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# PULA IMVULA

GROWING FOOD • PEOPLE • PROSPERITY

GRAIN SA MAGAZINE FOR DEVELOPING FARMERS





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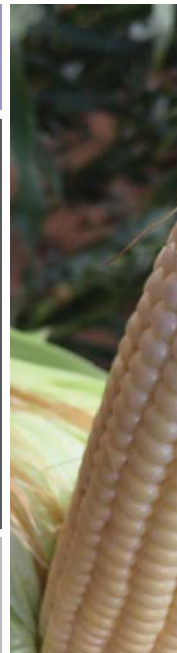


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## A WORD FROM... *Dr Dirk Strydom*

**T**HE DIFFICULTIES OUR COUNTRY IS EXPERIENCING AND HOW WE WOULD GET THROUGH ALL THIS UNCERTAINTY AND CHALLENGES, CAN EASILY LEAD TO NEGATIVITY. SOME PREVIOUS EXPERIENCES MADE ME THINK ABOUT THIS.

The first experience I recall, is from a previous visit to Poland, which is a beautiful country but one with a war-stricken history. There I asked a 5th generation farmer: 'How did your family manage to stay on the farm through all these troubled times, and best of all creating a world class farm and business?' He responded: 'Sir, my family believes in supporting the leaders that have our best interest at heart and not the politicians. If it goes well with us, we reinvest in our community, but most importantly we all keep focusing on what we are good at, which is farming.' Such words of wisdom, because we do not have control over a lot of things.

Another piece of wisdom came from a rural farmer, where I experienced superior hospitality, an abundance of love for God, and a whole lot of gratitude and thankfulness. 'This community seemingly does not have a lot but they are extremely grateful ... why is that?' is asked myself. Then the farmer explained to me how he produced his crops, what new ideas he has and how he embraced new production methods such as no-till on his small piece of land behind his house.

An old maize stalk previously harvested by hand remained in the field. The farmer explained: 'One day I watched the plant closely and realised if you look at it from the top, the leaves are twirled into the stalk creating a funnel for water, flowing to the bottom. There the brace roots channel the water into the ground close to the plant to utilise it through the roots.' This farmer took the time to have a close look at the plant to understand the working of it and to see what adjustments in the production process can be done to improve efficiency. Taking time to focus on the small things provided joy, gratefulness and prosperity, but the busier you get, the less one tends to retain focus, which leads to missed opportunities.

Sometimes the answer to happiness and prosperity lies within the passion for something, in the little things and a simpler life, which provides more focus on important things.

My friends, always keep this lesson a part of your life. Make time to enjoy, focus and appreciate the small things. Make sure you control the things that are controllable. Keep your love for agriculture no matter how big or small you farm. I am still a believer that through agriculture hearts are changed and that agriculture is a medicine that can heal the challenges of our country. ■



# Hit the **REFRESH BUTTON** of your crop system

**P**LANT DISEASES HAVE THE ABILITY TO DESTROY AN ENTIRE YIELD OF VARIOUS CROPS IN THE FIELD. ABUNDANCE OF INFECTIOUS PLANT PATHOGENS (GERMS) IS ONE OF THE FACTORS THAT LEADS TO SEVERE DAMAGE OF PLANTS BY THESE PATHOGENS. THE ABUNDANCE OF THESE PATHOGENS MAY BE CAUSED BY GROWING THE SAME CROP ON THE SAME FIELD OVER MANY CONSECUTIVE YEARS. FARMERS ARE ENCOURAGED TO PRACTICE CROP ROTATION AS IT HAS MANY BENEFITS INCLUDING REPLENISHING SOIL NUTRIENTS AND REDUCING THE AMOUNT OF PATHOGENS IN THE FIELD.

South Africa's population increases at the rate of 1,2% annually; while land available for agriculture remains stable but soil health constantly deteriorates. In an ideal world, we hope that every planted seed (e.g. maize) fully develops into a mature plant that produces its maximum yield in order to maintain food security for the ever-growing population.

However, this is not possible due to influences such as weed, plant diseases and insect pests. Plant diseases have been previously reported to destroy an entire yield of various crops in the field (e.g. Sclerotinia head rot of sunflower (**Photo 1a**).

*Plant health is important for developing and implementing strategies that can be used to control and prevent pests, weeds and disease.*

Some of the factors that influence the greater damage of plant disease on crops include (i) a defenceless host crop, (ii) infectious pathogen (plant germs), (iii) and a suitable environment for the plant disease to develop. A defenceless host crop may be regarded as a crop cultivar that is not genetically resistant to the pathogens (germs) or one that is injured either by wind-blown soil particles thus making infection by the pathogen easier. An infectious pathogen normally causes the most severe crop damage when it is abundant in the field. One of the causes that lead to the abundance of these pathogens in the field is lack of crop rotation or planting the same crop on the same field over many consecutive seasons.

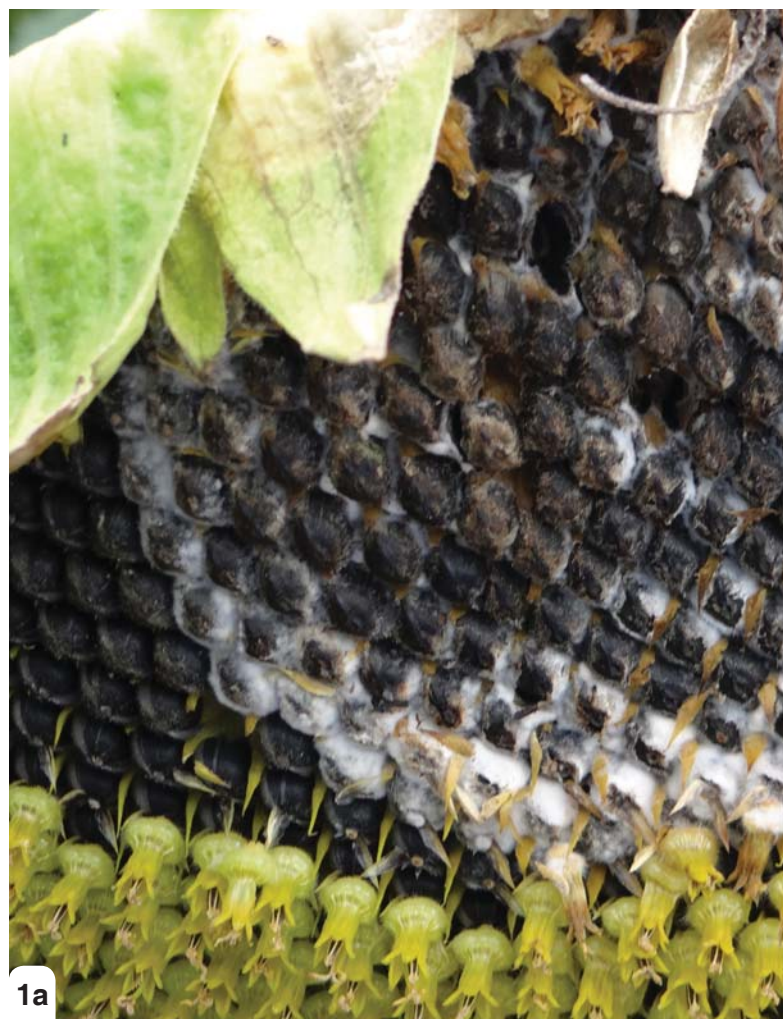
## **CROP ROTATION**

Lack of crop rotation may later affect crop yield since many pathogens can survive in the soil and on plant debris after the crop has been harvested. The University of Pretoria conducted a study to

