GRAIN SA
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READ INSIDE:

4

8

Farmers honoured at Day of Celebration

At a function held on 23 August at Monte Bella Estate, an idyllic country setting near Bloemfontein, Grain SA celebrated their harvest of emerging farmers who form part of the Grain SA Farmer Development Programme.

Grain SA decided that it was important to have a day of celebration where recognition is given to emerging farmers for their contribution to the country's food security. With this event Grain SA can see the fruit of the hard work that has gone into this programme.

"You are the pride of our harvest. You are the trailblazers in who we can see how to develop farmers in this country," Jannie de Villiers (CEO: Grain SA) said in his message to the developing farmers who attended the day of celebration.

De Villiers addressed the attendees and discussed the importance of Grain SA as a commodity organisation and the role of Grain SA in society. This organisation is there to assist farmers to produce enough food. He quoted prof Mohammad Karaan (dean of the Faculty of AgriSciences at the University of Stellenbosch) who stressed the importance of producing sufficient food as a stabilising factor within

Mme Jane says...

The first spring rains have fallen over large parts of South Africa, which means that farmers will have renewed hope for the next crop. It is time to put the plans you have been making into practice.

Remember that if you are going to get a good crop, you have to do the right things, among which is to get the basics right. That begs the question – what are the basics and what does it mean to do the right thing?

- Soil preparation – ensure that your lands are worked to a depth of more than 40 cm and that there is no plough pan which could prevent root development.
- Fertilise according to your soil sample analyses.
- Make sure that you have selected the correct cultivars and that you plant the optimal plant population – not too many plants and not too few either.
- Control your weeds – weeds are your enemy every step of the way, seeing as they compete with your crop for moisture, nutrients and sunlight.

Be in your fields on a daily basis – your attention to the crop is one of the most important factors. You need to know what is happening to your crop so that you do everything that you can to ensure success. Only God has the ability to control rain and sunshine – you must take care of everything else.

May your crops be blessed as you assist South Africa to be food secure, to create jobs, to generate an income and to increase our national food basket.

Farmers honoured at Day of Celebration

The Subsistence Farmer of the Year: Joconia Mthethwa.

The function was held at Monte Bella Estate in Bloemfontein.

The nominees in the Subsistence Farmer of the Year category, from the left: Albert Mazibuko (nominee), Joconia Mthethwa (winner), Wilson Tyelaphantsi (nominee), Benedict Gxiva (finalist) and Emmanuel Hadebe (finalist). The sixth nominee, Tiki Pitso, could unfortunately not attend the function.

The idyllic country setting at Monte Bella Estate.

a country. High food prices are unfortunately the trigger for political instability. Farmers thus have a huge responsibility to persevere even in difficult times to ensure that enough food is produced for the country.

This organisation also has to act as the voice of the farmer and therefore plays a leadership role. “I believe that the one with the bigger vision gets the bigger responsibility,” De Villiers stated, pointing out that Grain SA is ready for this responsibility. “We can see a vision of a better South Africa if we can keep this project running,” he concluded.

The CEO of AgriSeta, Jerry Madiba, addressed the role of training in farmer development and said that when organisations cooperate, successful training takes place. He accentuated the fact that training changes attitudes and inspires people to reach higher goals. He thanked Grain SA for providing “on-the-job” training and developing the skills of emerging farmers.

The role of the farmer in transformation was tackled by Karabo Peele (Chairman: Maize Trust). He finds it exciting to see that Grain SA has shown other organisations what transformation is all about. He encouraged farmers to adapt to the daily changes in agriculture and to not only listen to advice, but to apply what they have learned. “I support this organisation, as Grain SA has taught us to become farmers,” Peele added.

Louw Steytler (Chairman: Grain SA) discussed unity in agriculture and emphasised

The nominees in the Small Holder Farmer of the Year category, from the left: Vincent Mdluli (nominee), Bongani Sibanyoni (finalist), Elliot Tshabu (finalist) and Pieter Chabalala (winner).

