GRAIN SA
GRAAN SA

February
2013

PULA IMVULA

Grain SA magazine for developing farmers

READ INSIDE:

Control weeds to conserve soil moisture

Glyphosate applied on soybeans after emergence.

South Africa is a relatively arid country, with variable rainfall patterns experienced in the main highveld summer and winter crop production areas each year. The rainfall in these areas varies from between 400 mm and 900 mm per year. The summer crop production area that lies east of the 400 mm rainfall line, is regarded as a practical limit for dryland crop production.

Winter wheat production in this traditional summer crop production area became highly financially viable during the late 1950's through to the 1980's. Due to the lower margins and thus higher financial risk associated with the production of wheat in the summer rainfall areas after the 1980's, farmers moved towards producing more summer crops such as maize, sorghum, sunflowers and later soybeans in a planned rotation system.

Winter wheat production was thus reduced and many farmers moved towards a balanced system of producing both winter and summer crops and putting the lower potential soils back to pastures, while bringing in a livestock component into their basket of products produced.

One of the main production factors that contributed to winter wheat production, was the then new "miracle of moisture conservation during the summer fallow" production practice that promoted the storing of as much moisture from the summer rainfall received in the soil as possible.

This was achieved at first by mechanical weed control that also promoted the absorption of rain from the soil surface into the soil profile.

The conservation of the moisture received can be regarded as one of the most important critical resources required to produce the next crop and starts immediately when a winter or summer crop is harvested. In the case of winter wheat production, a crop was produced with virtually no rainfall in the winter months.

Summer crop production

The same principles used for the conservation of moisture for the winter crop by conserving moisture, can be equally important and used to conserve moisture after harvesting of the summer crops from March to July in this period and through to October every year, in the case of a summer crop to summer crop production fallow period.

By using tynes or rippers in a conservation tillage system to break up any pan in the soil profile and working of the soil at the end of July or the first few weeks of August, the existing moisture

7

8

Nkgono Jane says...

When you read this, you will have finished planting, spraying and cultivating all your lands, and you will be looking forward to reaping the rewards of your hard labour over the summer season! There will be some areas where the crops are excellent, while of course other areas will have received too much or too little rain – that is farming!

At all times of the year, we must remember that as farmers, we are actually in business and we must manage every aspect of the farming business. It is important to manage your finances, labour, machinery, marketing, livestock and all the natural resources available to you. Nothing can be left to chance in your business and you must make plans, execute these plans, evaluate the impact thereof and plan again – it is a never-ending cycle.

We are looking at the winter approaching and we must think very carefully about our livestock and the provision we have made with regards to feed for the coming winter. Remember that in the areas where the summer rains were late, there will not be much veld grass for the winter. Animals are in our care and we must make provision for them. If you have not made adequate provision, it is far better to sell a few than have them die of hunger or thirst.

We hope and believe that the crop prices will hold and that you will be adequately rewarded for the wonderful contribution that you as farmers make towards national food security, poverty alleviation and job creation. May you all be blessed in your efforts to feed and clothe our nation.

Control weeds to conserve soil moisture

and any rainfall received will be stored in the soil profile.

This important tillage operation can in many cases ensure that the first planting of the planned summer crop programme will be able to be implemented on time, subsequently obviating the necessity of waiting for the early summer rainfall during November or in some years much later.

The need to have to delay the start of planting and reduce the risk of not being able to plant the planned summer crops at the optimum planting time, can thus be avoided by using an effective early tillage and weed control system.

Soil characteristics that affect soil moisture storage

It is useful to review soil characteristics that affect the holding ability of the soil to store moisture. When considering the control of weeds as a critical management factor, it is important to be aware of what sort of soils and in particular the kind of topsoil you have in the cropping lands on your farm.

Soils are made up of various combinations of the above components and are classified according to the amount of sand, silt or clay.

The amount of water content throughout a soil profile is thus also determined by the portions of sand, silt or clay present in the various layers that the roots of crop or weed plants can penetrate in a season.

When the water content of a soil has stabilised after rainfall, the water that can be absorbed by a plant is known as the plant available water. As a general rule, this plant available water is considered to be half of the total water holding capacity of a particular soil.

The plant available water that can be stored in a sandy soil is about 40 mm per metre, a loam is about 80 mm per metre and for a silty clay loam soil, is 150 mm per metre of soil profile.

A typical soil profile of 1 m, taken as the average depth that crop roots would grow in a season and taking the various make up of layers of soil being considered, could store up to 135 mm or more of plant available water.