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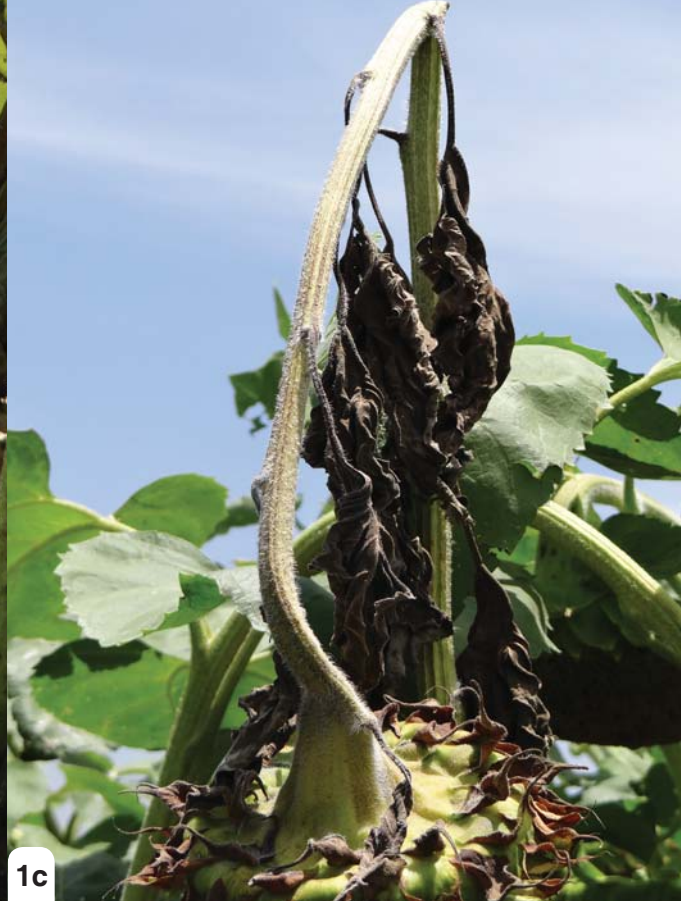


investigate how long Alternaria leaf blight (ALB), **Photo 1b** and Phoma black stem (PBS), **Photo 1c**, were able to survive on infected sunflower debris from a commercial farm. PBS was able to survive for eight months whereas ALB could survive for more than a year on plant debris. Other issues associated with growing one type of crop on the same field year after year may include nutrient depletion.



**Some of the diseases that affect sunflower production; Sclerotinia head rot (Photo 1a), Alternaria leaf blight (Photo 1b), and Phoma black stem (Photo 1c).**





Crop rotation can therefore be seen as a refresh button in a crop farming system. While crop rotation may reduce the level of disease in the soil; it also improves soil moisture, soil carbon, macro-fauna, crop productivity and is good for conservation purposes. The choice in which crop to rotate would be based on the environment, soil and climate. The crop should still have financial benefits to the farmer or should have economic gains (feed for livestock).

Crop rotation is done by growing plants with different types of crops in succession. For instance, if a farmer plants a field of maize in 2019/2020 growing season; it would be recommendable that he might plant beans in the 2020/2021 growing season. This is because maize consumes a lot of nitrogen and beans return nitrogen to the soil.



*One of the causes that lead to the abundance of these pathogens in the field is lack of crop rotation or planting the same crop on the same field over many consecutive seasons.*



## AWARENESS

Year 2020 has been declared as the International Year of Plant Health (IYPH). IYPH aims to create awareness on the importance of plant health. Plant health is important for developing and implementing strategies that can be used to control and prevent pests, weeds and disease. Plant health therefore plays a key role in combating hunger, protecting biodiversity and boosting economic development. Let us therefore ensure we keep our plants healthy. ■





# Congress highlights how farmers contribute

**A**T THE ANNUAL GRAIN SA CONGRESS WHICH TOOK PLACE IN MARCH, DELEGATES WERE INSPIRED BY SPEAKERS LIKE CHIEF JUSTICE MOGOENG MOGOENG AND WELL-KNOWN AGRICULTURAL ECONOMICS EXPERT DR FERDI MEYER OF BFAP (THE BUREAU FOR FOOD AND AGRICULTURAL POLICY). DELEGATES WERE ALSO TASKED WITH THE RESPONSIBILITY OF ELECTING NEW LEADERSHIP TO THE ORGANISATION.

## NEW LEADERSHIP FOR GRAIN SA

Immediate past Chairperson Jaco Minnaar has moved on to serve the sector on different platforms which meant Congress had to elect new top leadership. Derek Mathews, a farmer near Lichtenburg and past Vice-chairperson was voted in as new Chairperson of Grain SA while Richard Krige, previously a member of the Executive Committee and a farmer from the Western Cape was elected unopposed as new Vice-chairperson of Grain SA.

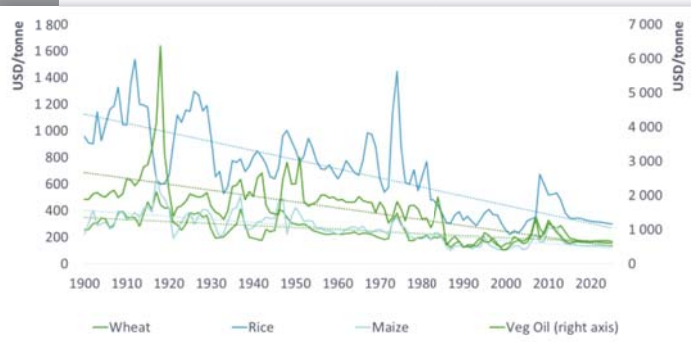
Delegates also voted in Ramodisa Monaisa to continue serving as Vice-chairperson for another term of office. He is a grain and live-stock farmer in the Lichtenburg district. Jeremia Mathebula who farms near Ermelo and is already a member was also elected by Congress to serve on the Executive Committee.

## CHIEF JUSTICE MOGOENG MOGOENG

Chief Justice Mogoeng told Congress: 'South Africa belongs to all – not just some – who live in it.' True to form Chief Justice Mogoeng asked Congress to pray with him before his address. He then expressed his feelings about the farming community: 'Thank you, thank you, thank you. He said farmers play a critical role in pursuing the calling to produce quality food to feed humanity. He also recognised how many farmers have been facing challenging times and thanked them for 'soldiering on'. Chief Justice Mogoeng empathised with farmers saying he understands how the frustrations experienced by other South Africans leave all farmers feeling despondent.

1

### Declining real prices.



Source: FAPRI, 2018



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## Issues

Some issues mentioned were:

- **'Land thieves'** – in spite of the name calling and negative attitudes, Chief Justice Mogoeng respects how farmers still choose to pursue their chosen careers and continue to contribute to economic vitality in South Africa.
- **Financing for farmers** – Chief Justice Mogoeng knows the risks for farmers who are increasingly unable to fully utilise their land values as collateral for financing in light of no title deeds for some and the looming possibility of land expropriation without compensation for others.
- **Farmer development** – Chief Justice Mogoeng said he's long been aware of the Grain SA Farmer Development Programme and the critical role it plays in recognising that every South African, black and white, deserves the possibility to free their potential as farmers. He acknowledged Grain SA's willingness to reach out a hand of help and mentorship to farmers.

