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PULA INVULA

GROWING FOOD • PEOPLE • PROSPERITY



GRAIN SA MAGAZINE FOR DEVELOPING FARMERS



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 Stroebe
■ 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



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 Stroebe
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

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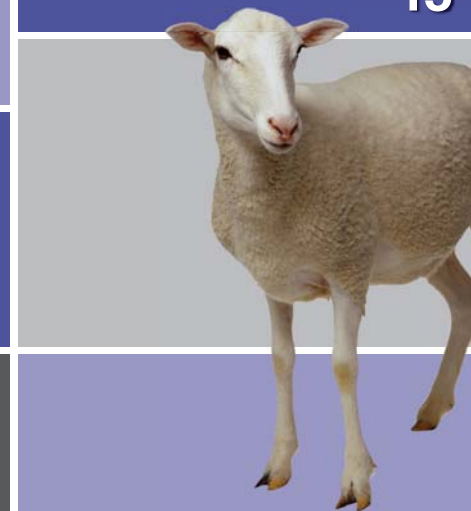
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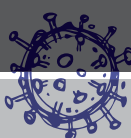
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A WORD FROM...

Jannie de Villiers

RETIRED AS CEO OF GRAIN SA AT THE END OF AUGUST THIS YEAR. THIS IS A FAREWELL MESSAGE TO ALL GRAIN SA MEMBERS AND PARTICIPANTS IN THE GRAIN SA FARMER DEVELOPMENT PROGRAMME. AT THE END OF MY CAREER, I CAN ONLY SALUTE YOU AND AM HUMBLLED TO HAVE BEEN A PART OF SUCH DEDICATED BRIDGE-BUILDERS TOWARDS A NEW AND BETTER SOUTH AFRICA.

If I look back at the little more than ten years as CEO of Grain SA, the Farmer Development Programme has grown in stature and has become the all familiar benchmark for a commodity development programme. To earn this type of title and recognition, requires consistent hard work of a team of managers and farmers as well as a strong belief by donors in the goals and ability of all that are involved.

The farmers are the ones taking on the elements of nature to produce food for themselves and the nation. You trusted Grain SA enough to deposit your hard-earned money into our account to assist you with inputs, training and mentorship. Your trust has elevated our commitment to assist and to persevere despite the odds. I am saddened by the fact that we have not in my time succeeded to unlock finance for new black grain farmers to become fully fledged commercial producers. However, I am confident that we are not too far from a breakthrough.

Lastly, Grain SA took a series of decisions during the last year to put farmer development onto a new trajectory. A new company Phahama Grain Phakama was registered as a dedicated vehicle for Grain SA's programmes. New donors have been recruited and a new manager, Dr Sandile Ngcamphalala, was appointed. I am confident that the combination of youth and experience together with a solid governance base will be able to assist more farmers to graduate to the next level.

To all the Grain SA coordinators in the field, you have inspired me! Thanks so much, not just for what you have done for Grain SA, but for our country and her people.

I would like to thank you all for showing the world that grain producers can co-operate and work together to feed and heal this nation. Please continue to do so in the future. ■

Top-dressing fertiliser: TIMING IS KEY

THE YEAR IS SPEEDING TO AN END AND PRODUCERS MUST MAKE SURE THAT EVERYTHING IS DONE TO MAXIMISE THEIR CROP YIELD. IT IS IMPORTANT TO MANAGE THE CROP ACCORDING TO THE FIRST PRODUCTION PLAN – ESPECIALLY THE FERTILISATION AND CHEMICAL PROGRAMMES.

These plans must constantly be evaluated. If changes in the programme is necessary, it must be done and now is the time to do it. To evaluate the fertilisation programme it is important to understand how much and when the crop requires the fertilisers.

GROWTH STAGES

In maize production there are important growth stages that must be kept in mind.

- The first stage is from germination up to V5 (or 5 leaf stage).
- The second stage is from V5 up to V9.
- Then from V9 up to flowering.
- Flowering up to hard dough stage.
- The last growth stage is physiologically mature.

The theoretical yield is initiated during the V5 stage. If any form of nutrient shortages is experienced now is the time to correct it. The application of fertiliser according to leaf analyses will help to determine what is required.

During planting the correct fertiliser composition is important and will have an effect on the yield. The plant grows faster during the following stage with new leaves appearing around every third day. Obviously the need for moisture and plant nutrients increases in this stage.

TIME FOR TOP-DRESSING

Maize

The V6 up to the V8 stage is the designated time for a nitrogen top-dressing. All nutrient deficiencies must now also be eliminated, so that the capture of the final harvest potential – which is determined in the twelve-leaf stage – is not adversely affected.

In some cases it will make economic sense to increase the top-dressing. Where an above average rainfall is expected, it makes sense to apply more fertiliser. In the case of a drought year the top-dressing can be cut back but remember that the yield will then be lower. Contact your fertiliser representative to help with the decision.

Sunflower

In sunflower, fertiliser also plays an important role to maximise the yield. It is important to apply the necessary fertiliser with planting. The application of extra nitrogen and potassium can improve the yield. The expected yield and the soil analyses are needed to determine the extra fertiliser required. Although the plant removes relatively low kilograms of potassium and phosphate, it needs much more than is subtracted. Therefore it makes sense to apply additional fertilisers. The correct time to apply extra fertiliser is when the sunflower is knee high and before the sunflower canopy has formed.

Sunflower is very sensitive to boron and molybdenum deficiencies and if these trace elements are not supplemented, deficiencies can have a significant effect on yields. It is important to apply these elements before the sunflower has reached knee height.

Take note

- With the application of the extra fertiliser on the crops it is important to apply it correctly. If the fertiliser is spread with a fertiliser spreader or applied with a cultivator, ensure that the implement is calibrated correctly.
- The driver has to adhere to the necessary settings.
- It is also important to make sure that the fertiliser spread on a field is verified with the calculated amount of fertiliser required. If there are differences, correct it accordingly where applicable.





Although the maize plant depends largely on nature to grow, other factors like cultivar choice, fertiliser, irrigation and pest control all contribute to maximise the yield.

- For crops produced in a conventional production system the cultivation of the fields is important. Where the soil is compacted, a light cultivation operation can aerate the soil. To prevent root damage, this should be done shallowly and fairly far from the plant. This action will also kill weeds but it can stimulate new weeds to germinate.

WEED AND PEST CONTROL

Weed and pest control is important in all crops. Maize and sunflower yields are reduced extremely by weed competition in the crops' young stage. It is important to apply the correct herbicide with planting.

In the later stages it is important to apply the second herbicide application to keep the crops weed free. With the second herbicide application it is important to read the labels and to apply the herbicide according to the recommendations. Make sure that the different types of herbicides applied can be sprayed together. Producers must make sure that the correct nozzles are used to apply the herbicides. Contact your chemical representative to make sure your plan can be executed.

It is also very important to make sure that the sprayers are calibrated correctly. Producers must compare each field's application with the planned and calculated application.

When the crops are sprayed, farmers must also be on the lookout for any pests in the crops. In the maize fields it will be wise to apply some pesticide to control the bollworm and maize stalk borer worms if a conventional or Roundup ready cultivar is planted. If a BT cultivar is planted it is not necessary to manage the bollworm and maize stalk borer worms. Also look out for maize leafhoppers and maize aphids because they feed on the sap of the maize plants and transfer leaf diseases.