When compared to an annual rainfall of 650 mm, the stored water will make up 20% to 25% of this and can mean the difference between successfully growing a crop or total failure in a dry year, depending on the rainfall patterns experienced in a particular year. This reservoir of water can enable the plant to survive until the next rain. It is this moisture that farmers should be very anxious to conserve.

Weed control management to conserve moisture

The control of weeds within the various cropping systems is one of the important factors in an integrated moisture conservation plan.

Weeds can be defined as any plant that is not desired in a particular crop production system. For example, sunflowers in a land of maize can be regarded as a weed together with all the other naturally occurring plants.

Weeds like other plants use or transpire large quantities of soil moisture to the atmosphere in their growth cycle and can reduce crop yields by as much as 50% in dry years.

Some common annual weeds growing with crops can use as much as three times more water to produce a kilogram of dry crop material as the crops themselves. For example, pigweed (*rooimisbredie or amaranthus species*) varieties can use about 630 litres and white goosefoot (*withondebossie or chenopodium species*) can use about 1 700 litres in transpiration of soil moisture to produce 1 kg dry matter above ground.

In comparison, the litres of water required to produce 1 kg of dry matter above ground of the crops listed below are as follows: Sorghum 670 litres, maize 770 litres, wheat 1 160 litres, sunflowers 1 400 litres, oats 1 300 litres and soybeans 1 400 litres.

These water usage amounts imply that 2,3 million litres of plant available water per hectare is transpired just to produce the grain portion of a 3 ton maize crop.

It is thus critically important to be able to store any rain from showers that occur from

A land should never be in this condition.

Glyphosate applied at 1,5 litres/ha before the planting of soybeans.

The results show effective weed control with a combination of sulcotrione and atrazine based chemicals after planting. Only one stubble mulch tyne operation was carried out in August prior to planting.

March to October so as to ensure that a minimum of preplanting rainfall is required in order for planting to start on time.

Farmers who either grazed plant residues for too long or did not do a tyning or ripper operation to loosen and aerate the soil profile in time in some areas during this season, were not able to plant on time. This is especially of great importance in soybean production, where certain cultivars respond to be planted during October and November in the higher altitude production areas.

During a high weed loading in early summer, during the period from August, with high winds, to October, which can be a hot month, the total transpiration by weeds in a land can be between 5 mm and 15 mm per day. All of the stored soil moisture can thus be used up within 9 to 27 days.

This competition for moisture will also occur in the early stage of crop growth, with both crops and weeds competing for moisture and more importantly soil nutrients.

Weeds thus usually cause the most severe reduction in final yield during the first two to three weeks of a crop's growth.

Mechanical control

From the above discussion, it can be seen that it is critical to control weeds so as to conserve the moisture in the soil. Effective weed control can be achieved either by traditional tillage methods or chemical control.

It has been shown that reduced tillage or conservation tillage systems can be used to control weeds as well as enhance the soil surface, so that the twin objectives of weed control and soil moisture conservation can be achieved.

The conservation tillage plan can be implemented with the combined use of stubble mulch tynes and sweeps or a combination of reduced tillage and chemical weed control.

The timing of the tillage operations and chemical weed control during the fallow period is important. Deep tillage, whether it is a 200 mm to 250 mm stubble mulch tyning or deep ripping in summer crops, should start at the latest during July prior to the coming production season. This timing can be adapted to till sunflower and soybean lands as soon as possible after harvesting, unless the plant residues are to be utilised for a period. Maize lands are usually harvested later and so the first tillage operation will also take place later.

Remember that livestock can really compact the soil profile in the early winter months if plant residues are utilised when the soil is wet. Often though, some useful rainfall of between 25 mm and 50 mm can be received during July in some areas. If the soil is very compacted, some runoff can be expected.

It has been shown that a chisel operation can cause the loss of moisture of 12,5 mm and a sweep share operation about 4 mm from the top soil profile. It is important to investigate which implements might be needed in your operation in order to enable you to start conservation tillage and practise effective weed control at the same time.

It is also important to keep as much residue on the soil surface as possible and to keep in mind that even with a chisel operation with straight points, 25% of the surface residue is incorporated with each pass over the field. Tandem disc implements set at 150 mm can however incorporate 90% of the plant residue, leaving the soil surface exposed and vulnerable to compaction as well as water and wind erosion. Residue mulch on the surface of the soil also keeps the soil cool, thereby reducing moisture evaporation, rain runoff and germination of weeds.

To facilitate the use of tynes, it is a good idea to ask your harvesting contractor to engage the residue cutter on the combine to cut the crop material into short pieces. This also helps in the planting operation when some residue is left from one crop to the next.