## Spotlight on our Constitution

Chief Justice Mogoeng turned the spotlight onto our constitution. We, the people of South Africa ... It doesn't specify any particular race, culture or creed – 'we' means everybody. It recognises the injustices of the past and accepts that South Africa belongs to all who live in it, united in our diversity and determines the constitution is an instrument for healing. He said we have to grapple with the historic realities as there will be no lasting resolution in the sector until we are brave enough, principled enough and sensitive enough to attend to cries for inclusive, meaningful participation and access to land. We have a responsibility to identify solutions in ways that build rather than divide, ensuring that 'no ball is placed in the hands of opportunistic political players' which will further divide us.

Deny the politicians the opportunity to divide us – we are a family. Our country needs healing from brokenness, suspicion, racism, tribalism, prejudices and mistrust. Whether we like it or not we are a family and we belong together. Chief Justice Mogoeng believes there is a oneness between fellow South Africans demonstrated because we find joy together. He says he looks forward to the day when the private sector, organised agriculture and government work more closely together than ever before.

## Land redistribution

In past times land redistribution was not a success.

- We need to work together to transfer land.



- Land must be put into the hands of people who really do have the heart for farming and who have the capacity to farm.
- We must ensure consistent mentorship.
- Require institutional support from government.

#### We need to tell our own stories

‘Until we have an avenue of communication there will always be fake news out there.’ Chief Justice Mogoeng encouraged aggressive communication to mainstream media with news of the good work being done. It is also important that the messages are not window dressing but true examples of the good work being done from Grain SA’s apolitical standpoint.

‘Sacrifice and compromise will be required of all of us, black and white.’ Chief Justice Mogoeng said he can vouch for the selflessness of farmers and their spirit of generosity and said he believes farmers have what it takes to contribute to the stabilising of the sector.

#### We need to know

Chief Justice Mogoeng encouraged farmers to demand speedy resolution of the land issue. He recognises we need policies designed to ensure meaningful productivity and sustainable farming opportunities and, in the process, he emphasised the need for current farmers’ experience and invaluable institutional memory. ‘I would hate to see farmers close shop because they can’t farm productively in South Africa. South Africa has a bright future and only you and I, with steely determination, can ensure this beautiful country does not go to waste.

#### DR FERDI MEYER

Dr Meyer addressed Congress on matters influencing the grain economy. He says if there’s to be any future growth, we need to attend to: 1) Partnerships, 2) what we focus on, 3) what issues we prioritise, 4) how we coordinate within the value chain and 5) how we execute policy. It’s not insignificant that Grain SA and BFAP have been collaborating to collect data and look for creative ways to carry strategic messages to policy makers, business and decision-making forums.

#### Bend the curve

What does he mean when he says: ‘We have to bend the curve?’ Statistics reflect steadily declining levels of profitability in the agricultural sector. All grain producers are under extreme pressure and face many challenges. A real price line graph shows a downward trend – which means less profits for farmers, higher risks and threats to sustainable farming. We have to find ways to bend the curve so that it points upwards and moves farming into a more viable and sustainable state.

Look at **Graph 1** which tracks the decline in prices received by farmers for their produce. The downward trend is worrying. We have to find ways to ‘bend the curve’ upwards so that farming is more attractive, more viable and sustainable. As farmers we need to be able to provide for our families and grow our businesses. With downward trends like this, we cannot.

#### What will change things and help bend the curve?

We need to find solutions and raise our voices to policy makers and government so they can understand how fragile and vulnerable the agricultural sector is and what is required to fix it.

#### Jobs, growth and the National Development Plan (NDP)

Dr Meyer said there are some areas like under-utilised land and smallholder farmers where there should be great potential job opportunity but instead numbers have declined from 1,3 million in 2011 to about 1,2 million currently. But export-led sector jobs at farm level have increased and the agro-processing and integrated value chain has seen encouraging growth.

#### The maize value chain shifting to transformed state

Dr Meyer red flagged issues affecting long term sustainability. We need to construct messages that will bend the curve.

- Private sector interventions provide skills transfer, but we need direct subsidies for smallholders.
- Land reform policy and land expropriation needs clarity for all.
- Farmers need reliable production finance and affordable crop insurance.
- Infrastructure needs to be developed and maintained e.g. roads, electricity and water supply.

*Until we have an avenue of communication there will always be fake news out there.*

#### Potential

‘We have a lot of potential to bend the curve and create a downstream value chain in the economy.’

- The soybean industry has seen tremendous growth.
- Chicken and poultry markets – reduce imports and make local industry more competitive and create job opportunities.
- South African producers have challenges in terms of cost of production. Farmers in dry areas will have to make strategic changes and integrate a bigger livestock component.

#### Take home ideas

- Farmers need an organisation which is gathering accurate data that measures the impacts of the many different drivers on production and processors.
- The role of Grain SA and BFAP in gathering and sharing accurate data is critical.
- The messages informed by such information must be communicated clearly to policy makers and other role-players.
- Grain SA Farmer Development is not only making a difference with mentorship but is also helping gather invaluable information to tell the story on behalf of farmers. ■



# SOIL SAMPLING

## is key to a successful crop

**S**OIL SAMPLING, CORRECTLY DONE, IS A CRITICAL STEP IN MANAGING YOUR SOIL FERTILITY FOR EACH CASH CROP IN A CROP ROTATION SYSTEM OR FOR THE PASTURES USED TO PRODUCE LIVE-STOCK PRODUCTS.

It is important to keep records of all samples taken and the soil test results that you receive from various soil samples sent directly to test laboratories or consultants in the fertiliser industry. The recommendations for optimum fertiliser use given for a crop or soil will determine your ultimate crop yield and the current and long-term success of your cash cropping operation.

The crop yields actually realised can be compared to the soil test, knowledge of the levels and ratios of the existing soil fertility components and the quantity of the fertiliser elements of nitrogen (N), phosphates (P), potassium (K), calcium, magnesium, zinc, boron and other trace elements applied.

The soil test becomes the benchmark for encouraging the farmer to increase the fertility and yields of the cash crops being grown over many years.



*Taking soil samples.*

Written by a retired farmer



### ADDITIONAL KNOWLEDGE REQUIRED

When taking soil samples it is important to know and see the actual soil profiles, the descriptive name designated to that soil, the effective root depth together with your rainfall data to have an accurate estimate of the yield potential of a certain block of soil types or individual lands within a farming enterprise. The fertility of each and the fertiliser to be applied must be 'calibrated' to the soil test benchmarks created and the actual yields realised over many production seasons.

Some essential resources to read and to have at hand when looking at soil test results are *Soil Classification – A taxonomic system for South Africa* (ISBN 0-621-10784-0) and the latest edition of the *Fertilizer Handbook* (ISBN 0-909071-86-1). The fertiliser handbook has been found to be very accurate when calibrating the soil test, fertiliser recommendations for various levels of crop yields and the yields realised in practice on your farm.

To one's surprise some farmers with over 20 years of crop experience have never dug soil profile holes and so do not know the true potential of the soils. It is essential to obtain the maximum yields from the highest potential soils. Each must have a specific fertility programme that is tailor-made for optimum yields. Soils which are uneconomic for cash crops should be put back to planted pastures.