CONTROL OF LEAF DISEASES

The control of leaf diseases in maize is very important. Be on the lookout for grey leaf spot, eyespot, common rust, northern corn blight and other diseases. These leaf diseases can reduce yields dramatically. Up to 50% of the yield can be lost due to these diseases.

In sunflowers it is also important to manage bollworms. The plants are at their most sensitive in the early stages of head formation. An infestation at this stage may result in deformed heads and poor seed set. Sometimes no head is formed at all.

After the flowering stage plants are less sensitive and damage is limited to eaten kernels in the head. Although bollworms may also attack the top leaves, damage is seldom serious, except when the infestation is particularly severe.

The main sunflower diseases are *Sclerotinia sclerotiorum*, rust, root rot, leaf spot, charcoal rot, white blister, head rot and stem rot. Contact your chemical representatives for advice on which chemicals to use as well as the right time to spray. ■



PIETMAN BOTHA,
INDEPENDENT AGRICULTURAL CONSULTANT

Follow these steps when appointing a new employee

IT IS NECESSARY TO FOLLOW THE CORRECT PROCEDURES WHEN APPOINTING NEW EMPLOYEES. THE PROCEDURE IS REGULATED BY THE LABOUR LAWS OF SOUTH AFRICA. SHOULD YOU NOT FOLLOW THE CORRECT PROCEDURE IT COULD BECOME COSTLY FOR YOUR BUSINESS.

When appointing a new employee, certain steps have to be followed. Please note that the steps advised are not all required by law. Some are practical steps to assist in preventing labour disputes, to save you costs and to demonstrate sound management.

STEPS WHEN APPOINTING A NEW EMPLOYEE

1 Should you decide to appoint a new employee, whether it is for a new post or to fill a vacancy, support your decision by an organisational structure indicating where the relevant post fits into your business.

2 Next compile a job analysis consisting of a job description and job specification. A job analysis is a written document in which is described what the job entails, and the knowledge, training, skills, experience, and abilities needed to perform the job.

3 Your next step will be to recruit potential work-seekers to fill the vacant post. Normally this is referred to as advertising to be done internally and externally. Advertising can be done in different ways of which the most common way is to advertise in a paper or magazine. You can even put up an advertisement on your farm gate. With advertising it is necessary to take note of specific legislation prohibiting discrimination towards employees. This aspect is regulated by Act No. 55 of 1998: Employment Equity Act. For instance, should you wish to fill a vacancy for a tractor driver, you may not invite applications from only men as women can also drive tractors.

Ask potential work seekers to complete a suitable application form or at least to forward their latest Curriculum Vitae (CV). This will help you to compile a shortlist of three to five people which you would like to interview in person. This is where the job analysis is an absolute must document to use. If one requirement is that a valid driver's license is required, you can exclude all applicants without a driver's license.

4

Set up interviews on a specific date and time for each applicant on the shortlist. Make sure to use a venue which is private and where you will not be disturbed. A practical hint: Keep record of questions asked and each applicant's answers during the actual interviews. On the day of interview the shortlist applicants must provide you with certified copies of qualifications and other documents which you may require. A valid South African identity document is a compulsory requirement at all times or in the case of foreigners valid working permits.

5

During the interview you may test a job skill such as tractor driving. Let the applicant drive a tractor – if he/she can reverse a tractor with a four-wheel trailer they can drive a tractor.

Make your selection based on the job analysis (job description, job specification), application forms and/or CV, information provided at the interview, possible tests and references which you have followed up. Try to allocate marks (for instance from 1 to 10) for different aspects. It simplifies your motivation of choice of a specific applicant.

6

Remember unsuccessful applicants may confront you as employer via a dispute at the CCMA. If possible, it is advisable to select a first and second choice candidate should number one not accept the appointment.

7

Lastly make an offer to the chosen applicant and provide him/her with a service contract and file the original in the employee's personal file.

There must be a sound reason for a vacancy according to your organisational structure. It is very risky to hire somebody off the street. Should a dispute arise, it will be very difficult to prove anything without a proper paper trail. Farming today is a business and you must run it as such. ■



MARIUS GREYLING,
INDEPENDENT AGRICULTURAL
MANAGEMENT CONSULTANT

Meet Grain SA's *new* CEO

DR PIETER TALJAARD (43) TOOK OVER THE REIGNS FROM JANNIE DE VILLIERS, FORMER CEO, ON 1 SEPTEMBER. AS A PART-TIME PRODUCER, HE NOT ONLY HAS A PASSION FOR AGRICULTURE, BUT ALSO UNDERSTANDS ITS JOYS, OBSTACLES AND CHALLENGES.

With a PHD in agricultural economics from the University of the Free State (UFS), he has filled various management roles over the past few years. These include positions as income optimization manager at Monsanto and production manager at NWK. Prior to joining Grain SA he was the manager: Small Grain and Industrial Crops at Bayer.

His passion for agriculture stems from the North West maize region – on a farm just outside Potchefstroom where his father farmed part-time. Pieter decided at a young age to make agriculture his career. Apart from a career mainly in the seed industry over the past few years, he has also been farming part-time for 19 years – a hobby that provides him and his family with endless joy.

In a recent interview with *SA Graan/Grain* magazine, he said what excites him about Grain SA is the fact that the producer is both a member and a customer. 'It is therefore important to the producer that the organisation makes sense and has a right to exist.'

He also mentioned that agricultural development is a big part of South Africa's future and the only way commercial producers can en-

sure a future in South Africa. 'In the grain industry, Grain SA has done fantastic work so far and many people's lives have been changed and improved by the projects. I would like to build on this.

'To farm profitably and sustainably, it is important to take developing farmers forward, as they are to a greater extent exposed to environmental and economic factors. Inputs need to be improved and optimised and for that, a passion for agriculture is needed. It is easier to invest in something you love. I would like to see Grain SA increasingly play a role in the development of agriculture.' ■



GRAIN SA EDITORIAL TEAM

A call to vaccinate



THE MINISTER OF AGRICULTURE, LAND REFORM AND RURAL DEVELOPMENT, MS THOKO DIDIZA, CALLS UPON THE AGRICULTURAL AND AGRO-PROCESSING SECTORS TO VACCINATE. THERE IS A PROMISING IMPROVEMENT IN THE COUNTRY'S VACCINATION PROGRAMME.

'I wish to call on all role-players in the agricultural and agro-possessing sectors to ensure that they are vaccinated because that will go a long way in making sure continued food production in the country,' said Minister Didiza in an official statement.

Fighting against COVID-19 forms core of the Economic Reconstruction and Recovery Plan of government as pronounced by president Cyril Ramaphosa. It is important to increase the number of people who vaccinate, because that will improve chances of ensuring that economic activity and livelihoods in the country continue with minimal interruption.

'This sector is important in terms of jobs as the sector has consistently maintained more than 750 000 jobs over the medium term. Based on its potential on economic growth and job creation, it has been identified as one of the key economic sectors to drive the eco-

nomic recovery in the country and that is why all of us in the sector need to be fully vaccinated, so that we continue to play our important role,' said Minister Didiza.