Well planned crop rotations can also stop the build-up of millions of weed seeds and control different kinds of weeds in both the summer and winter fallow periods.

Chemical control

There are many chemical combinations that can be used in conjunction with full or reduced tillage systems during the fallow period and as a preplant during planting and post planting operations. Each farming area and each farmer has a slightly different adaptation suited to his farming climate and circumstances.

Always consult a reliable chemical representative before continuing with any application.

The use of glyphosate (Roundup) can be a very cost-effective weapon in conjunction with trans genetically adapted maize and soybean varieties as a preplant weed control after a July tyning operation, when the soil and air temperature has enabled weeds to grow actively, usually during October. If the genetically adapted varieties of crops are grown, another application of glyphosate might be required after planting in order to control weeds that emerge after planting.

Other chemicals that can be used to control weeds during a fallow period are Gramoxone and Paraquat. These are non-glyphosate based chemicals. What has worked in practice can be seen in the photos in this article.

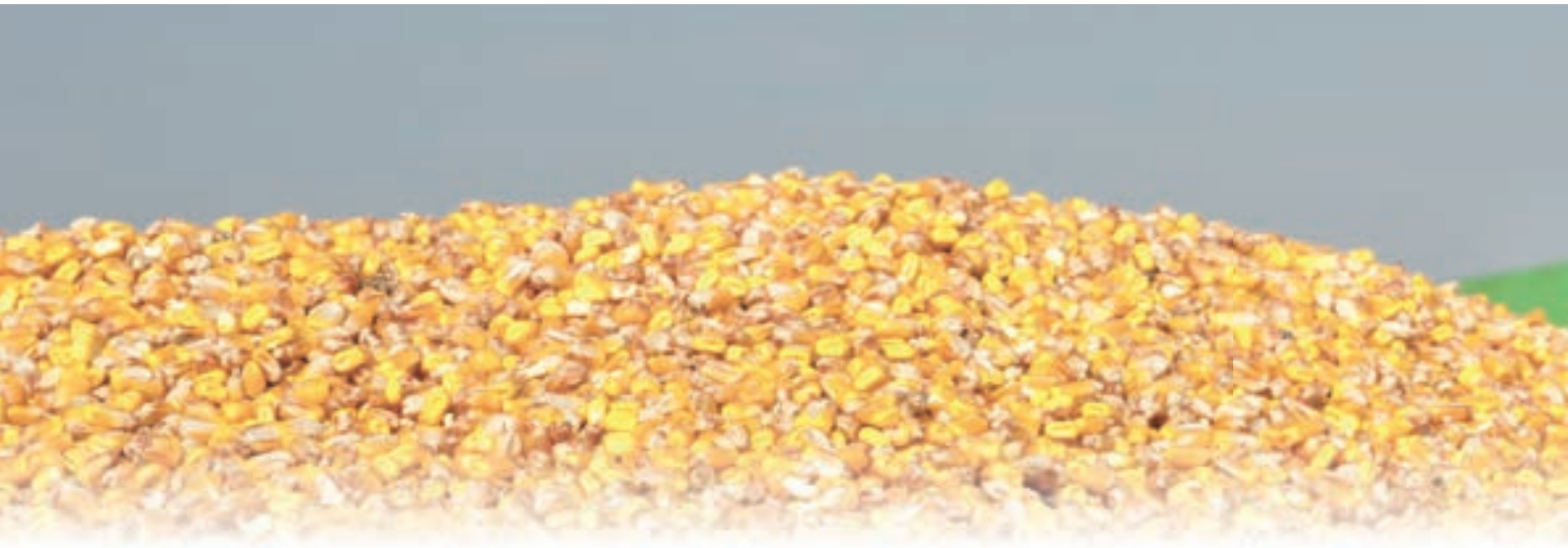
The rainfall received after harvesting of soybeans was 30 mm before and after stubble mulching and a total of 20 mm up to and after planting and then a further 16 mm was received on the planted crops.

The glyphosate applications of 1,5 litres/ha cost about R70 for the chemicals alone and the combination of non-glyphosate chemicals for control of weeds in the maize plantings cost about R320/ha.

As can be seen in the soybeans, a combination of keeping some residue on the surface and effective weed control at a reasonable cost as well as good moisture conservation has been achieved.

The results as shown in the photographs show effective weed control, with a combination of sulcotrione and atrazine based chemicals after planting. Only one stubble mulch tyne operation was carried out in August prior to planting.