### RECOMMENDATIONS AND CONSIDERATIONS

It is important to take soil samples 2 to 4 weeks before the summer production season to allow for testing and the interpretation of results before you order the correct fertiliser. The soil starts to warm up after winter and so August to September is an ideal time period. If you can get in early you will receive the results from the laboratory before the seasonal rush to test thousands of samples.

*Take soil samples of your most high potential lands first if resources and time is limited and complete a careful and accurate survey and analysis of your fertility levels in each of the other lands over the next few years.*

The ARC-Small Grain Institute situated in Bethlehem for example, has given good service and reliable results over many years. The general guidelines for sampling are to take samples during the same phase of a cultivation programme, to go through a land in a zig-zag pattern with the sampling tool with bag attached and to take samples at random, equally between and within the previous crop rows.

Take samples for top-soil analysis from a depth of 0 mm to 200 mm in the main crop rooting zone and the subsoil from 200 mm to 600 mm.





***A profile hole shows the soil profile and effective root depth.***

If you are doing soil analysis on an unknown land it is advisable to take both so that an accurate record of fertility improvement can be kept. If you buy or hire a new farm, ask the previous owner if he can give you the previous records of soil sampling to make a comparison to the current tests.

Homogeneous or lands of a similar soil type and depth smaller than 50 ha's must be sampled and marked separately. 20 to 40 samples must be taken over the entire area of each homogeneous unit

of the land. The 20 to 40 samples must be mixed thoroughly, and a final sample of 0,5 kg to 1,0 kg placed in a sealed bag and sent or delivered to the laboratory.

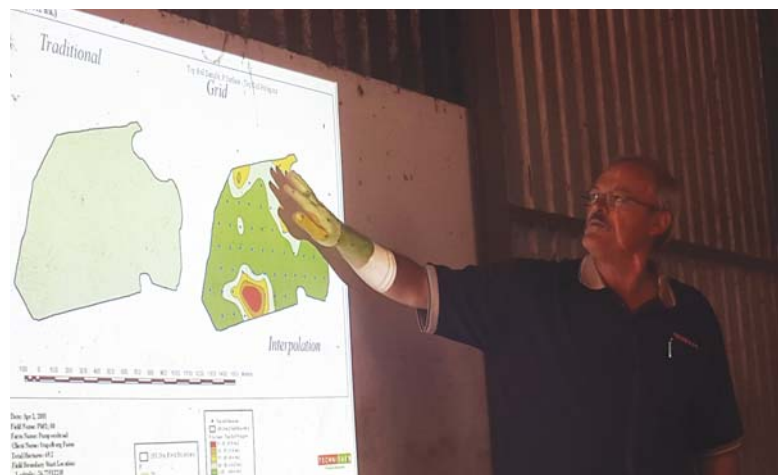
It is highly recommended that the correct sample boxes supplied by the different laboratories be taken to site and the mixing and labelling of each sample be diligently done at each land to avoid any possibility of confusion of which sample mix belongs to which land.

## CONCLUSION

Take soil samples of your most high potential lands first if resources and time is limited and complete a careful and accurate survey and analysis of your fertility levels in each of the other lands over the next few years. It is the key to successful cash crop farming. ■



***A soil sample taken in Bergville.***



***Soil sampling will show you where there are deficiencies in the soil.***



# TO MEASURE IS TO KNOW

## – the importance of crop estimates

**D**OING A CROP ESTIMATE IS A METHOD OF MEASUREMENT AND FORECASTING WHEREBY ANALYSTS OR FARMERS PREDICT OR ESTIMATE THE POTENTIAL TONNAGE OF A PARTICULAR CROP. THIS MAY BE FOR A CERTAIN FIELD OR FOR A FARM OR EVEN NATIONWIDE. THEREFORE, WE CAN DIVIDE ESTIMATES INTO TWO CATEGORIES; NATIONAL CROP ESTIMATES AND PERSONAL CROP ESTIMATES.

The national crop estimate is the forecasting of the expected harvest for the entire country. This is performed by a dedicated team of analysts and economists who use a combination of methods to determine a given tonnage figure. This figure will change throughout the season as the conditions change.

Estimates will be done at different stages throughout the season to try and be as accurate as possible. The methods used to perform the crop estimates are based on information available through the season. Firstly, the committee will look at the inputs that were purchased pre-season. How much seed are farmers hoping to put in the ground? Obviously, all the seed that is bought will not be planted as climatic conditions will vary across the country. To determine how many hectares are actually planted the estimates committee will travel the country to assess the conditions as well as make use of geographical information systems (GIS) and remote sensing technologies to arrive at an accurate answer.

As the season progresses the team will make continual adjustments based on regional conditions throughout the country. If you are receiving good rains, this does not mean that the rest of the country is. The average South African maize harvest varies dramatically year on year as our climatic conditions are so volatile. The long-term average maize harvest in South Africa is approximately 8 million tonnes. However, we have regularly achieved above the 10 million tonnes mark. In 2017 South Africa achieved a record harvest of over 16 million tonnes and all indications suggest that 2020 may well achieve the same if not higher.

### WHY DO WE DO CROP ESTIMATES?

Doing a crop estimate is an important practice because maize is the staple food for our country as well as Africa. Approximately 200 million Africans consume maize on a daily basis. Knowing how much maize is available in the market will determine how much you and I will need to pay for it at the supermarket. Therefore, crop estimates contribute to the price setting mechanisms of the market.

There are many other products which prices are also indirectly determined by the maize price such as livestock. Knowing how much maize will be available at harvest time will also allow us to manage and budget accordingly. Perhaps in a poor season we will be prompted to hold back on exports and rather keep reserves for our own countries consumption. In a good year we may have the freedom to push exports or perhaps dedicate a larger percentage into animal production. These are all decisions that the crop estimates aid us in making.



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Many of these reasons for doing crop estimates are similar for the individual farmer. Farmers will do personal crop estimates in order to budget and plan for the coming season. The tonnes that you expect to harvest have a direct influence on your potential profits. Farmers who run mixed operations where livestock is a part of the business structure will be able to plan and strategise for optimum profits by deciding where the grain will make the most impact. Many farmers sell maize silage and doing a crop estimate will allow them to market their silage according to a dry grain crop estimate. Doing a maize estimate in each field is a good practice as it allows you to assess your performance throughout the planting season. It also assists you in analysing your fertilisation programme.

*In farming we always need to be thinking ahead and planning for different scenarios that may come our way.*

Farmers usually use simple mathematics to calculate their yield estimates. This is done by measuring a row section in the field and counting the number of plants in that section. The farmer will then count the number of cobs on each plant and then do a kernel count on each cob. By weighing a sample of kernels, the farmer can then calculate the kilograms of grain that will be harvested in that section. By multiplication he will then be able to estimate the tonnage per hectare and ultimately the tonnage for the given field. To achieve an accurate estimate the farmer will do these exercises a number of times throughout different sections of the field.

The Afrikaans saying goes: 'Om te meet is om te weet', 'to measure is to know'. We do yield estimates to know what potentially will be coming into the silos for the season. This allows us to plan for the season to come. In farming we always need to be thinking ahead and planning for different scenarios that may come our way. We do business in a volatile and unpredictable environment which is why we need to be continually planning for varied outcomes and by knowing what our harvest could be can help you do this more effectively. ■





# BE PREPARED AND MANAGE YOUR FINANCIAL CRISIS YOURSELF

**D**UE TO THE SHIFTING CLIMATE IN WHICH PRODUCERS IN SOUTH AFRICA FARM, CROP FAILURES ARE NOT UNCOMMON. PAYING OF TAXES IS ALSO A REALITY: JUST REMEMBER TO USE EVERYTHING PERMITTED BY THE LAW TO MAKE THIS AMOUNT AS SMALL AS POSSIBLE.