Scientific evidence confirms that vaccinated people stand a better chance of surviving from COVID-19 than unvaccinated people. 'I encourage all unvaccinated people especially in our sector to get vaccinated because vaccines protect us from getting seriously ill from COVID-19 and it saves lives.'

The minister concluded by thanking the citrus industry for leading the way in terms of sector vaccination initiative which has seen public and private health practitioners conducting on-site vaccination on-farm and in pack houses around the country. ■

By the end of August more than nine million vaccines have been administered in South Africa, with over four million (more than 10% of the population) fully vaccinated.

PRESS RELEASE ISSUED BY DALRRD, 20 AUGUST 2021

Hedging your crop through futures

THIS ARTICLE WILL FOCUS ON FUTURES HEDGING. HEDGING IS A MARKETING STRATEGY DONE THROUGH FUTURES OR OPTIONS. PEOPLE WHO WANT TO LIMIT THEIR RISK OF PRICE MOVEMENT MUST HEDGE, WHICH INCLUDES PRODUCERS AND COMMODITY USERS.

A hedge is an instrument used to reduce or cancel price risk. A futures contract is traded on Safex for delivery of grain at a future date.

The contract specifies the item to be delivered and the terms and conditions of delivery.

SHOULD I HEDGE?

Before hedging, two questions need to be answered:

- Firstly, the choice of an **underlying instrument**. If the profit and loss profile of the underlying instrument is the same or exactly the opposite of the commodity, the choice is naturally easy. If not, the hedger must search for an underlying instrument, the profit and

1

Example of hedging for a producer.

- a) During July the yellow maize trades at R3 300/ton. Firstly, we look at the producers profit and loss position. The producer has two methods to execute his futures contract position. He can either cancel his futures contract position by taking an offsetting contract position and then sell the yellow maize on the spot market in his area or he can deliver on the futures market contract position.

	Delivery on Safex/ton	Sold on spot market/ton
Initial margin during January	-R100	-R100
Trader's fee	-R4	-R4
JSE trading fee	-R0,17	-R0,17
Additional initial margin-delivery month	-R50	-R50
Initial margin in July	R150	R150
Silo certificate cost	-R4	-
Trader's fee	-R4	-R4
JSE delivery fee	-R4	-
JSE trading fee	-	-R0,17
Variation margin	-R800	-R800
Received from JSE (R3 300 - R280)	R3 020	-
Sell on spot market in Lichtenburg	-	R3 020
Profit/loss on position	R2 204	R2 212

- b) The yellow maize contract price trades at R1 500/ton in July.

	Delivery on Safex/ton	Sold on spot market/ton
Initial margin during January	-R100	-R100
Trader's fee	-R4	-R4
JSE trading fee	-R0,17	-R0,17
Additional initial margin-delivery month	-R50	-R50
Initial margin in July	R150	R150
Silo certificate cost	-R4	-
Trader's fee	-R4	-R4
JSE delivery fee	-R4	-
JSE trading fee	-	-R0,17
Variation margin	R1 000	R1 000
Received from JSE (R1 500 - R280)	R1 220	-
Sell on spot market in Lichtenburg	-	R1 220
Profit/loss on position	R2 204	R2 212

Example adopted from JM Geyser, 2013



loss profile that is close to that of the hedged instrument.

- Secondly, **choice of contract**. Producers should choose a contract month while harvesting or just after the harvest. For example, farmers in Free State that harvest most of their maize in June/July should use July as their hedging month.

Table 1 indicates an example of a producer in North West who is worried that prices of yellow maize may drop during harvest season and would like to hedge against that price risk.

- He plants 1 500 ha of yellow maize, with an expected yield of 5,5 tons/ha.
- The area differential and handling costs amount to R280/ton, with trader costs and silo certificate costs at R4/ton and JSE trading fee at R17,64/contract (R0,17/ton). He expects to harvest in June.

Suppose the producer takes a futures contract in January with July yellow maize trading at R2 100/ton. For a producer to determine the quantity of maize to hedge, the best thing to do would be to determine the percentage of his expected harvest at a certain price level required to cover the crop costs.

BENEFITS AND DRAWBACKS

Advantages of hedging include:

- No default risk.
- Basis cannot weaken more than the location differential.
- The price is known in advance.
- Unless basis changes and it helps with the planning and budgeting.

Disadvantages of hedging include:

- Payable margins.
- Additional delivery costs required by the exchange.
- Transaction costs.
- Price fluctuations. ■



**IKAGENG MALULEKE,
AGRICULTURAL ECO-
NOMIST AT GRAIN SA**



*If we estimate dignity by immediate usefulness,
agriculture is undoubtedly the first
and noblest science.*

~ SAMUEL JOHNSON
(English writer)



DRAIN IT to keep it

SOIL HEALTH AND PRODUCTIVITY CAN BE ENHANCED THROUGH WELL-DRAINED SOILS. ARTIFICIAL DRAINAGE IN AGRICULTURE IS A PRACTICE USED TO IMPROVE THE NATURAL DRAINAGE CONDITIONS AND HAS BEEN PRACTICED WORLDWIDE FOR MANY YEARS.

In South Africa artificial drainage was introduced in the late 50s and early 60s. Various approaches and techniques have been used and are still being used to drain agricultural fields.

Ecological farming is recognised as the objective of sustainable agriculture and includes all methods which regenerate ecosystem services such as the prevention of soil erosion; water infiltration and retention; carbon sequestration in the form of humus and increased biodiversity. Many techniques are used, including no till; multispecies cover crops; strip cropping; terrace cultivation and pasture cropping. Together with

these, efficient irrigation and drainage are of utmost importance for improved soil health and productivity for sustainable agriculture.

Subsurface drainage of agricultural lands (**Photo 1**) is an instrument for production growth, a safeguard for sustainable investment in irrigation and a tool for conservation of land resources. There are, however, pressing needs for more investment in land-drainage systems to maintain current production levels in existing agricultural systems around the world and to drain degraded and abandoned agricultural lands.

The extent of cultivated area worldwide is estimated at 1 500 million ha, out of which about 390 million ha are said to be provided with sustainable water management systems, being irrigation, drainage or both. It is estimated that 500 000 ha of the world's total agricultural land are becoming unproductive every year due to poor drainage.

In South Africa 16 000 000 ha are cultivated of which 1 600 000 ha are registered for irrigation. It is estimated that 240 000 ha are affected by rising water tables and salinisation and the problems appear to be



1 Subsurface drainage for controlling of groundwater levels.



2

A leaking irrigation dam.



3

Example of a shallow water table.

expanding. Subsurface drainage systems are installed on 65 000 ha and another 110 000 ha have surface drainage systems. There are many causes of drainage problems in South Africa, including the following:

- Inefficient and badly managed irrigation systems, especially where there are very shallow soils and insufficient natural drainage. This causes salts to accumulate and the end result is that the land has to be withdrawn from production.
- Leaking earthen dams and irrigation furrows (**Photo 2**).
- In some areas terraces are designed and established in order to obtain the right slopes for flood irrigation. Unfortunately, sooner or later drainage problems start to occur at the bottom of these terraces.
- Where natural waterways are being cultivated, wet conditions can be expected, which may lead to drainage problems (**Photo 3** and **Photo 4**).