The Small Holder Farmer of the Year: Pieter Chabalala.

The new members of the 250 Ton Club (bronze), from left: Jack Kokoma, Thulane Mbhele and Pieter Chabalala. Buti Coka, Rykie Raphoto and Thembani Moyo were not at the function to receive their awards.

Israel Motlhabane became the first member of the 250 Ton Club's platinum level, producing over 1 500 ton. With him is Johan Kriel.

The sponsors of the Day of Celebration programme, from left: Etienne Claassen (FNB), Harry Matebese (Pannar) and Hanlie Kroese (Santam Agri).

Louw Steytler (Chairman: Grain SA) and Jannie de Villiers (CEO: Grain SA) are proud to be part of an organisation that supports emerging farmers.

that cooperation is the key to success in the agricultural industry. "Unity can ensure food security in our country," he stated and added that Grain SA is willing to play a leading role in the advancement of agriculture in South Africa.

To the programme manager of the Grain SA Producer Development Programme, Jane McPherson, this event is a highlight on Grain SA's calendar. She mentioned that Grain SA is passionate about developing farmers. She feels that it is very important to give recognition to those farmers who do not have large pieces of land to cultivate. "You can produce food on small pieces of land if you do it correctly," she said. As smaller farmers cannot compete with the bigger commercial farmers in the Farmer of the Year competition, it was important to create other categories where these farmers could receive recognition for their hard work. Jane congratulated all nominees on their achievements.

The following category winners for the Farmer of the Year competition were announced:

- Small Holder Farmer of the Year (from 10 hectares to producing 250 ton): Pieter Chabalala; and
- Subsistence Farmer of the Year (farmers who produce less than 10 hectares): Joconia Mthethwa.

Up until this year the 250 Ton Club had three levels – bronze, silver and gold – but this year a fourth level, platinum, had to be added when Israel Motlhabane (who is also a member of the executive committee) managed to produce 1 500 ton during the season. One new member was added to the gold level for farmers producing over 1 000 ton, while the silver level (for producing over 500 ton) added three new members. The 250 Ton Club's bronze division awarded certificates and badges to six new members. This club celebrates the progress and hard work of these farmers and accentuates the importance of the Farmer Development Programme.

LOUISE KUNZ, PULA/IMVULA CONTRIBUTOR

The value of soil profiles

This Eastern Free State land is being prepared for the coming summer crop planting season.

Farmers are preparing lands for the coming summer crop planting season. The land shown is situated in the Eastern Free State. Soybeans were planted the previous season in which below normal and variable rainfall was experienced. The soy residue was lightly grazed during the early winter months and then the land was worked with only one pass with stubble mulch implements to a depth of 250 mm.

The type of implement used and the planned working depth of the tines, whether flexible or fixed, could be determined largely by tradition, normal farming practices on your own or your neighbour's farms, a move to conservation tillage, weed control or a perceived need to break any plough or disc pan present. Every farmer is usually convinced his method is right.

We can easily see and assess conditions at the soil-to-air interface, but what is happening below and throughout the soil profile?

A soil profile hole of 1 square metre that is well into the effective root depth, up to a maximum of 1,2 metres to 1,5 metres for high potential soils with no restrictive layer, can be used in a variety of ways to assist in the planning for the coming planting season. If you have never done soil profiles in any of your lands, it is advisable to start doing it this year.

Use in overall planning

The results of a farm survey can give an indication of the high, medium and low potential lands for grain production, which are largely a function of soil depth, texture and fertility coupled to the average and timing of the rainfall in your farming area. A similar soil in a higher rainfall area will have a higher grain or pasture production potential than in a lower rainfall area.

This information can be very useful and in a long term planning process can be the cornerstone for the analysis of the best use of the soil resources on your farm. The high inputs required for the production of maize, sunflower, soybeans, wheat and other crops can usually only show a return on the high potential soils and for certain crops, such as sunflower, on the medium potential soils. The lower potential soils should be put under perennial pastures and incorporated into the long term fodder flow programme for the livestock enterprise.