*Pietman Botha, SA Graan/Grain editorial team. First published in SA Graan/Grain May 2019. Send an email to [pietmanbotha@gmail.com](mailto:pietmanbotha@gmail.com)*



Finances always involve stress. When things are not going well, the difficult times ahead must be managed. When things are going well, the tax payments ahead must be managed. Whatever the case: You must pay attention to your finances. Planning and managing your finances pre-emptively are critical today – without analyses and planning it is virtually impossible to prevent problems.

## ANALYSE YOUR FARMING OPERATIONS

It is important for every producer to sit down and determine whether he has made a profit or not before the end of the tax year. If there is a profit, producers must allocate funds to themselves to make provision for retirement. You must also decide where to invest these surplus funds. Must they be invested in the farm or outside the farming operations?

This is where long-term objectives come in. If the producer has a goal to farm for cash as quickly as possible, the funds must be

used on the farm. If there are other goals, producers must determine where this money will earn the most interest.

Should the money perhaps be invested outside agriculture? In poor farming years this asset can be a good source of income. In good financial years it is not necessarily the best time to expand and buy new machines – everyone is buying in such times. This drives up the demand for assets and together with that the price too. It may mean that the asset is bought at too high a price – which could cost you dearly later.

It makes sense to sit back and buy when everybody else is selling. In this way you can perhaps get the best assets at a lower price.

Sometimes you have to ask the question: Is the investment in new equipment and technology worthwhile? It looks very nice if the newest tractors are running in the fields, but wouldn't a second-hand tractor work just as well? Is the fuel consumption of the new tractor really so much better than that of the old tractor?

## CAUSES OF PROBLEMS

Many producers are not in a situation in which they make a profit. This leads to tension. In this case, producers should look critically at their business and be honest about the causes of the problems.

The causes of the problems can often be managed. Some producers simply spend more than their production capacity. The production

### 1 Maximum debt burden ratio benchmarks.

| Type of farm                      | After harvest | Before harvest |
|-----------------------------------|---------------|----------------|
| Irrigation                        | 45% - 50%     | 55% - 60%      |
| Mixed farming                     | 30% - 35%     | 45%            |
| Dryland sowing (medium potential) | 25% - 30%     | 43% - 50%      |
| Dryland sowing (high potential)   | 30% - 35%     | 60%            |



MADE POSSIBLE BY  
BAYER

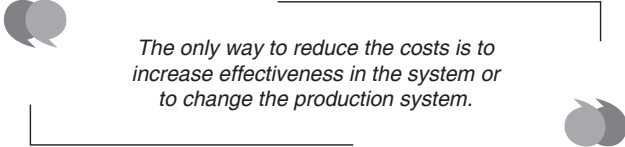


## Be prepared and manage your...

potential of the farm is 4 t/ha, for example, and fertiliser for a yield of 5 t/ha is applied. Unfortunately, this leads to problems.

Producers usually know what the cause of the problems is, namely the profitability and risk of the current crops to be cultivated. By continuing the existing practices, they will just get deeper into trouble.

This reminds one of what happened in the north-west Free State with the water table soils. The producers here ploughed these soils until they were just no longer profitable, and insolvency forced them to change. Those who applied new, adapted production practices were quickly in a position to buy the other producers' land, and in this way the production practices and economy of the entire area changed dramatically.



*The only way to reduce the costs is to increase effectiveness in the system or to change the production system.*

### ADAPT EXISTING PRACTICES

Perhaps we are once again in a period in which the existing practices have to be adapted to increase the profitability of the system. Producers must accept the reality. If the domestic supply of whatever product exceeds the domestic demand, production will have to occur at export-parity prices.

These prices usually do not allow sustainable production. So what now? Must the supply be reduced or should the cost of production be lowered? It is probably best to do both.

To reduce the cost of production, attention must be given to fertiliser, fuel and repairs. Fertiliser represents between 20% and 30% of the costs of the current common practices, and fuel and repairs represent between 20% and 27% of the costs.

Saving on these costs will definitely harm production in the current system. The only way to reduce these costs is to increase effectiveness in the system or to change the production system. This will mean that other rotation crops that increase the yields of the crops must be grown at the same cost. Perhaps introducing conservation agriculture can tip the scales again? Producers will have to find solutions for their farms themselves.

### CONVERSION

If the system change is not yet profitable, more intensive changes will definitely have to be introduced. Perhaps the area must be converted so that more livestock can be introduced? Make doubly sure that the new low-cost system will be profitable.

### ANALYSE FINANCES REGULARLY

One way of preventing this unnecessary stress is to analyse your finances regularly, upgrade your planning and thus identify the problems timeously. It does not help a lot to just know problems are coming: React to the challenges and make plans to manage them.

It is better to manage the problems yourself, rather than be manged by the problems. Make time to analyse the farm properly, or have it analysed. Take particular note of solvability, liquidity and profitability, and remember to take the future cash flow and objectives into account.

### Solvability

Solvability gives an indication of how solvent the business is. If the farm is still solvent, there is always a chance that it can continue – provided the planned, calculated solvability remains within the benchmarks. Usually we also refer to the farm's debt burden when solvability is analysed. These ratios are mainly calculated with information from the balance sheet. Make sure that the balance sheet is compiled properly and timeously.

In difficult times the balance sheet must be analysed properly. On the balance sheet, study the interest that each asset earns. If there are assets that earn less interest than the interest rate that prevails, the asset must be liquidated and debt must be paid. Sometimes it makes sense to dispose of the fixed assets like land. Just check how much interest the asset earns, and also when it must be sold.

### Liquidity

Liquidity is an indication of how easily short-term debt can be settled with short-term assets. This is usually where the challenges to the farm lie. Unplanned taxes to be paid at a time when most farms do not expect an income can place enormous additional pressure on the cash flow. Because of the cost of plant and machinery, medium-term assets are usually bought on credit, and after a poor year the instalments can be challenging. Talk to the financial institutions and arrange to have them deferred.

### Profitability

A further analysis to be made, is to examine the future profitability of the business. This refers to the profit made over the past year, how much profit can be made in a normal year, and what combination of crops has to be planted.

To do these analyses, the producer must draw up a full balance sheet, crop budgets and a future income and expenditure statement and a future balance sheet. With these calculations you definitely need timely cash flow. These statements can assist a producer or consultant in determining accurately how big the problem is and to suggest the right solutions.

### LONG-TERM PLANNING

Unfortunately, the effect of crop failures and low product prices does not pose a problem for only one year, but also for coming years. A full long-term detail plan and cash flow for the next few years must be compiled so that a complete, timely overview can be obtained.

Payment problems must be addressed immediately. Do not wait until the last moment – go and see the creditors or the accountant and start planning to address and resolve the problem. If a tax problem is envisioned, producers can also make plans to make tax purchases with increased overdraft facilities in good time.

### ANALYSE THE DEBT PROBLEM AND THE CAUSES OF THE SITUATION

Any action has a reaction. This also applies to the finances of the business. If the problems have been identified, the cause of the



problem must be found and corrected. If the profitability of the business has been under pressure for some time, the unit could have become too small to service the fixed costs, or there may be a production problem.