Subsurface drainage systems have proved to be an essential method to restore the productivity of agricultural lands, especially in arid and semi-arid zones. These agricultural subsurface drainage systems can be used for the following:

- Reclamation of new land with a groundwater table and/or soil salinity that are too high.
- Controlling groundwater levels at desired depths and soil salinity at desired levels.
- Restoring the productivity of waterlogged and/or salinised lands to their potential levels.



4

Subsurface drains are in the process of being installed.

In many respects it is essential to have drainage with irrigation, with the following impacts:

- Initial high implementation cost.
- Lowering of the water table.
- Reducing soil compaction and destruction.
- Leaching of accumulated salts.
- Field operations without waterlogging.
- Extended growing season.
- Increased root development.
- Improved yields.
- Better drought resistance.
- Sustainable long-term irrigation.

Drain it...

The impact of irrigation without drainage are as follows:

- Non-effective irrigation application.
- Shallow root development.
- Field operations are more difficult.
- Greater control of weeds is required.
- Rise of the water table.
- Salt accumulation.
- Reduction in plant available water.
- Development of bad patches in the field.
- No or limited yield.

The need for subsurface drainage in irrigated lands cannot be over-emphasised as it is regarded as a sustainable and proven solution to both waterlogging and salinity problems. By correcting the water table status and the salinisation together with the installation of a proper erosion control system, soil health and crop production can be improved. It will also minimise the impact on the environment and improve the profitability of the producer.

All drainage works, small and large, have certain requirements and the following factors need to be taken into account:

- Identify the purpose of what is to be reached with the drainage works.
- Investigate all conditions and obtain design information in the field.
- Make use of previous information and experience of a similar area.
- Do a proper financial costing of the project.

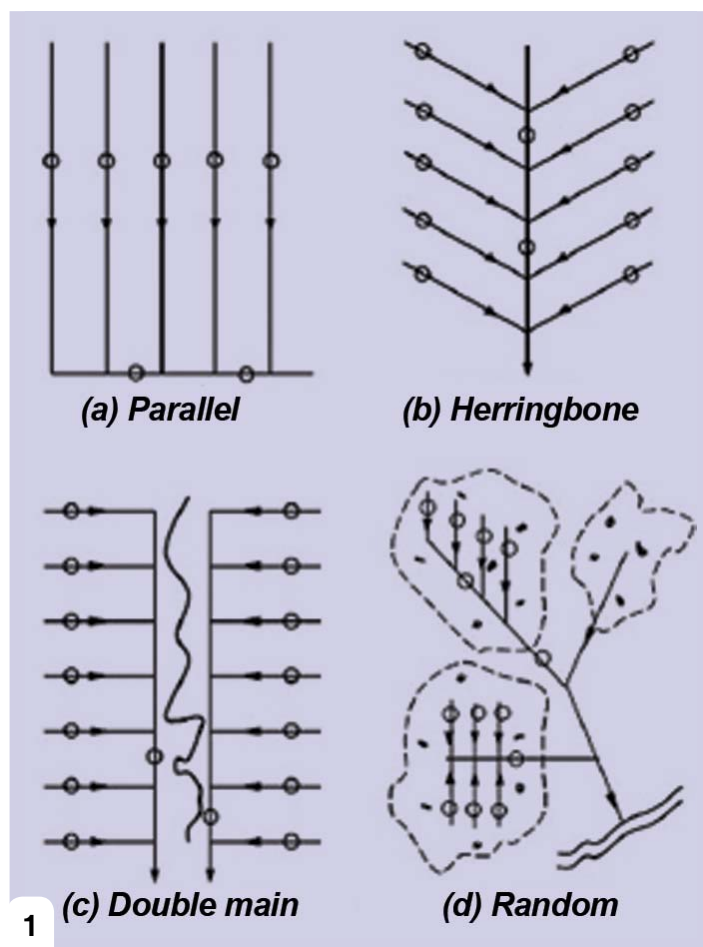


Figure 1: Typical subsurface layouts.



5

A typical machine installation.

The basic steps of developing a subsurface drainage system are the following:

- Investigate the problem and plan the system.
- Design a drainage system.
- Prepare work drawings and plans.
- Compile the specifications.
- Install the subsurface system.
- Maintain the system.

Typical layouts are shown in **Figure 1** and depend on the specific circumstances and topography of the area. Select a drainage pattern that best fits the topography and the groundwater conditions.

The herringbone system (b) consists of parallel laterals that enter the main at an angle, usually from both sides. This system is used for long, relatively narrow, wet areas. The parallel system (a) is similar to the herringbone system except that the laterals enter the main from only one side. This system is used on flat, regularly shaped fields with uniform soil types. The double-main system (c) is a modification of the parallel and herringbone systems. It is used where a depression, which is frequently a natural watercourse, divides the field. A random system (d) is used where the topography is undulating or rolling and contains isolated wet areas.

Installation can take place either manually (where trenches are dug and pipes are laid by hand) or mechanically as shown in **Photo 5**.

Since subsurface drainage is a high investment operation, a greater return from agricultural land is expected after installation of subsurface drains. It is of utmost importance that this investment is safe-guarded by regular maintenance.

Drainage systems are man-made systems that are only implemented when natural drainage is insufficient for a satisfactory form of agriculture. It is necessary to consider technical, economic and environmental issues when a project of this nature is embarked on.

In many cases it is advisable to get expert advice to assist with subsurface drainage projects. In this regard the ARC-Institute for Agricultural Engineering has completed a project, *Development of technical and financial norms and standards for drainage of irrigated lands*, that has been published by the Water Research Commission. It provides guidelines for the planning and design of subsurface drainage that will provide efficient drainage for improved and sustainable soil health. ■

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Grain

Meet the partners of the Farmer Development Programme

THE AMERICAN CO-FOUNDER, CHIEF EXECUTIVE AND CHAIRMAN OF APPLE COMPUTER, STEVE JOBS, BELIEVED THAT GREAT THINGS IN BUSINESS ARE NEVER DONE BY ONE PERSON, BUT BY A TEAM OF PEOPLE. GRAIN SA'S FARMER DEVELOPMENT PROGRAMME (FDP) IS PROOF OF THIS. APART FROM THE MANAGEMENT TEAM, THE DEVELOPMENT COORDINATORS, MENTORS AND STUDY GROUP LEADERS COLLABORATE TO ENSURE THAT DEVELOPING FARMERS ARE REACHING NEW HEIGHTS. WITHOUT THE SUPPORT OF THE PROGRAMME SPONSORS/FUNDING PARTNERS, HOWEVER NONE OF THIS WOULD BE POSSIBLE.

The South African Cultivar and Technology Agency (SACTA), a non-profit company established to administer seed levies for all open-pollinated crops, is one of the programme's partners. Gert Heyns, CEO of SACTA, says that more, new era commercial producers need to be established in South Africa. 'There are so many developing farmers with potential who just need to be given an opportunity to prove themselves, but not being able to get the necessary financing makes it difficult to grow.'