Using specific profiles in each land

It is useful to do a proper soil profile sample before the first cultivation and then once again after the cultivation. Usually only a few properly done profile holes performed in lands that are representative of the soils found on a particular farm, will be enough to reveal the necessary information. After this is done, a soil auger or a simple soil penetrometer steel rod of about 6 mm in diameter can be used to assess the lands for compaction at any point without much effort.

Carrying out the survey at this time of the year can be done in conjunction with an annual or bi-annual soil sampling analysis for the purpose of determining fertiliser requirements. It will also highlight the importance of correctly fertilising the high potential soils and not over-fertilising for a perceived crop potential that will not be realised on the medium to lower potential soils.

Soil samples can be taken in the top 150 mm to 165 mm and in the next layer of this depth below the top sample layer. Much interesting information can be gained by comparing the fertility test results for various elements and phosphate levels in particular.

Observation of the soil surface before the pre-cultivation profile will show you the amount of residue left, soil texture, organic matter, surface moisture and the extent of any weed development over the winter. Just by walking on the surface, an indication of compaction will already be felt. Soil that is in an ideal condition, as usually found after a stubble mulch tyne operation, should be springy and loose.

Once the pre-cultivation hole has been completed, you can climb into the hole and assess the top 30 cm to 40 cm where any compaction layer is usually found. A knife blade is then used to slice gently through the ex-

posed soil in the profile hole. A compaction layer will quickly be felt. The compaction layer in lands that have been disced only for several years will show immediately. A digital photo of each exercise can be taken for your records. It is best done when the soil is at field capacity, meaning the soil pores are made up of 50% air and 50% moisture. The texture and moisture content of the soil in the profile can be noted and an estimation of the total water stored, taking into consideration, the entire profile available to a plant in a season's growth, can be made.

In a very dry profile, the compaction layer might be over-emphasised, so care must be taken in an accurate assessment.

For instance, in the soil profile shown above, the top soil being a sandy clay loam can store about 25 mm of water for 150 mm of soil depth. The soft plinthic layer will store 35 mm or more of moisture per each 150 mm of soil depth. The deeper Westleigh soil could have about nearly 150 mm of moisture stored, depending on the rainfall experienced in the late summer and winter and the cultivation practices followed. In areas where the annual rainfall is in the region of about 600 mm, this stored moisture represents a quarter of the annual rainfall.

In this particular soil profiles, the soft plinthic layer is found at about 50 cm, but is not root restricting. Thus together with the sandy clay loam topsoil, the soil can be regarded as medium potential soil for cropping. In rainfall areas of over 650 mm, high yields of summer crops can be achieved with good overall crop husbandry.

Any crops planted into a correctly fallowed land will be able to draw on these reserves should there be a below average rainfall in the season to come. While doing pre-season planning to plant, this ideal moisture "fallow" profile can be regarded as money in the bank.

A comprehensive soil profile of the land.

When any compaction zone has been identified, the setting of the correct depth of cultivation or "working" depth of the implement tines can be correctly set and then the actual working depth be monitored with the soil penetrometer thereafter.

The objectives of keeping some plant residue, 15% cover being the minimum definition for conservation tillage, on the surface and the important aeration of the top 250 mm can also be realised. It is also important to ensure that the operation is completed in time so that any moisture from late winter and early summer rains can easily permeate into the soil profile and be stored for the forthcoming summer production season.

Several soil profiles after the cultivation in the lands can be used to indicate, most importantly, if the compaction layer has been broken or shattered. The hole can also be used by the farmer to satisfy himself that the job has been well done and to show tractor and equipment operators what needs to be achieved and the effectiveness of the current cultivation operation.

Planting of the coming summer crop can now be carried out knowing that the plants will have no compacted soil layers in the main root growth zone and can realise the maximum potential crop returns in the coming season.