The physical resources can also be a problem. Perhaps the potential to cultivate the crops profitably is just not there? Analyse the profitability of the different components, including fixed costs, and compare this with that of other role-players in the industry. This analysis will also indicate what is possible for the particular farm and how much debt can be paid.

*Investigate the effect of technology in increasing profit and reducing risk. Precision farming is a well-known method of increasing profit.*

Any industry has certain benchmarks. Directly after the harvest there are already benchmarks to be complied with. One of the first indicators of problems is the debt burden ratios. **Table 1** on page 11 gives an indication of what the maximum debt burden of different types of farms should be. However, these are only benchmarks, and should always be assessed together with profitability, liquidity and the ability to repay.

If you have compiled a detailed budget every year, compare the results that were achieved with the budget and look for answers to the deviations. Determine why production does not correspond with soil potential – what is the reason for this, and how can it be rectified? An overly optimistic budget can also lead to problems.

If the reason for the crisis is more of a long-term nature, for example a long-term drought, a long period of lower prices or the wrong financial decisions made in the past, a different approach like the

selling of assets may be required. The producer will have to take a fresh look at the farm and re-plan everything.

### OPTIMISE THE FARM

Every business has areas where the effectiveness and efficiency can be increased. If you know what the farm's limitations are, they can be managed. If the finances are a limitation, the profitability of each component must be calculated.

The component with the highest profitability must be developed until other limitations stop the production or until funds dry up. If your farm is limited by the area, the component with the highest gross margin per hectare must be cultivated until all the fields have been planted or until other limitations cause production to cease.

Also remember to take the risk of each component into account.

Investigate the effect of technology to increasing profit and reducing risk. Precision farming is a well-known method of increasing profit. Try to have the fields mapped and eliminate or convert the sections with a lower potential and apply other practices.

### MARKETING

Using the futures market makes it possible to manage prices better and increase income – just be aware that it will require time. Expert staff must become part of your team to market products better.

It can also be useful to hedge risks. Input insurance and hail insurance should be considered to hedge the capital in the farm.

### TALK TO EXPERTS

It is not a disgrace to ask for help. Approach financiers, extension officers and consultants for advice and support so that you can address the problem concerned. These objective outsiders may see opportunities and threats in the business that you have missed.

These persons can also have a model that can be used to do detailed calculations – something that can be of considerable assistance. ■



*There is a powerful driving force inside every human being that, once unleashed, can make any vision, dream, or desire a reality.*

~ ANTHONY ROBBINS





# Be prepared for the red devil that consumes everything

**S**EVERE DAMAGE AND INJURIES ARE CAUSED BY FIRE EVERY YEAR. MANY OF THESE INJURIES AND DAMAGE CAN BE PREVENTED IF ACTIONS ARE CORRECT FROM THE BEGINNING.

*Johan Terblanche, fire protection officer, Goudveld Fire-Protection Association. First published in SA Graan/Grain May 2019. Send an email to [johanrusmysiel@gmail.com](mailto:johanrusmysiel@gmail.com)*



## VELD FIRE RESPONSE PLAN

Vigilance is the most important aspect to prevent damage and loss. It is critical for a fire association that members report smoke or fire immediately when they spot it.

Always be on the lookout for smoke when you leave the house, work on the farm or drive to town. If you wake up at night, look out of the window for the glow of fires. Report it immediately on the relevant WhatsApp groups and wait a few minutes for response.

If no response comes, phone the fire protection officer to make sure that he is aware of it. Also mention on the group in what direction you see the smoke. It is the fire protection officer's responsibility to phone around and find out where the fire is. The person closest to it should drive there, determine the size and how much assistance is needed.

The person at the fire should send a WhatsApp location to the other members. The other members of the fire association then receive the message and can get to the fire easily. People on their way to help can just post on the group 'I am on my way'. The firemaster then sees how much help is on the way and can plan accordingly.

As soon as the fire is under control or if too much help is on the way, the firemaster will communicate on the group that everything is under control, in order for the help furthest from the fire to turn around and go home. The quicker members react to the alarm, the smaller the fire to extinguish will be.

When you arrive at the scene of the fire, find out where the fire started and take photographs of what you think will be necessary





later in a court case. Take note of the direction of the wind and also of everyone helping with the fire. These details should be in the fire report. (The details only become relevant about two years after the fire when the claim comes in.) Ask the co-driver to take photos or videos.

## REQUIREMENTS FOR VELD FIRES

A veld fire usually starts at a very inconvenient time, like over weekends when most people are social and not vigilant. The WhatsApp group reports the veld fire, everyone jumps into their bakkies with the bakkie bags at the back and off they go.

Landowners can be the cause of great grief and damage here. The friends from town climb into the bakkie as they are – with flip-flops, shorts and T-shirts and having consumed alcohol – without putting on protective clothing and without any training in veld fire behaviour.

Alternatively, the producer fetches the farmworkers at their homes, where they are also enjoying the weekend, maybe after the over-consumption of alcohol. In the state they are in, they have to now help to extinguish a veld fire moving at metres per second across the veld. This is a sure recipe for a sad disaster.



When on route to a veld fire, the following should be in place:

- Persons going to extinguish the veld fire should be trained and should wear protective clothing.
- Protective clothing protecting the whole body is two layers of cotton or wool over one another, like a T-shirt of cotton, with a cotton overall jacket, as well as long welding gloves to protect the hands, and double-layer cotton trousers.
- Be careful for synthetic clothes – they can melt into the skin when they get close to the flames.
- Leather boots with wool socks are essential.
- Leather boots should not have a hard steel tip in the front. It can get so hot that the toes can burn.
- A wet, broad-brimmed cotton hat, with a wet head cloth over the nose and mouth, tied at the back of the head.
- Dust-proof welding goggles (clear) to protect the eyes.

These are the minimum requirements for protective clothing – there are also better and more expensive options available.

When you go to a fire, your bakkie and firefighting unit should be in 100% working condition. Keep in mind that the fuel can run out. When you get to 60 m from the fire, start up the firefighting engine and ensure that the bakkie's engine always idles when it is close to fire. A few trucks have burnt out because drivers could not start them quickly enough.

If you are a member of a fire-protection association, the sector leader of the area will take control of fighting the fire. Report to him upon arrival – he will place you where help is needed.

A fire has a dangerous and a safe side. The dangerous side is the unburnt side – downwind – or the direction in which the wind is blowing and where the flames move to. The safe side is the burnt side – upwind – in other words, the wind blows from you towards the flames.

Also remember that the fire can make its own wind due to the convection currents from the heat of the fire. This can cause the fire to turn suddenly and move the heat towards you. Move further away from the fire into the burnt area in this case.

Be careful of fire below a power cable. Firefighters should not extinguish the fire directly below a power cable, because electrical sparks can jump to the ground due to the heat and can injure workers.

It is easier to roll up the fire line from the back on the left and right flanks of a veld fire – preferably in a team of two to three bakkies behind one another. One unit for every flank should be cleaning up and preventing the fire from flaring up again.

Some of the best aids are the large mist blowers from Stihl and Husqvarna, that can blow the soot, leaves and cowpats into the black spot to prevent the fire from flaring up again at the back.