Through their involvement in Grain SA's FDP, SACTA hopes to make it possible for new era commercial producers to build up a financial and technical track record that they can use to acquire their own credit facilities. The SACTA assistance with Grain SA currently runs over periods of three years for each individual farmer. 'We have the funds; Grain SA has the work force and expertise in the field – together we can make the difference.' Gert hopes that the programme can advance to a second stage where mechanisation support is also made available to these farmers.

TRANSFORMATION IS IMPORTANT

SACTA acknowledges the importance of transformation in the South African agricultural landscape. One of the conditions for the approval of a statutory levy, is that 20% of the nett levy income, has to be allocated towards transformation. The allocation of the funds is done according to the National Agricultural Marketing Council's guidelines for transformation.

'Each company that puts a transformation project in place, has a different outlook. Many invest in agricultural practices such as performing soil corrections or crop insurance, but we found that one of the biggest problems developing commercial farmers have to face, is not being able to get financing to help cover their total input costs as they cannot provide collateral' says Gert about their involvement.

'We have decided to make funds available for farmers through certain service providers such as Grain SA, Senwes and FarmSol, among others. In this way we make a three-year interest-free loan available, with the service providers assisting the producers with the necessary production planning, access to input supplies, marketing and mentoring.'

The service providers ensure proper record-keeping with regards to the SACTA allocated funds. When these loans are replenished from current production season yields, the producer may tap into these funds in following production seasons, thus allowing for better sustainability.

SACTA's involvement kicked off in the 2019/2020 production season, making funds available to four farmers who together planted 250 hectares of wheat in the winter grain area. The success of this first step opened the door to expansion, and in the summer season, funding made the planting of 1 300 hectares soybeans possible. In the same



season at least 600 hectares of maize input costs funding was also made available to Grain SA farmers.

For the new season the programme has expanded even further, and nearly double the funding will be made available,' says Gert.

Evaluation is done throughout the season and SACTA is kept in the loop of the farmers' progress. 'We get a report from the service providers after planting and they keep us posted throughout the season. After harvesting, Grain SA consolidates all the information and sends us a final report,' Gert explains. Farmers then decide whether they are going to continue or not.

MORE ABOUT SACTA

SACTA was created as a not for profit organisation which administers the breeding and technology levies for self-pollinated grain and oilseed crops, specifically wheat, barley, oats and soybeans. Lupins will be added later this year. Although producers have the fullest right to hold back seeds from these self-pollinated crops for future planting, this practice reduces the quantity of new seeds sold and it is thus not worthwhile for seed companies to invest in breeding and technology of these crops.

It takes more or less twelve years and costs over R16 million to bring a new cultivar to the market. Without the latest technology, it is impossible for South African producers to compete against their international counterparts, who make use of the best seeds and latest technologies available. With no investment in the development of self-pollinated seeds there will be no progress – genetic gain and local production will stagnate or decline. Consequently, South Africa will need to import more of these grains, increasing production cost and putting the country's food security at risk.

Currently South Africa imports more than 50% of our wheat and there is not enough investment in new breeding programmes. With the funding made available by the levy, seed companies are committed to ensure food security through the development of new genetics and technology for open-pollinated crops.

WHY A STATUTORY LEVY?

In South Africa, the Marketing of Agricultural Products Act (Act 47 of 1996) provides for the application of a statutory levy. This gives substance to a levy/royalty within a legal framework with many benefits like producers and breeders sharing the risk. Should a farmer's income be low due to drought or other problems, the levies are also lower.

SACTA collects the levy from the farmers via the grain trading and silo role players. Seed companies are compensated according to their market share and receive a portion of the funds for research accordingly. ■



LOUISE KUNZ,
PULA IMVULA CONTRIBUTOR



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Stock theft is increasing considerably

DURING THE LOCKDOWN THE INCIDENCE OF STOCK THEFT INCREASED CONSIDERABLY IN MOST PARTS OF SOUTH AFRICA. THIS IS ATTRIBUTED TO, AMONG OTHER THINGS, THE FACT THAT FARM PATROLS WERE NOT ALLOWED TO OPERATE DURING THIS PERIOD.

The Manual for the Prevention of Stock Theft by the Red Meat Producers Organisation (RPO) is every producer's one-stop guide for the prevention and handling of stock theft. It covers all aspects of stock theft and of combating it.

ANIMAL IDENTIFICATION

In many cases the increase in stock theft can be attributed to the fact that animals are not marked properly. A legal, permanent mark is the first line of defence against stock theft. In South Africa, legislation makes provision for an effective animal identification system. The Animal Identification Act (Act No. 6 of 2002) makes it compulsory to mark animals. This helps the industry and the South African Police Service (SAPS) to combat stock theft and makes it easier to find stolen animals.

Feedlots, producers, speculators, auctioneers, abattoirs and buyers at auctions can, knowingly or unknowingly, receive stolen stock. They then violate the law and can receive heavy fines or be prosecuted. The animal identification system and the legal implications and regulations are defined in the manual, while it is also a marking guide for hot-iron and freeze branding and tattooing.

MARKETING OF ANIMALS

The financial side of marketing includes the use of a receipt book, cheque book, electronic transfers, the VAT invoice and related aspects. Most stock owners are conscientious with this, but they do not realise that they

may be violating other laws that have no bearing on the South African Revenue Services (SARS). Legislation regulating the marketing of stock protects the owner and all role-players in the red meat value chain to whom stock is delivered. The Stock Theft Act (Act No. 57 of 1959) and the Animal Identification Act were promulgated for this purpose. Both are still in force. These acts deal with two specific aspects of the marketing of stock, namely buying and selling, and with the transporting of stock.

Stock producers must be aware of the fact that any person (including an auctioneer, agent or market master) selling, exchanging or giving stock to anybody else or disposing of it in any other way must provide the other person with a document of identification on delivering the stock.

STOCK THEFT

The process to be followed when stock theft has taken place is just as important. When stock owners become the victims of stock theft, they can play an active role in preventing further thefts by supporting the local SAPS and the stock-theft unit during the investigation. The time that elapses from the discovery of the theft and reporting it must be as brief as possible. Many stock theft cases are not resolved satisfactorily because of insufficient evidence and proof or incomplete statements. Stolen stock often cannot be identified positively either, and the relevant owner cannot prove ownership.

Specific aspects to be kept in mind are the preservation of the crime scene and evidence; reporting of stock-theft cases; using DNA technology; the statement by the plaintiff; additional charges of animal abuse; the victims' charter, and what to do if an investigation was carried out in an unsatisfactory manner.

KNOW THE LEGAL SYSTEM

A working knowledge of the criminal justice system is to the benefit of the producer. Criminal procedure is a combination of rules and

procedures that regulate the entire process of criminal prosecution. Among other things they regulate arrest, bail, the hearing, sentencing and appeal. The main source of South African criminal procedure is the Criminal Procedure Act (Act No. 51 of 1977).

The Animal Identification Act and the Stock Theft Act are the two acts that are commonly associated with stock theft. However, there are other acts that are also violated when stock is stolen, like the Fencing Act (Act No. 31 of 1963) and the Trespass Act (Act No. 6 of 1959). Producers should be familiar with the content of this legislation and the additional violations in terms of these acts that can be added to the charges against the stock thief. The Trespass Act, the Fencing Act, the Animal Protection Act, the Adjustment of Fines Act and illegal hunting with dogs are also defined in the manual.