ARTICLE SUBMITTED BY A PULA/IMVULA CONTRIBUTOR



Know your maize plant – the growth stages (Part 2)

In the January 2013 Pula/Imvula, we examined the vegetative growth stages of the maize plant. In part 2 we will examine the growth stages of the maize plant in the kernel development phase.

R1 – Silking

The maize plant is now **55** to **66** days post **emergence**, the silks are visible and pollination will be taking place. Silks grow about 2 cm to 3 cm per day. The pollen grains which slide down the silk and fertilise the ovule, become the birth of the kernel.

It takes about two to three days for all the silks on one single ear of maize to emerge and be pollinated. This is a critical time for the plant and it is important that there is no stress while the pollination is occurring. The largest yield reduction will be as a result of stress during silking.

R2 – Blister

This stage occurs about **10** to **14 days following silking**. The new kernels are white and look like little "blisters" on the cob. The cob will almost have reached its full size and the silks will begin to dry and turn dark. The kernels enter a rapid growth phase, seeing as the seeds begin to fill. Some starch is beginning to form in the kernel.

R3 – Milk

About **20 days after silking**, the kernels will begin to discolour or yellow on the outer skin, but will still contain a very milky liquid, which is the starch filling the kernel. At this point, the kernel contains about 80% of its moisture. Most of the kernels are now growing out, the cells are expanding and starch is accumulating.

The milk line can be seen very clearly on a cob of yellow maize. It is during this stage when silage makers start checking the yields for readiness. At this stage the effect of stress is less severe, but yields can be reduced by the number of kernels which develop to their full potential and the final weight of the kernels can still be affected. Very little root growth occurs by now.

R4 – Dough

About **26 days after silking**, the kernels enter the dough stage with the

The growth stages of the maize plant in the kernel development phase.

References

Grain Fill Stages in Corn by Bob Nielsen,
Pest and Crop July 2007, Purdue University.

contents of the kernel thickening to a doughy consistency. Starch levels are increasing and kernel moisture content is decreasing, with some of the kernels just showing signs of dent where they are drying on the tips.

R5 – Dent

This stage begins about **36 days after silking** and nearly all the kernels show signs of denting. The drying kernels have a hard layer on top. The white line, known as the milk line or the starch line, moves up towards the top of the kernel as it matures. The moisture content of the kernels is declining now and it is only about 55% at this stage. All the kernels should be fully dented in by 48 days after silking and the kernels are now matured.

R6 – Physiological maturity

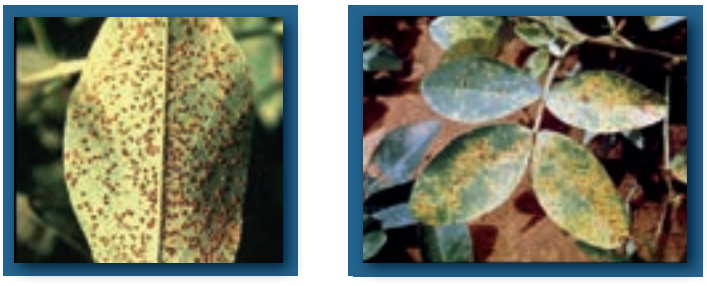
About **55 to 60 days after silking**, the kernels will have reached a maximum dry weight, the starch line will have advanced to the tip of the kernel and they will be considered fully mature. Silage harvesting should have begun a little earlier, but it will be too soon to harvest, seeing as a little more drying off is needed. The husks and leaves will start turning colour, but the stalk could still be green. Moisture content is 20% to 26% and the grain still needs to dry down to ideal harvesting moisture, which is 14%, at which the silos will begin accepting the grain for storage.

JENNY MATHEWS, PULA/IMVULA CONTRIBUTOR

Patrol your peanut crop like a policeman

THERE ARE A WIDE VARIETY OF PESTS AND DISEASES WHICH CAN INFECT A GROUNDNUT CROP, NEGATIVELY AFFECT THE POTENTIAL YIELD AND STEAL YOUR PROFITS. EVERY GROWER SHOULD TAKE TIME OUT TO WALK THROUGH THE PLANTS THROUGHOUT THE GROWING SEASON – SCOUTING FOR THE PRESENCE OF PESTS OR DISEASES.

Brown spots on the leaves with a yellow circle around the spot, are tell-tale signs of early leaf spot.



A collection of orange spots which first appear on the lower surface of the leaf and then burst into a reddish-brown collection of spots, is a sign of rust.

Patrolling like this means problems will be observed and identified quickly, so they can be monitored to see how much damage is being caused and one can get advice from the experts on how best to solve the problem!

