of these farmers. How do they even reach the market or how do inputs reach their farms? But somehow, they make do. The majority of these areas do not have running water or electricity. Despite all these apparent challenges, one is always welcomed with a big, warm smile when arriving at the farm.

Danie Reichel, Ramoso Pholo, Mapidiyana Manoto, Ikageng Maluleke and Du Toit van der Westhuizen during a farm visit in the Lichtenburg area.

Ikageng thoroughly enjoyed the farm visits.

Within these communities there is a social fabric and a sense of warmth like nowhere else I have been. Although each community has its social ills, the presence of a farmer always makes a difference – from job creation to fostering children and even feeding orphaned or elderly neighbours. Among all the farmers that we met, I should just acknowledge the importance of mentorship and partnerships with input suppliers. The knowledge transfer, friendship, trust and dedication are seen through the improvement of each farming operation.

I must say, the subsistence and smallholder farmers captured my heart; they farm on 1 ha to 15 ha of land. With the help of Grain SA, these farmers can produce commercial yields on their small pieces of land, allowing them to feed their families and animals and to sell the surplus to their neighbours or even to mills close by. The pride in their eyes when they talk about their farming operations and show off their fields or great-looking harvest stored in cob cages, is beyond amazing.

Most of them work the land using hand tools and they thresh using communal threshing machines that belong to their study groups. This is truly a labour of love. I witnessed first-hand the daily struggles that these farmers face. From a farmer with worry in his eyes because his cow is struggling to calve, to a farmer who has to get water over a kilometre away from her home, but still maintains a vegetable garden. The amazing thing is that they remain so resilient and hopeful regardless of their circumstances.

SHARING THEIR LOVE FOR THE LAND

Moving on to potential commercial and commercial farmers, I have one word to describe this category – impressive. Most of these farms have been taken over from their parents by the younger generation. It is remarkable to see young people so passionate about agriculture and doing well. The use of technology, the level of innovation and new techniques of doing things are astonishing. Although there are many challenges, these young people are committed to the cause for the long haul.

If you ever have an opportunity to visit with a farmer, the conversation will flow easily if you ask about either the weather, their animals, machinery or their family. Throughout all our visits, I met the most humble human beings. What they all had in common was the love they have for the land. Some of us even call it dirt, but to them it is potential. No matter their age, the heart of a farmer remains the same. In their heart lies the desire to bring life to the soil and harvest that life to provide for others. They are tough, true and determined.

Reflecting on this journey, I salute these unsung heroes who contribute to our country's food security despite the odds. I have learnt a lot about grain production and the challenges it presents. This has given me a new perspective on how I can cater to the needs of a farmer. ■

FIRST PUBLISHED IN SA GRAAN/ GRAIN SEPTEMBER 2020.

THE CORNER POST

VIEWPOINT

THOBANI NTONGA

'I fell in love with the farming lifestyle'

THOBANI NTONGA (41) DID NOT CONSIDER FARMING AS A CAREER CHOICE – HE CHOSE A CAREER IN FINANCES AND WORKED AS A FINANCIAL ADVISOR IN CAPE TOWN. WHEN HE VISITED HIS FAMILY HOME IN THE EASTERN CAPE, FARMING REELED HIM IN.

SOMETIMES FARMING CHOOSES YOU

Farming is not seen as a glamorous job. There is no fixed monthly salary, no company pension or paid holidays and you are at the mercy of nature's elements. So, why would someone with a promising corporate career give it all up to farm?

'I never intended to be a farmer – I just fell in love with the lifestyle,' he says about his passion for farming. He finds that there is so much positive feedback on a farm. 'To get feedback from whatever you do, is so satisfying. If you give your crops the necessary fertiliser, you can see the results. If your livestock are fed properly, you witness their growth and it just makes you feel good.'

Not even the unpredictability of farming dampens his enthusiasm. 'It is difficult having a career where you can follow all the rules and still end up having a bad crop as result of variable weather conditions or when your neighbours' livestock get out and destroy your hard work.' In times like these he just feeds on the satisfaction that farming gives him.

> *He learned the value of timeous planting on his own farm the hard way.*

'During a visit to my family, I saw an opportunity to start a farming operation. My dad who is a trader was buying produce in Kokstad which he then sold in the Cedarville area. I realised it was unnecessary to travel to buy something that we ourselves could plant as no-one in that area was growing vegetables.' He started looking for a government farm and was fortunate to obtain a 181 ha farm, Hentiq with 64 ha of arable land – 50 ha under pivot irrigation. This made it possible for him to venture into crop farming, which would save his dad time and travelling expenses.