COMBAT STOCK THEFT IN THIS WAY

Stock theft can be combated in different ways. Stock owners can ensure themselves that the risk of theft on their property is reduced. The stock theft prevention forums and information centres also deserve the support of every stock owner. The RPO has estab-



GERHARD SCHUTTE,
CEO OF THE RED MEAT
PRODUCERS' ORGANISATION,
FIRST PUBLISHED IN SA GRAAN/
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lished stock theft prevention forums at national and provincial level to fight stock theft. The main aim of the forums is to establish a representative structure in the fight by organised agriculture against stock theft. Cases relating to stock theft are preferably dealt with at provincial level. Provincial role-players are encouraged to find solutions and put preventive measures in place to combat stock theft effectively.

Cases that cannot be resolved at provincial level or cases of national interest are referred to the national forum. One of the most effective ways in which producers can ensure a greater say in investigations and successful prosecutions is to establish stock theft information centres (SICs) in their district. Producers, police officers and public prosecutors can liaise informally, communicate better and work together with one another through these centres.

The complete manual is available on the national RPO's website at www.rpo.co.za. ■

Reduction in FMD affected area

THE MINISTER OF AGRICULTURE, LAND REFORM AND RURAL DEVELOPMENT, MS THOKO DIDIZA (MP), ANNOUNCED THE REDUCTION OF THE SIZE OF THE DISEASE MANAGEMENT AREA (DMA) AFFECTED BY FOOT-AND-MOUTH DISEASES (FMD) IN KWAZULU-NATAL.

The second round of serological surveillance showed that the disease is still confined to two clusters of diptanks in Mtubatuba and Nongoma. This shows that the restriction on the movement of animals out of, within, through and into the DMA was sufficient to prevent the disease from spreading.

Since the disease did not spread within or outside of the DMA, the size of the KwaZulu-Natal DMA can now be decreased. This will release areas that remained free of the disease from movement restrictions, while still maintaining restrictions on those areas where the disease is still present.

In total, FMD was detected and confirmed in 29 locations, comprising two clusters of diptanks in communal grazing land as well as two commercial areas. The local municipalities of Umhlabuyalingana, Jozini, eDumbe, Abaqulusi, Ulundi, Nkandla, Mthonjaneni and uMlalazi are now released from movement restrictions.

There are still signs of circulating FMD virus within the two clusters, the movement protocol and permit system for movement of cloven-hoofed animals remains in place in the revised DMA. Movement of cloven-hoofed animals and their products into, out of, through or within the DMA is still only allowed on authority of a permit issued by the Veterinary Services of the area.

The movement protocol can be obtained from KZN Veterinary Services. Visible Veterinary Patrols and roadblocks will remain in place in the reduced DMA to control the movement of livestock and to monitor adherence to the movement protocol. Livestock owners are encouraged to submit all applications for movement to the Provincial Veterinary Movement Control Officers for evaluation and risk assessment. Applications and queries can be submitted to fmdpermitskzn@gmail.com.

All stakeholders are again reminded to continue abiding by the movement restrictions still in place in the reduced DMA, as these restrictions are deemed necessary to prevent the escape of the virus out of the affected areas. As soon as it is clear that there is no longer circulating virus in these areas, the remaining movement restrictions can also be reconsidered. ■

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LAND REFORM AND RURAL DEVELOPMENT ON 7 SEPTEMBER 2021



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This is how **MARKETING YEARS** are determined

THE LOCAL GRAIN AND OILSEEDS MARKETS HAVE A VERY CYCLIC TREND, AFFECTING THE STOCK AND THE FLOW OF GRAIN. IT IS IMPORTANT FOR ROLE-PLAYERS IN THE INDUSTRY TO UNDERSTAND THE CYCLIC NATURE OF THE LOCAL MARKETS IN ORDER TO HAVE A BETTER UNDERSTANDING OF THE FUNDAMENTAL ASPECTS OF THE MARKET.

An aspect of the local market that is discussed regularly is the marketing seasons. Why do the marketing seasons of the different crops differ, and why are they not just according to calendar years? It may make sense to many people for the marketing season to run hand in hand with the calendar year, but there are a number of important aspects to keep in mind when the marketing season is determined.

SEASON AND STOCKS ARE IMPORTANT

The marketing years of grains and oilseeds differ and are determined mainly by the production season and available stocks of the different crops. **Table 1** shows the marketing years for different grains and oilseeds.

The marketing seasons are set up to end just before the harvesting process for the new season starts. This is also when the lowest stock is traditionally available locally.

Graph 1 shows the average unprocessed stock of maize per month. It is clear that the maize stock is traditionally the lowest in April. Although stock for the new season does start coming on the market in the form of early deliveries since March, this is very little. Early deliveries on average constitute between 2% and 3% of the total maize production for the season. As the stock for the new season enters the market, the available stock in the local market increases until it traditionally reaches a peak in August.

One of the main aspects that is taken into account when the supply and demand committee announces its figures, is the available stock at the end of the marketing season. The market therefore wants to establish how much maize is available in the month when the available local stock is traditionally at its lowest level. It helps to quantify the risk of shortages. Generally speaking, the norm is that a minimum of approximately 45 days (one and a half months) of stock must be available at the end of the marketing season.

IN CONCLUSION

Although the principle in the article mainly deals with maize, it also applies to all grains and oilseeds, with the marketing season ending

1 *Marketing year period for different grains and oilseeds.*

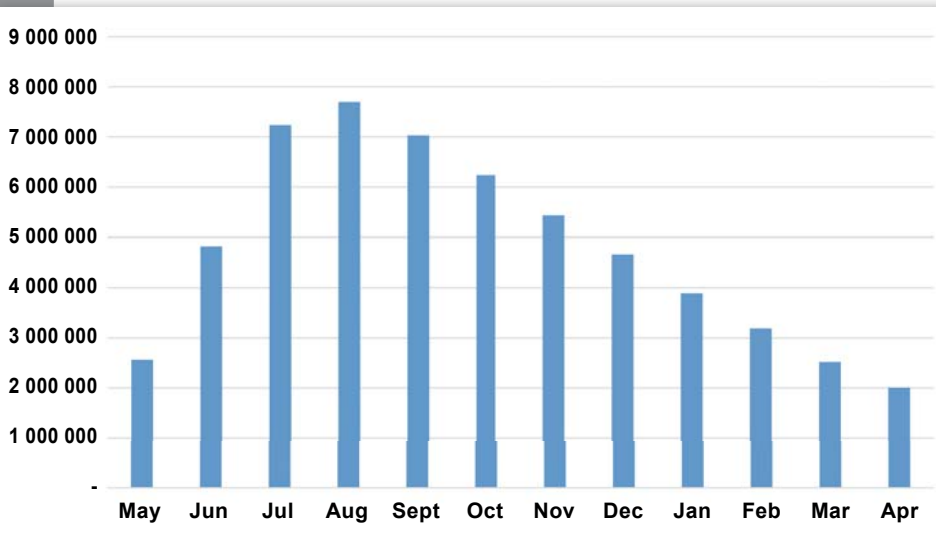
Marketing year	Crop
1 May to 30 April	Maize (white and yellow)
1 March to 28 February	Soybeans, sunflower, sorghum and groundnuts
1 October to 30 September	Wheat, barley, oats and canola

when the local stock is at its lowest level. The reporting and interpretation of the figures are much easier than when figures have to be calculated in a period with high stock levels. In the case of maize there is the matter of early deliveries, which is not necessarily an issue with the other crops. However, the deliveries that occur in March and April will always be part of the calculation, regardless of the reporting period.