Diseases in groundnuts mostly affect the leaf, the stem or the pods, so do spot checks of all of these around the field. Pests such as the common aphid or termites can also be a plague to your groundnut crop. According to the ARC-Grain Crops Institute in Potchefstroom, the most prevalent diseases remain early leaf spot and Sclerotium stem rot. Both diseases are difficult to control and are most evident when climatic conditions are warm and the soil is moist.

Most common diseases

Early leaf spot and late leaf spot

Early leaf spot is recognised by tell-tale brown spots on the leaves, usually with a yellow circle around the spot. It can be found as early as 30 days after planting. It produces tufts of silvery, hairy spores on the top side of the leaf, which can only be seen with a good magnifying glass due to them being so small!

Late leaf spot is less common and has spots which produce dark brown to black spots, which are normally found on the underside of the leaf. These peanut leaf spot diseases are caused by two different types of fungi, but both of them thrive in moist, humid conditions. The result of a leaf spot infestation is a rapid defoliation, seeing as leaves fall off the plant, thereby causing loss of valuable feedstuff since the hay is a precious part of the crop as animal feed.

If you keep a close watch on the climatic conditions, you will know when to be alert to this disease, which thrives in moist and humid conditions. Get your chemical representative to advise you on an appropriate spraying programme.

Rust in your groundnuts

Rust is a serious threat to groundnut crops, causing substantial yield losses, particularly if the crop is already infected by the two types of leaf spot fungi.

Rust appears as a collection of orange spots called pustules, which first appear on the lower surface of the leaf and then burst into a reddish-brown collection of spots known as spores. Rust-infected leaves don't usually fall off like the leaf spot infected ones, but rather they shrivel and dry, but tend to remain attached to the plant.

Plants of all ages are susceptible if the conditions are ideal with warm, damp conditions accompanied by high humidity. The movement of wind,

the splash of a raindrop or even insects moving from plant to plant, all assist in spreading the disease. There are chemicals developed for use against rust, so once noted you should call experts to get their advice on a spray programme.

Most common pests

Aphids

The aphids commonly found in the groundnuts are black or dark brown in colour and between 1,5 mm to 2 mm in length. This is a serious pest, seeing as it not only sucks the sap and juices out of the plant, but it is also a known carrier of other virus diseases such as the rosette virus disease, which is a big problem for groundnut producers, due to it causing a reduced yield. It can be recognised by the presence of mottled, twisted and misshapen leaves and the plant itself looks stunted.

The sap-sucking habits of the aphids cause wilting and leaf-drop. The plant growth will be stunted and leaves will discolour in severe cases. The aphids feed on any part of the plant – the leaves, stems and the anchors. It has a natural enemy in the form of the ladybug. When the aphid population is left unsprayed, large numbers of hungry ladybirds arrive to feed on the aphids; however, if the infestation is severe, you should get expert advice on a spraying programme.

Termites

In the drier regions of the country, termites are a serious pest. Termites attack the crops at all stages of development and usually cause damage to the root system by tunnelling around it. The treatment of seed before planting will help deter the pest attack, but where the levels of infestation are high, chemicals can be used for effective control. According to the ARC-Grain Crops Institute, termite damage is most serious towards the end of the growing season just before harvesting, with drought being an aggravating factor.

Should you wish to discuss any of your concerns about pests and diseases in groundnuts, you can consult further with Ms Alana Pretorius or Ms Lorraine Solomon at the ARC-Grain Crops Institute. Contact them at (018) 299-6100.

JENNY MATHEWS, PULA/IMVULA CONTRIBUTOR

Take the culprits hostage and eradicate the little thieves as efficiently as possible.

Evaluate the successes or failures of your crop

An important management function of the farmer is the monitoring and evaluation process. Once the crop is growing, one should take stock and evaluate the successes or failures in order to repeat the successes and avoid the same mistakes.

One should ask the following questions:

- Did I reach my goals?
- Am I doing things as efficiently and economically as possible?
- Have I been doing things effectively?

A very important question that one should ask is: Did I pay enough attention to the following?

Field choice – Did I use the best fields to plant my crop?
Sunflowers germinate and grow well under a broad range of soil types and conditions, but field choice must be made carefully. Did I practise crop rotation? Risk of disease and weeds increase in mono-cropping and lessen with crop rotation. Sunflowers are sensitive to residual herbicides from previous seasons since it is a broad leafed crop, so it's important to know the field herbicide history. Sunflowers do well on residual fertiliser from the previous crop – especially maize or groundnuts – so it is a good idea to practise crop rotation.