ARTICLE SUBMITTED BY A RETIRED FARMER

Avoid the "breakdown blues"

RESEARCH HAS SHOWN THAT PAYING CAREFUL ATTENTION TO VEHICLES, IMPLEMENTS AND MOTORS AS WELL AS THE IMPLEMENTATION OF AN EFFECTIVE MAINTENANCE PLAN MIGHT OFFER FARMERS A LARGE, YET OFTEN UNSEEN, SAVINGS POTENTIAL. THIS SHOULD IDEALLY BE DONE EITHER POST-HARVEST OR PRE-PLANTING.

October is an ideal month for farmers to focus on their machines in order to avoid the "breakdown blues" once the new season's cycle begins with its usual hurry and stresses. By using the time between harvest and planting to check, service and repair your farm vehicles and implements, you can avoid valuable downtime during planting.

Tractors

Your tractor works hardest of all and should be serviced regularly. Find below some things you should pay attention to:

Ignition

- Check the ignition switches, alternator and starter motor.
- Check all the wiring for signs of wear and deterioration. Replace any wires showing signs of cracking or splitting.

Fuel system

- Service the fuel filters which prevent contamination of the fuel supply.
- Do the injectors need servicing? This is normally a job for a skilled serviceman, so see whether or not they should be taken in to a service centre.
- Remember that clean fuel is important for the proper operation of the injectors.
- Clean the fuel tank, especially if diesel has been dispensed from cans which may have been dirty.

Air cleaners

- The air supply should be kept as clean as possible, seeing as this prevents unnecessary wear and tear on the vital working parts of the engine.
- If your air cleaner has a pre-cleaner screen over the intake, clean the screen well.
- Replace or clean the air filters.
- Check hoses for cracks.

Crankcase

- Drain the old oil and replace with fresh oil. It is advisable that before you drain the oil to make sure the engine is up to normal operating temperature so that any contaminants will be suspended in the oil and will drain from the engine.
- Replace the oil filter before adding the new oil.

Transmission

- Check the level of the lubricant. Add if necessary in order to fill it up to the proper level.

Hydraulic system

- This should be drained and refilled at least once or twice a year in order to ensure the dirt particles in the water and fluid which is formed by condensation, are removed.
- Refill with the recommended fluid before starting the engine in order to avoid serious damage to the hydraulic pump.

Cooling system

- To adequately carry away waste heat developed by the engine, air must pass freely through the radiator core.
- Remove the grille, dirt and trash from the back side.
- Use an air gun, water hose or even a tire pump.
- Wear safety glasses or shield when you do this.
- Check for signs of leaks at the radiator top tank, bottom tank or in the core when the engine is warm.
- Look for signs of leaks around the seals of the water pump shaft.
- It is a good idea to drain and flush the cooling system, even if no repair service is needed. Then refill the system with the recommended fluid.
- Check fan belt condition and tension. A loose belt will slip and prevent the cooling system from doing its job properly.

Electrical systems

- Check the liquid levels in the battery. If this is low, you need to add clean water.
- Clean up the terminals in order to ensure that they are free of corrosion. This can be done with a solution of bicarbonate of soda, but ensure this solution doesn't get into the battery.
- Keep the battery fully charged. Make sure the terminal clamps are tight and also coat them lightly with grease.
- Check to see that the hold-down clamps are in place, seeing as rough terrain can shake the battery and break its case.
- Check the general condition of the wiring and look out for corroded connections between wires and terminals of electrical parts. These terminals can sometimes be disconnected and cleaned to ensure they perform properly. If you do decide to disconnect any terminals, disconnect the negative to avoid the possibility of shorting wires or the terminals during the cleaning.
- Check the wiring and mounting of lights.
- Examine all belts for wear and tear, and check the tensions.

Clutch and brakes

- If necessary, tighten the brakes and make some adjustments so that both pedals take up evenly.

- The foot clutch should not have too much free play. The hand clutch action should not be too loose.

Steering gear

- Check the level of the lubricant in the case and bring this up to the recommended level. It's not usually necessary to drain the remaining lubricant.
- Check the condition of the front wheel bearings and replace if these are worn. If they are still fine, just oil them.
- Check the stub axels for wear.
- Examine the steering box for excess play – service or replace if so.