The firemaster will decide where and when backburns should be started. A backburn can only be started if there is enough assistance. Many large fires have started from backburn, so ensure that instructions are followed correctly. ■



# A closer look at the effect of foot-and-mouth on the market

**F**OOT-AND-MOUTH HAS ALWAYS BEEN ENDEMIC TO SOUTH AFRICA – THE FIRST CASE OF THE DISEASE WAS REPORTED IN 1892 IN GRIQUALAND WEST. SUBSEQUENTLY, A FOOT-AND-MOUTH OUTBREAK OCCURRED IN THE CAPE PENINSULA WHEN DAIRY CATTLE WERE IMPORTED FROM ARGENTINA.

The World Organisation for Animal Health (OIE) granted a request from South Africa in 1996 to be classified as a foot-and-mouth-free zone without vaccination. The area excluded from this exemption was the endemically infected Kruger National Park, the control area bordering it, as well as areas bordering eSwatini, Mozambique, Zimbabwe and Botswana.

Another outbreak of the disease occurred subsequently in the Nkomazi area close to Komatipoort in Mpumalanga in September 2009.

In February 2011, an outbreak was confirmed north of the Hluhluwe-Imfolozi Nature Reserve in KwaZulu-Natal, after which the country lost its foot-and-mouth-free zone status. South Africa retrieved this status in May 2012.

The most current outbreak of the disease was in January last year in the Vhembe district in Limpopo, after which the OIE rescinded South Africa's foot-and-mouth-free zone status. Most of the country's trading partners suspended exports of cloven-hoofed animals and products from South Africa.

## EFFECT ON RED MEAT PRODUCTS

Approximately 29 189 tons of beef, or approximately 4,02% of local production, was previously exported to 42 countries annually. China, Hong Kong and Kuwait were the main markets. A total of 701 tons of mutton or 0,69% of local production was exported mainly to eSwatini, Lesotho, Botswana and Norway annually. This meat has now been absorbed into the local market.

## EFFECT ON HIDES AND SKINS

No raw, salted hides and skins can currently be exported to China. This is especially problematic for merino producers, since 90% of these skins are usually exported to China.

China requires a veterinary health certificate certifying that the skins originate from a foot-and-mouth-free zone, which is impossible because of South Africa's current status.

The Department of Agriculture, Forestry and Fisheries requested China to accept a certificate that confirms that South Africa follows the OIE's recommendations. These require the skins to be salted for 28 days. China has not yet responded to this. The same situation applies to blue and split skins.

For the same reasons, South Africa also cannot export blue and split skins to Thailand or Uruguay at the moment.

## EFFECT ON THE WOOL INDUSTRY

The total value of the annual South African clip is almost R5 billion and approximately 70% of that is exported to China. The outbreak therefore has a drastic impact on the local wool industry, since it led to the China export market being currently unavailable.

Gerhard Schutte, chief executive officer, Red Meat Producers Organisation. First published in SA Graan/Grain May 2019. Send an email to [gerhard@rpo.co.za](mailto:gerhard@rpo.co.za)



Grain SA/Sasol photo competition – Amanda van Blerk, 2012



South Africa's wool-producing areas are, however, very far removed from the area where the outbreak occurred and there is no risk of spreading the disease via wool. The wool industry also has an excellent tracking system in place that makes it possible to certify wool as coming from an area where no outbreak has occurred. The tracking system is operated by Cape Wools SA according to a statutory guideline in place at the Agricultural Marketing Council.

Wool export certificates to Malaysia and Egypt were revised in order for exports to these countries to be resumed. The approval of the modified certificates is still awaited from the export countries. Wool exports to Europe have not been touched by the outbreak yet.



## CONTROLS

After the outbreak in January 2019, the Department of Agriculture, Forestry and Fisheries in collaboration with the meat industries under the banner of the national and provincial animal health forums started a coordinated campaign to stop the disease. This includes the establishment of three working groups: The communication working group, the trade working group and a technical task team.



According to the last joint report from the department and the industries, the department was preparing an application for a declaration of a disease-limited area, which would be submitted to the technical committee of the OIE before the end of April.

If this application is successful, the rest of the country's status as a foot-and-mouth-free zone can be reinstated. It will also make a big difference in South Africa's attempts to resume dealings with former trading partners.

In the meantime, the department successfully negotiated for the revision of veterinary health certificates for exporting beef to Bahrain,

Egypt, Jordan, Kuwait, Lesotho, Mozambique, Qatar, eSwatini and the United Arab Emirates.

Trade in pork originating from foot-and-mouth-free compartments was (partially) resumed with Seychelles, Mozambique, eSwatini, Lesotho and Namibia.

## NAMIBIA, BOTSWANA AND CHINA

Negotiations with Namibia about the export of beef and with Botswana about the export of pork have not been concluded yet. The markets for dairy products have largely recovered. Some markets for hides, skins and wool are still affected and concerted negotiations are taking place, specifically for products processed in such a way that the foot-and-mouth virus is completely destroyed.



*The restriction on the movement of animals is still applicable and no animals are allowed to be moved from the disease control area without veterinary consent.*



The Director General of the Department of Agriculture, Forestry and Fisheries and the Chief Director: Animal Production and Health were received well during a visit to China. Presentations were made about the foot-and-mouth outbreak and the actions to be undertaken to retrieve South Africa's free zone status. China indicated that they would evaluate the information and will do a risk analysis about trade in safe products.

No cases of foot-and-mouth were reported during the past seven weeks. Samples were collected from all the dip tanks and crush pens in the disease control area and are being tested at Onderstepoort. More than 13 000 animals in the former foot-and-mouth-free zone were vaccinated for a second time at the end of March 2019.

The restriction on the movement of animals is still applicable and no animals are allowed to be moved from the disease control area without veterinary consent. Road blocks are still in place and will probably be replaced by mobile patrols soon.

In the report, the department highlighted that the disease control strategies have positive results.

However, it is clear that the red meat industry cannot depend on the government alone to control animal diseases and that the way followed currently by the public-private partnership with the foot-and-mouth outbreak is the correct one. It will be possible to manage the buffer zones better in this way.

An animal identification and tracking system is also essential if our country wants to protect its flocks against diseases. ■



# PLANNING FOR NEXT SEASON

## – plant diseases and white hybrids

**T**HE IMPROVEMENT OF FARM PRODUCTIVITY IS AN IMPORTANT ASPECT ALL FARMERS NEED TO STRIVE FOR. AT BAYER, OUR PRODUCTS AND SERVICES ARE AIMED AT SUPPORTING FARMERS THROUGH OUR RESEARCH PROGRAMMES, STATE-OF-THE FACILITIES, OUR INNOVATIVE AND SUSTAINABLE PRACTICES, AND OUR GOOD QUALITY PRODUCTS.

As a company we try to add value through constantly bringing new hybrids to the market and at the same time improving the health of plants.

Although we are still amid the current planting season, planning should already start for the coming planting season. It is now time to critically assess hybrid choices and other on-farm practices.

In evaluating the current season, farmers should already think of diseases that they might encounter in the coming season. Diseases that appear in one season are likely to carry over to the next. Knowledge of the exact disease occurring, its prevalence and severity is pivotal for making sound management decisions for the next season's crop.

The evaluation of the current hybrids on the fields should also be done now and through harvesting to facilitate timeous ordering of seed for the new planting season.

The DEKALB seed product range offers excellent agronomic traits to farmers, but also supports our plant protection solutions which ultimately add to improved yield potential. Farmers can select from the DEKALB product range and compile a complete package to address their needs to minimise risk.