Seedbed – Was the seedbed well prepared?
Sunflowers shouldn't be planted into a newly-ploughed land, seeing as they need a firm seedbed that was preferably ploughed in the winter, then disked and harrowed just before planting. Sunflowers germinate well in soils that are either chisel-ploughed or vibro-flexed, seeing as these seedbeds are normally firmer than a ploughed land.

Planting depths – Did I get the planting depth right?
Sunflower seeds are planted shallowly. If the soil has high clay content, seeds are planted at about 25 mm, while in sandy soils, seeds can be planted to 50 mm.

Seed population – What is my stand like?
Was the calibration of my planter accurate?
One should aim to plant about 35 000 plants per hectare.

Seed spacing – What is the spacing between the plants?
Does my planter have a good depth control mechanism?
Does it have press wheels?
Planting equipment and calibration must work together in order to ensure good seed-to-soil contact.

Was my planter serviced properly?
Did the planter jockey check that the plates were clean?
Old crop and weed residue can clog planter plates, thereby hampering seed distribution.

Seed emergence – What was the emergence percentage?
Sunflowers should be *duisendpoted* three to four days after planting in order to loosen the soil surface, seeing as seeds are easily compacted.

Was there crusting? What did I do about it?
Crusting on the surface of the soil commonly causes uneven emergence or gaps in the stand. Thunderstorms and hard rains falling before seedlings have emerged, can cause crusts of baked soil which seedlings struggle to penetrate. A *duisendpoot* action remedies this.

Speed while planting – What are the gaps between the sunflowers in the row?
Some drivers drive too fast when planting, which subsequently results in "seed bounce" evident in inconsistent in-row spacings. Ideal speeds are around 6 km to 8 km per hour. Did I teach my tractor driver this?

Fertilisation – Did I take soil samples in time? What attention did I pay to the soil analysis? How did I apply the fertiliser?
Sunflowers use nutrients in the soil very efficiently because of their root system. A soil analysis ensures fertilisation is done accurately to save unnecessary expense. Have I checked for signs of nutrient deprivation? A shortage of nitrogen causes leaves to turn pale green. Lower leaves on the plant also die off. A shortage of phosphorus is seen in signs of stunted growth. Sunflowers draw large amounts of potassium from the soils, but our soils are normally rich in potassium, so soil analysis is needed to tell you if you need to apply it (if at all). The micro elements known as boron and molybdenum are important to good sunflower yields and there are often shortages of this in our soils, especially in the eastern parts of the country.

Insects – What insect damage exists? When did I notice it?
Wireworm and cutworm threaten sunflowers and overwinter in plant residue on the field. Seed treatments reduce the risk, but crops should still be monitored, seeing as insecticide can be added to the herbicides that were sprayed after planting.

Weeds – What weeds are present? How effective has my weed control been?
Some farmers prefer to disk herbicide into the soil before planting, otherwise a pre-emergent herbicide is sprayed immediately after planting. The first six weeks are critical, seeing as the young sunflowers can't compete with vigorous weeds. Yields can be increased by keeping fields weed free at this stage.

Conclusion

Monitoring and evaluation is about collecting information and conducting a problem analysis to see what must be maintained and what must be changed in order to do things better in the future.

JENNY MATHEWS, PULA/IMVULA CONTRIBUTOR

This special feature is made possible by the contribution of the Oil and Protein Seeds Development Trust.

Get to know... Whermit Dirks

In this issue of Pula/Imvula, we get to know Whermit Dirks, a farmer from the Genadeshoop area in the Western Cape. Whermit farms with wheat, barley, lupines and sheep.

Where and on how many hectares are you farming? What do you farm with?

I farm with wheat, barley, lupines and sheep on 600 ha of land in the Genadeshoop area in the Western Cape.

What motivates/inspires you?

I have a passion for farming, love nature and feel very blessed to work on the farm everyday. My relationship with my Creator also motivates and inspires me a great deal and keeps me going.

Describe your strengths and weaknesses

I really enjoy farming and nature. I am good with finances and also love working with animals. I would say those are my strengths. My weakness would be that sometimes I get angry too quickly.

What was your crop yield when you started farming? What are your respective yields now?

In the past, my wheat crop yielded around 220 tons and my lupines around 50 tons (approximately 1,5 tons/ha). This year though, we managed to achieve a yield of 460 tons of wheat and 170 tons of barley (that is an average yield of 2,5 tons/ha). The lupines were sold for grazing.