Tyres and ballast

Tyres should be inflated to the proper pressure. Tyres which are over-inflated decrease traction, thereby creating ruts in the soft soil which can cause the sidewall tread of the tyre to deteriorate. Be careful not to overload your tyres, seeing as this definitely causes premature wear, leading to increased compaction and subsequently increasing the fuel consumption as a result of increased resistance. Studies have shown that tyres inflated to the desired pressure, require up to 20% less fuel than those either under- or over-inflated.

- Look for signs of breaks or cuts in your tyre casings. Repair them now rather than be caught out while you have critical farming operations happening.
- Check the wheel rims for damage caused by driving through potholes or over sharp objects. Bent rims can be fixed with a sledge hammer.
- Check the inflation pressure of the tyres.
- Check the ballast in the tyres, especially before ploughing or other operations using a heavy draw bar. This will prevent the wheels from slipping and from using more fuel than is necessary.

Implements

- Check through all your implements for broken or missing parts.
- Look out for parts that have worked hard and are worn down, seeing as these may need to be replaced. These include items such as plough shears, disc harrow discs, bushes and bearings etcetera.
- Check all rubber hoses and plastic parts like fans for cracks.
- Use a lubricant on all the key working parts like bearings and shafts.
- Check the tyres of the implements and repair or pump where necessary.
- Go over your machinery with a careful eye; tighten all bolts, nuts and cap screws that may have loosened over time. This simple precaution could save money by avoiding serious and costly damage.
- This is also the time to think about the safety equipment needed during the operation of the machinery as well as to purchase stock such as gloves, masks and goggles that will help you avoid accidents and keep your workers protected at all times.

Basic safety tips

It is always important to be a responsible farmer, employer and employee, so keep these key safety tips in mind:

- Service your farm equipment in a suitable site which preferably has a concreted or very clean floor and a tarpaulin laid on the ground. Keep your tools near at hand and in neat order. Be very careful to note where you remove each item from and lay it methodically down on your work bench or even on the tarpaulin.

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Our aim is to produce the best publication possible. Please direct any comments on the editorial content or presentation thereof, to Jane McPherson.

Avoid the "breakdown blues"

- Always stop your engines before refuelling, servicing or greasing.
- Never work under unstable machines – be very certain they are well secured.
- Never remove or replace belts while the pulleys are powered.
- Keep work surfaces as well as steps and working platforms free of grease and oil to avoid slipping and falling.
- Be aware that hydraulic lines can be under high pressure. Take care of your eyes.
- Don't check for leaks with bare hands.
- Use eye protection and other necessary personal protective equipment.

These may seem like silly pointers, but statistics show that most on-farm accidents occur while handling heavy machinery and equipment.

Farm equipment is dangerous – prevent and protect

In order to avoid hazards which may be a threat and endanger those either working with the equipment or in the vicinity, you should:

- Be sure the operators have the appropriate skills and necessary protection to use the machinery. Make sure they are aware, informed and safe.
- Teach drivers how to perform a "safe stop". The handbrake should be on, controls in neutral and the engine should be stopped.
- Make sure that all the relevant guards are in place and cover dangerous working parts which could catch a hand or even an item of clothing and pull it into the working parts.
- Teach operators about the hazards of moving parts and make them aware of the dangers of getting entangled in pulleys or augers. They should never wear loose clothing which could be caught up.
- Teach operators and drivers the importance of unblocking areas where weeds, grass or hay have gathered and make them aware of the risks of fire. Provide a suitable fire extinguisher.
- Extra precautions must be taken when drivers want to engage reverse and a thorough check should be carried out. It is necessary to train workers and drivers to have a suitable system of communication regarding the actions about to be taken. Too many cases are reported where workers have become trapped between the tractor and the machine when hitching or unhitching.
- Farm workers and machinery operators should be warned to take care and to be alert. They are often required to climb ladders, work from high platforms and risk slipping and falling from high positions if they are too hurried, wear inappropriate footwear or even if they are unwell.

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