Waiver

Everything possible was done to ensure the accuracy of this information. However, Grain SA accepts no responsibility for any damage or losses incurred because this information was used. ■

2 *Average quantity of unprocessed maize stock per month in South Africa.*



Source: SAGIS

LUAN VAN DER WALT,
AGRICULTURAL ECONOMIST,
GRAIN SA. FIRST PUBLISHED
IN SA GRAAN/GRAIN
NOVEMBER 2020

SA **Graan**
Grain

THE CORNER POST

LETHIWE MTHETHWA

Success begins with dreams

Sphamandla (28), Lethiwe (32), Sabatha (30) and Mvelo (23) – used to report to their mom Nomusa Mthethwa who made sure things were running smoothly in the farming operation. Sadly, Nomusa passed away in September and the siblings will now honour their parents through their hard work.

REMEMBER WISEMAN MTHETHWA WAS ONE OF THE FINALISTS OF THE 2017 GRAIN SA/ABSA/JOHN DEERE FINANCIAL NEW ERA COMMERCIAL FARMER OF THE YEAR COMPETITION. SADLY, HIS DREAM OF BEING A SUCCESSFUL COMMERCIAL FARMER WAS CUT SHORT AS HE PASSED AWAY IN A CAR ACCIDENT IN AUGUST 2018. FOLLOWING HIS DEATH, HIS CHILDREN HAD TO TAKE UP THE REIGNS OF THE FAMILY FARM, MILNEDEALE FARM, IN THE DANNHAUSER AREA IN KWAZULU NATAL.

FILLING A SUCCESSFUL FATHER'S SHOES

Remember joined Grain SA's Farmer Development Programme in 2013. 'When my dad passed away they were there to lend a helping hand,' says Lethiwe who joined the farming operation in 2011 after completing her studies. She says it was not easy filling their dad's shoes. 'He was our leader and we are now walking in his footsteps. These are big shoes to fill.'

The development coordinator from the Dundee office, Graeme Engelbrecht, provided the necessary mentorship and advice. 'Graeme's mentorship plays a big role in our success. He guided us into achieving the goals my dad wanted to realise. He comes to the farm to check on us and our harvest,' shares Lethiwe.

'We have improved a lot since Grain SA's has been around,' the family says. At the start of the programme they were harvesting 2 t/ha to 4 t/ha of maize. 'This has now increased to 7 t/ha to 8 t/ha. With sugarbeans we are realising 3 t/ha to 4 t/ha and with soybeans 2 t/ha to 3 t/ha.'

The siblings make sure they get the necessary knowledge and training by attending study groups regularly.

They operate a mixed farming enterprise on their 612 hectares farm which they are leasing from the Department of Rural Development and Land Reform. Apart from planting maize and dry beans, they also farm with Brahman and Bonsmara cattle and sheep. 'Currently we are using 412 hectares for the livestock and planting on 200 hectares of dryland,' Lethiwe shares.

The siblings make sure they get the necessary knowledge and training by attending study groups regularly. Here they learned about correct agriculture practices like the importance of timeous planting and the significance of taking soil samples to know your soil's status.

Lethiwe is especially grateful for the information on record-keeping and 'doing the books' as this has become her duty on the farm. The rest of the farming duties are a joint venture.

This year they decided to plant soybeans after planting sugarbeans for the past three years. 'We did this to give the soil a break this season. It is also more cost effective as soybeans are cheaper to harvest as less labour is required.'

With the skills they had learned from their father and the guidance of Grain SA's Farmer Development Programme the Mthethwa clan are now living out his dream successfully. Sabatha was even crowned as the 2019 Grain SA/Monsanto Potential Commercial Farmer of the year. After receiving his award he said their success stems from their love of farming, respect for the land and pride in what they are doing.

IT'S NOT JUST A DREAM, BUT A PLAN

Eleanor Roosevelt, a former first lady of the USA, said, 'The future belongs to the one who believes in the beauty of their dreams.' In other word if you stop dreaming you will stop making plans for your future.

Lethiwe is a big dreamer who sees so many opportunities for expansion on Milnedale. Her dreams therefore centre around the farming operation. 'We have to expand what we have, not just more hectares for planting and increasing our herd, but we should expand into secondary agriculture,' she says about her dream to set up an abattoir and a butchery on the farm. 'Then we can slaughter and sell our own meat while at the same time creating jobs for people.' Another dream is to establish a mill on the farm where maize meal, samp and other products can be produced on site.

She hopes that she will one day own her own piece of land and that her brothers will all be landowners too in the near future. Until her dreams are realised, she is happy making her father's dream come true.

Lethiwe shares the following advice with fellow farmers:

- To grow as a farmer it is important to seek knowledge on a daily basis. So join a study group and get involved with other farmers. We can learn so much from each other.'
- Do not be jealous of each other. Share your information. Support each other. Lend a helping hand and make a difference for agriculture.
- It is not a good time in South Africa now but hang in there. Things will improve. ■



LOUISE KUNZ,
PULA IMVULA CONTRIBUTOR

A programme that is changing lives



Telling OUR OWN STORY first-hand

GRAIN SA'S FARMER DEVELOPMENT TEAM IS ACTIVELY CONTRIBUTING TO THE DREAM OF A UNITED AND PROSPEROUS AGRICULTURAL SECTOR. WE ARE PROACTIVE ABOUT TEACHING FARMERS THE MOST APPROPRIATE AND MODERN FARMING TECHNIQUES THAT WE BELIEVE WILL CHANGE THEIR UNIQUE FARMING OPERATIONS FOR THE BETTER.

This is a team made up of many parts. We are:

- Farmers and agriculturalists.
- Development specialists.
- Teachers and trainers.
- Linguists who can communicate in multiple languages.
- Mentors.

Nothing makes us happier than helping people by expanding their knowledge and growing their skill sets. Therefore we are constantly seeking for opportunities to partner with other stakeholders who have a vested interest in successful land reform and farmer development whether they are from within government circles or in private sector, commodity organisations and agribusiness networks. These institutions make it possible for us to reach the most remote and rural regions of South Africa where bring knowledge transfer and skills development opportunities to farmers who wish to improve their businesses.

CONNECTING WITH THE FARMERS

One of the mentors began his reporting in August with the following words: 'It has been so good to get to meet with the farmers again.' The first meeting platform Grain SA's Farmer Development Programme offers is the **study group meeting**.

The month of August was still very busy in most regions of the country with farmers still threshing, packaging and marketing their maize crop. On the whole, farmers had a good year and many have been able to buy new season inputs already. The Grain SA team has been in regular contact with the many study group farmers. There were at least **148 contact sessions** with study group chairmen and farmers in August.