What do you think was the main contributor to your progress and success?

The excellent training I received from Grain SA as well as the financial assistance I received from the Department of Agriculture has helped me a lot.

What training have you received to date and what training would you still like to do?

I have completed a Farmer Development course on soil analysis and would still like to do a course in Farm Management as well as Personnel Management.

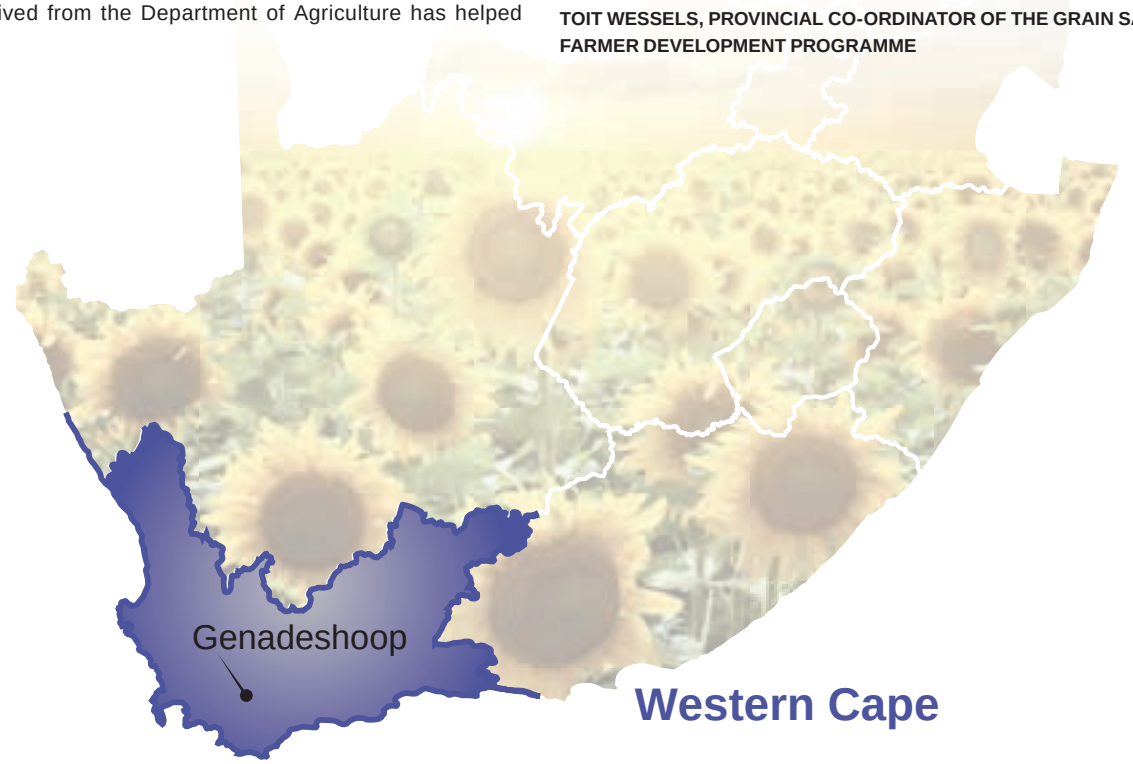
Where do you see yourself in five year's time?

I would like to be in possession of my own farm as well as my own machinery and equipment.

What advice do you have for young aspiring farmers?

Work hard, form a team with your mentor and be willing to learn!

TOIT WESSELS, PROVINCIAL CO-ORDINATOR OF THE GRAIN SA FARMER DEVELOPMENT PROGRAMME



Succession planning for farmers

EVERY FARMER, NO MATTER THE SIZE OF THEIR FARMING OPERATION, WILL SOME DAY BE FACED WITH THE ISSUE OF CONSIDERING WHO WILL BE RESPONSIBLE FOR THE FARM AND HOW HIS INVESTMENT WILL BE CARRIED ON WHEN HE EITHER BECOMES UNABLE TO MANAGE THE OPERATION OR IN WORST CASE SCENARIO, IS DECEASED.

Many farm owners or even foremen, who occupy a principal position within a farming operation with a corporate structure, put off this critical planning required in preserving their "farming legacy". When no plan has been made for an orderly transfer of ownership and responsibilities, chaos can erupt within a family, leading to fragile and hostile interfamily relationships for decades after the impairment or death of a farm owner.

The ideas expressed in this article focus on farms that are owned freehold in various legal entities and do not specifically address the various arrangements made to farm any area of land within a traditional tribal authority area. In this instance, succession to use a particular land area might devolve to an eldest son after due consideration by the traditional leader and his or her council.