FINANCIAL ADVISOR BECOMES CONFIDENT FARMER

Thobani has been farming commercially since 2014 in their family operated enterprise, Loto Greens. His father has always been involved in agriculture through livestock speculation, planting maize and doing contract work for the government. Although he was only assisting his father at the onset of their farming operation, he is now the operating manager who ensures that their crops and livestock receive the necessary daily attention.

He is eager to improve his knowledge and skills and seizes any opportunity to gain more information. He therefore is a Grain SA member and regularly attends the study groups in the area. It is here where he crossed paths with Luke Collier, provincial coordinator of Grain SA's Farmer Development Programme at the Kokstad office. Luke has been instrumental in Thobani's development as a farmer.

'Through his mentorship, farm visits, advice and support I have gained a lot of confidence as a farmer.'

This father of three hopes that his two sons will share his passion as they have been exposed to agriculture from a young age. 'I believe that the African youth can be motivated to engage in agriculture – whether it is farming or other careers in agriculture – through exposure from a young age. In the rural areas farming is done on a very small piece of land, mostly for own consumption. Commercial farming is something totally different.'

IMPROVING THROUGH TRIAL AND ERROR

As Thobani wants to be a good steward of his land and farm sustainably, he tries to learn as much as he can about best agricultural practices from whatever source is available or just by trial and error. For example, he learned the value of timeous planting on his own farm the hard way.

Although he started off well achieving 8 t/ha on dry land, only 6 t/ha was realised in their second season. 'The years thereafter have been a bit of a disaster, achieving only 3 t/ha.' The main reason for the drop in yield was late planting. 'We have always had challenges, but a massive challenge has been outsourcing mechanisation. Issues with a funder also made access to funding problematic and we received our inputs late. All this led to late planting.'

He shares two valuable lessons with other farmers.

- **Be prepared**: 'One of the shortfalls in my enterprise is that I go into a season "blind". I am uncertain of inputs, all aspects of finance and who I will use for mechanisation. This leads to late planting. One of the biggest mistakes a crop farmer can make is planting outside the planting window period. If you plant late, you have already lost a huge part of your harvest.'
- **Be a hands-on farmer**: 'There is no excuse for not being on the farm. You need to monitor your crop and livestock daily because change is immediate. Farming can't be done from a distance.' ■

LOUISE KUNZ,
PULA IMVULA CONTRIBUTOR

A programme that is changing lives

Knowledge means TRANSFORMATION

GRAIN SA FARMER DEVELOPMENT FACILITATES TRAINING AND TRANSFORMATION IN MORE WAYS THAN ONE – FOR EXAMPLE THE WAY WE ENCOURAGE FARMERS TO ADD VALUE TO THEIR GRAIN. ONE OF THE EXCITING METHODS WE INTRODUCE FARMERS TO IS CALLED NIXTAMALISATION. THESE TRAINING COURSES ARE CURRENTLY FUNDED BY THE DEPARTMENT OF SCIENCE AND INNOVATION.

During June trainers Agnes Mndawe, Nomsa Ngulube and Phumelele Nyunde worked with Jerry Mthombothi, development coordinator at the Nelspruit office to hold **twelve training days** with all COVID-19 protocols in place for **247 trainees**.

WHAT IS NIXTAMALISATION?

This is a way of preparing maize to enhance nutritional value and make it more versatile. Maize is soaked and boiled in slaked lime water then washed so the outer hull is removed. This removes 90% to 97% of the aflatoxins from the maize so it is an important method to learn about for farmers who store their own grains.

Once rinsed, the soaked grain is now called **nixtamal**. This is ground, minced and processed with a little bit of water to form a maize dough called **masa**. **Masa dough** can be used in many different ways. It just takes a quick demonstration by our trainers to show the transformation of maize to masa. The excitement in the air is tangible!

TRAINING EVENTS

Nomusa Ngulube conducted a Nixtamalisation training event near Barberton for 21 learners. The group was taught how to prepare maize to be used for cooking, using lime. Trainees were shown how to grind maize and they were encouraged to take turns and use a hand machine to grind maize. They made yoghurt, muffins, pizzas and a cinnamon ginger spice cake. The level of excitement was high and trainees said they are happy because from now they will use dry maize in a way that will excite their family members.