Some may ask why bother with meetings, travelling and time spent on study group interaction, so why do we do it? We don't believe there is a 'one-size-fits-all' approach; rather we like to talk to our farmer members and embark on a journey of knowledge acquisition appropriate for them.

This varies throughout the season as we deliver timeous information. Since August saw farmers still busy with harvest time and post-harvest activities, we have taught them the importance of accurate record keeping and have shown them how to determine the crop yields achieved. We have taught farmers how to know they are getting a fair deal for the maize they are selling. In South Africa maize price changes on a daily basis sometimes and price is determined by Safex.

Another meeting platform we have is **farm visits** which are targeted at more advanced farmers who need some assistance on their way to full commercialisation. There is a maze of uncertainties, choices, and new technologies that a potential commercial producer must navigate and the team assists with this. Close working relationships are formed with these producers while the nitty gritty of farming – the planning and challenges that farmers face – are dealt with on a one to one basis.

The team makes a commitment to walk a road with a specific farmer and a commitment to funders to monitor and ensure that recapitalisation or targeted funding is spent wisely. By getting to know the farmer and all aspects of the farming operation, we learn more about his dreams and ambitions. We care as much about the well-being and success of an individual farmer as we do about successful land reform.

During farm visits the team assists with planning and logistics. Where necessary we help fix old or broken tractors and implements. We worry with the farmers when there is no rain and we rejoice when we see impressive yields. When damage is done by a runaway fire, we weep alongside the farmer. Recently Thobani Ntonga and Abednigo Mofokeng from the Eastern Cape suffered tremendous loss after a runaway fire destroyed their maize fields and grain storage bins.

This is a fully funded programme with support from Government (DRDLR – Recap), Grain SA, the Maize Trust, OPDT and Standard Bank amongst others. We appreciate these sponsors.

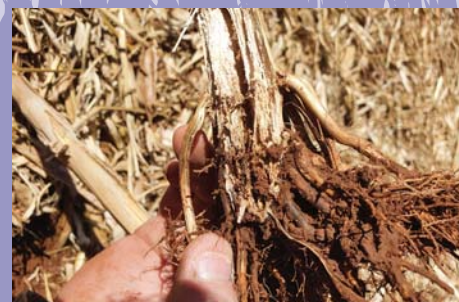
AT GRASS ROOTS



After a runaway fire swept through Thobani Ntonga's farm, his mentor spent a whole day with him assessing the damage. The maize storage dam was completely destroyed by fire.



Mlindeli Hlazo visiting the fields of study group farmers and monitoring their maize. Here farmers are harvesting and threshing.



Sometimes the mentor has to be the bearer of bad news. The mentor showed the farmer the clear evidence of a stalk borer problem which needs to be managed. Yields will be compromised if the issue is not dealt with.



Farmer
Development
Programme

Feedback

Celebrate the harvest

THESE photos are of farmers with the maize they harvested in July and August. Most farmers had above average yields. The Grain SA team used any problems that occurred as an opportunity to teach a valuable lesson, like the importance of weed control, how to conduct field inspection looking for stalk borer and the importance of soil sampling.



Mentoring on HOME SOIL

ONE of the meeting platforms Grain SA's Farmer Development Programme uses is farm visits. The team travels thousands of kilometres every year to get to the farms as often as possible. In spite of a global pandemic, **78 farm visits** were made around the country during August where the team got out of their vehicles and into the fields. Here are some of the activities that occurred during August's farm visits.

Luvuyo Mbutho is mentored by Neil Kirk who made him an augur stand so at least two augurs can pour from the grain dams into the trucks. This just shows how invested the mentors are in the farming operations of their mentees.



Simon Mazwi collecting soil samples during Du Toit van der Westhuizen's visit.



Another meeting with planning done on a bakkie flap – a farm visit to Paul Motlokoa to discuss water reticulation.



Johan Nel and farmer Sopazi Lunyaweni from the Maclear area discuss the season ahead.



Mentor Neil checks the moisture content of farmer Sabasaba's maize on the field before harvesting.

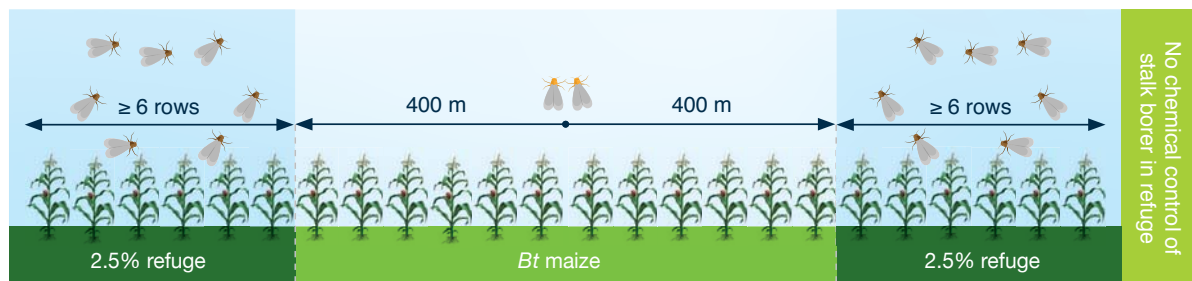


Plant the correct refuge area for maize



Step 1 Choose the option best suited to your farm:

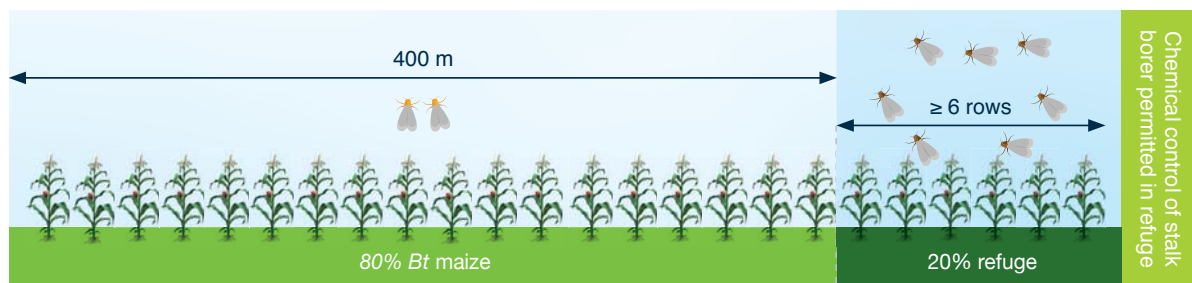
Option 1A - field size over 800 m



Option 1B - field size under 800 m



Option 2 - field size under 800 m



KEY Resistant adult insects Susceptible adult insects

Step 2 Depending on the option chosen above, your refuge must be planted in the following manner:

Similar Hybrid in the same growing season

Each grower their own refuge

Minimum 6 row strips

Plant within 7 days

Cover borders

Don't mix seed

Same agronomical conditions

Within 400 m of Bt Plants

Don't cross Bt Rows

Step 3 Scout Bt planting regularly; if more than 10% stalk borer damage on YieldGard, or any damage on YieldGard MAIZE 2, contact your seed representative immediately.

A30263/PI