### OUR WORLD CLASS FACILITY

To reinforce our commitment to bring better products to farmers and in support of our product research in the field, Bayer utilises a state-of-the-art Plant Health Pathology laboratory at its maize breeding and research facility at Petit. This world class new facility enables us to further improve our DEKALB product portfolio and deliver more value to our farmer customers.

At this facility Bayer is providing plant disease diagnosis, consultancy and testing services not only to our research team, but also to our agronomists, seed production and commercial teams. This laboratory, supported by field testing, is enabling the team to analyse and interpret a vast range of diseases to enable us to provide our clients with relevant and practical solutions for maize plant health issues. The pathology team focuses on the



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monitoring and assessment of major diseases on the continent, developing pertinent reaction plans, and pro-active breeding initiatives.

The services at the laboratory include:

- The identification and diagnosis of plant diseases on maize.
- Disease control advice.
- Disease assessment for fungicide trials evaluating chemical and biocontrol products.
- Seed testing for plant pathogens.
- Site visits and consultancy.
- Planning and conducting maize crop disease surveys.
- Research projects on maize plant diseases.
- Advice to the seed and production research as well as our seed production teams.
- Advice to the sales and marketing teams regarding product placement.

As a leading global provider of technology-based solutions and agricultural products that aim to improve farm productivity and food quality, Bayer wants to enable both smallholder and large-scale farmers to produce more food sustainably. To this end we have a large variety of hybrids that can be combined in a suitable package for each individual farmer's needs.

### HYBRIDS

Regarding our dry land hybrids, we are very proud to have DKC72-76BR, DKC72-72B, DKC72-74R, DKC72-70, DKC76-77BR, DKC76-73R and DKC76-71 in our wide product range.

DKC72-76BR is known for its prolificacy and this trait contributes hugely to the excellent yield potential of the hybrid in both the eastern and western maize production areas. It has a very quick dry down period and good standability. DKC72-72B is a very similar hybrid and contains the YieldGard® Maize 2 trait technology for control of corn borers and fall armyworm. DKC72-74R contains the Roundup Ready® Maize 2 trait technology to assist with broad control of weeds. DKC72-74R can also be used to plant the refuge area for DKC72-76BR.

DKC76-73R is also a prolific hybrid that contains the Roundup Ready technology and is also suitable for planting in both the eastern and western maize production areas. The hybrid has a very good standability and the ears are well protected by the husks. DKC76-73R shows good tolerance against all maize diseases and can be used in the planting of refuge areas.

We also have a new product, DKC76-75B, available that contains YieldGard® Maize 2-technology for the control of stalk bores and fall armyworm. This is a prolific hybrid and suitable for planting in both the eastern and western production areas. It has good standability as well as good tolerance to most maize disease.

DKC76-77BR is a stack hybrid and will give good yields in both the eastern and western maize production areas. It shows good tolerance against most of the maize diseases. ■

# THE CORNER POST

## AGNES MNDawe

*Passion makes dreams come true*

**'A**S YOU GROW OLDER, YOU WILL DISCOVER THAT YOU HAVE TWO HANDS – ONE FOR HELPING YOURSELF, THE OTHER FOR HELPING OTHERS.' THESE WORDS BY AUDREY HEPBURN, THE BRITISH BORN ACTRESS WHO WAS SEEN AS A FILM AND FASHION ICON, DESCRIBE WHY AGNES MNDawe (57), BECAME A MENTOR IN GRAIN SA'S FARMER DEVELOPMENT PROGRAMME IN MPUMALANGA.

### SHARING KNOWLEDGE AND PASSION

Agnes obtained a diploma in agriculture from Fort Cox College of Agriculture and Forestry, at Middelrdrift, about 90 km north-west of East London in the Eastern Cape. She focused on crop production and furthered her studies by attaining a B.Tech. degree in agriculture, Agriculture Operations and Related Sciences through Tshwane University of Technology in Pretoria.

Before retiring she worked as an agricultural advisor in the Department of Agriculture for 30 years. When she retired from this position, she felt that her knowledge was far too valuable to keep to herself and offered her services to Grain SA's Farmer Development Programme. Jerry Mthombothi, Grain SA provincial co-ordinator in Mpumalanga, was thrilled to welcome her on board.

This passionate agriculturalist lives in the White River area where she grows maize, groundnuts, jojoba beans and vegetables on her 5 ha plot. She is blessed as her land is situated just above a little stream of water which she uses to irrigate the fields.

'I am passionate about agriculture,' says Agnes who studied agriculture not just to get a job, but to inspire others to evoke the same passion. 'Agriculture is not only my job, it is my life.'

### HELPING OTHERS TO DEVELOP

To Agnes a mentor is someone who helps others to grow. Although she gained the theoretical knowledge through her studies, Jerry had to show her the ropes at the beginning of her involvement as a mentor so that she could grow to help others.

No matter how much or how little the mentees knew about agriculture, it was important for Agnes to convey best practices in production. 'If you follow good practice you will have a better crop no matter what the conditions are. The right steps lead to success.' She says that although most of the mentees are keen farmers, they were lacking in knowledge concerning correct agricultural practices. Her mentorship would help make a difference if they followed the advice given through the intensive study group material.

One of the biggest problems in this area was the essential inputs needed for successful crop production. 'They needed to plant the right seeds that are resistant to drought and diseases otherwise their yields would not improve.' To ensure healthy crops, fertiliser and herbicides are very important. 'These are all costly, but Grain SA made sure the programme would

succeed by arranging discount with the input suppliers. The farmers have now witnessed that buying better inputs mean reaping the reward.'

'One other area that needed attention was soil health as healthy soil will grow healthy plants.' Farmers were advised to take soil samples, and have it analysed to find out what the pH and condition of the soil was. Once again, the results convinced them that this practise was the way to go.

Although she enjoys the study group sessions, she loves the practical side of the mentorship. 'It is exciting to be with the farmers in the field where the growing takes place – in the fields and in the farmers.'

### COMMITMENT MAKES THE DIFFERENCE

There is a proverb from Malawi which states that those who accomplish great things, pay attention to the little ones. Agnes has seen this in the 112 farmers in the Badplaas area who were under her guidance although she has only been a mentor in Mpumalanga for one season. The group was divided into seven study groups and ranged from 13 to 32 members. These smaller groups made it much easier for Agnes to give advice during the weekly field visitation.

In her first season as mentor, most of the farmers who paid close attention to this knowledgeable mentor increased their yield. 'Some farmers improved from 2 t/ha or 3 t/ha to between 5 t/ha and 7 t/ha – all because they took on board the advice which was shared at the study group meetings.'

She would however like to realise the importance of identifying and tackling problems as soon as they arise. 'The mentees usually wait until the problem is on their doorstep before implementing the guidelines shared at the study group meetings. If they implement best practices from the onset, it would make things much easier.'

Farmers in the area are now being trained in the agro-processing of maize as well. 'We started training women and the youth in the process of nixtamalisation. 'Dry maize is cooked using slaked lime to remove the husk and reveal the nixtamal. It is then grinded, and a variety of dishes or recipes are cooked and bake – from bread to cake.' This way they learn the process of turning dry maize into products which can also be sold for an extra income.

Agnes is very proud to have entered two mentees in the 2019 Subsistence Farmer of the Year competition in the very first year of her involvement in the programme – Amos Kubeka from Oshoek, who was also a finalist, and Emma Mkhonto from Kromdraai. 'It is wonderful to know that my involvement is making a difference,' says this dedicated mentor who hopes to be part of this remarkable programme for years to come. ■

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