Phumelele Nyundu held a similar event at Mandundu for 20 trainees. They were amazed to see the variety of foods that could be made with maize.

Agnes Mndawe held a course at Clu Clau Joy Homebased Centre for 24 ladies. The women started by rinsing the maize and grinded it to make masa. They baked chocolate muffins, pizzas and snacks.

STUDY GROUP MEETINGS

The Farmer Development team had contact with **99 study groups** during June. Most farmers reported that they had had a good season and they were very pleased with their yields. Many farmers wanted to either renew their membership or sign up for the first time because they have found the mentorship offered to them by Grain SA to be invaluable.

Our mentors spent their contact sessions checking the grain and advising farmers on harvesting, shelling the grain, storing and marketing the crop. Farmers were reminded to harvest their maize when the moisture content is at 14% because if it was not dry enough the miller will not accept their maize. They were also reminded to make sure that they remove all foreign materials before they could take their maize to the miller for milling purposes.

The team is also teaching farmers about safe storage and alerting them to the dangers of mycotoxins in grains that stored for own use to be consumed by family and livestock. Preparations for the new season was also discussed. The other top discussion point was the importance of weed control and the different types of chemicals to use both pre and post emergence herbicides.

AT GRASS ROOTS

Ladies preparing the maize using lime.

The maize dough or masa is being prepared.

Tasting time! Products made with masa dough.

Masa dough ready to use.

Grinding the prepared corn kernels to make masa.

The products made by the trainees.

Giving guidance through farm visits

FARM visits during June 2021 were full and varied. On the one hand many farmers were still busy bringing in their crops while at the same time they were planning for the new season. The mentors had 58 encounters with their advanced farmers during June to guide them in diverse ways along their journey towards commercial farming sustainability.

- **Harvesting**: The team did yield estimates, checked the moisture levels of the grain and monitored the bulk handling of the crop.
- **Storing**: Discussions about safe storage of the harvested grains took place.
- **Planning**: General farm maintenance such as fencing, water supply and storage was discussed.
- **Soil health**: Attention was given to soil status, soil sampling and liming of fields.
- **Business planning**: Mentors discussed financing needs, budgets and insurance as well as office management procedures including cultivating an understanding of the role of SARS with VAT, tax and diesel rebate.
- **Mechanisation**: The team gave attention to the condition of the farm implements and mechanisation. They discussed repairs that needed to be done or advised farmers to consider replacing if funds were available.

On the farm of Mahlaba Abel, a farmer near Reitz, cobs were collected to test moisture content at a nearby silo.

During a visit to the Nzimande Farming Projects in the Amsterdam region the crop progress was evaluated.

Mentor Jacques Roux conducts crop inspection before the crop is harvested. Sunflowers and maize were inspected on the farm of Hlalele Joseph Khahleli.

Sharing at STUDY GROUPS

THE Grain SA Farmer Development team really enjoys our study group contacts as this is how we get to know the farmers and identify the needs of farmers in the different regions. We are very dependent on the chairpersons of each study group and want to acknowledge them and thank them for their commitment and assistance on this platform. To our chairpersons we say: 'You are each making an important contribution to the farmers in your community and we thank you!'.

Here is some of the study group activity that took place in June.

Mentor Elias Dladla visited the farmers of the Schuelzendal study group in Nelspruit region to see their harvest.

A demonstration on handling, maintenance and the calibration of knapsack sprayers was done for the Zaaiplaas study group at Dora Phoku's house.

The Arthurstone study group farmers in the Bushbuckridge region discussed chemical and mechanical weed control practices.

Let's help you plant your DEKALB® success

With **DEKALB** genetics offering the highest quality seed combined with the unrivalled support from our dedicated sales teams you can rest assured of an abundant harvest.

Our extensive cultivar range includes the following cultivars to help you maximise your yield potential:

/// ***DKC76-77BR - White***
/// ***DKC75-65BR - White***
/// ***DKC72-76BR - Yellow***

Partner with us, for the benefit of your farm's future ...

Let's Talk ...

@Bayer4Crops
@DEKALBSA

Bayer (Pty) Ltd. Reg. No. 1968/011192/07
27 Wrench Road, Isando, 1601.
PO Box 143, Isando, 1600. **Tel:** +27 11 921 5002

www.cropscience.bayer.co.za /// www.bayer.co.za

Your pride *our passion*

A28970/P