Farm succession planning involves the effective transfer of the ownership and management of the farming enterprise. The successful outcome of any succession plan will be designed to meet the needs of all family members so as to ensure a viable and sustainable business for the future.

Succession planning can also be defined as a continuous process within a family to match changing circumstances, to plan for the transfer of knowledge, skills, labour, management control and ownership of the family business between one generation, known as the founder or retiring generation, and the next or successor generation.

Succession planning is often put off because it can seem like a huge task and the process itself can lead to conflict and disagreement with family members. It is easy for those members who are working in the family enterprise to have been lead to believe that they would inherit some land or other responsibilities within the family structure. Many deserving family members in this scenario can be totally surprised when a will is read out for the first time in the case of the premature or unexpected death of the founder or principal.

In these cases, the remaining family members might have to sell assets, including land, to settle estate duty or to deal with conflict in the family.

It is much better to start the process before the founder is deceased. This has many advantages in that an elderly founding couple can enjoy the benefits of living on the farm and seeing the fruits of their endeavours being taken forward by the next generation. The stress of the responsibilities of the day to day running of the farm can be relieved. The elder generation, with experience of various farming eras, can always be on hand to give advice if sought.

The sooner the process starts and each member of the family feels that they have had an opportunity to give their opinions, the more likely that all the choices available can be explored.

It is advised that after the process has started, a lawyer specialising in succession planning is approached to draw up any legal documents. The will can then be drawn up in such a way that it covers and co-ordinates all the outcomes of the family discussions in a clear and understandable manner.

The planning process

The two main phases of drawing up the plan can be broadly divided into two parts. The first phase involves having all the family members, perhaps first lead by the principal discussing it, thinking about it, researching various options, planning, agreeing and deciding on workable and implementable options. The second phase involves the documentation or recording the decisions through a written succession plan.

The first meeting

Once a principal founder or founders have decided to move forward with the process, any family member who may have an interest in the farm business and its future, needs to be included in the consultation process. Sometimes, depending on the dynamics of the family relationships, a professional mediator with knowledge of the legal consequences of the decisions made, might be invited from the start.

It is important to give everybody a fair hearing. It is essential to understand what each member wants and to be flexible as to their needs, which may change as their individual careers and family obligations develop and evolve.

The main elements of a succession plan

A succession plan deals with the transfer of responsibilities in three main areas. These include the physical labour applied by various members in the day to day operation, the responsibility for the management and decision making or control of the farming operation as well as the specific ownership of the farming assets by various members.

As the founders or succeeding inheritors age, the transfer of the physical labour component for day to day running of the farm is usually the easiest. The transfer of management and decision making often causes the most conflict and is the most difficult area that the founder has to "let go".

The confidence required by the founder to transfer this responsibility to a son, son in law, daughter or professional manager in the larger operations, is usually built up over years of working together. An assessment is made over time by the principal and other family members of whether or not the "chosen" party is suited to farming and has the necessary knowledge and skills to take over and successfully operate the farm in the future.

PULA IMVULA

This publication is made possible by the contribution of the Maize Trust.

GRAIN SA
PO Box 74087, Lynwood Ridge, 0040
▸ 08600 47246 ◂
www.grainsa.co.za

DISTRIBUTION
Liana Stroebel
▸ 084 264 1422 ◂
liana@grainsa.co.za

DEVELOPMENT CO-ORDINATORS
Danie van den Berg
Free State (Bloemfontein)
▸ 071 675 5497 ◂
danie@grainsa.co.za

Johan Kriel
Free State (Ladybrand)
▸ 079 497 4294 ◂
▸ Office: 051 924 1099 ◂
johank@grainsa.co.za
Dimakatsi Nyambose

Jerry Mthombothi
Mpumalanga (Nelspruit)
▸ 084 604 0549 ◂
▸ Office: 013 755 4575 ◂
jerry@grainsa.co.za
Nonhlanhla Sithole

Naas Gouws
Mpumalanga (Belfast)
▸ 072 736 7219 ◂
naas@grainsa.co.za

Jurie Mentz
KwaZulu-Natal (Vryheid)
▸ 082 354 5749 ◂
▸ Office: 034 980 1455 ◂
jurie@grainsa.co.za
Sydwell Nkosi

Ian Household
Eastern Cape (Kokstad)
▸ 078 791 1004 ◂
▸ Office: 039 727 5749 ◂
ian@grainsa.co.za
Jenilee Buntting

Lawrence Luthango
Eastern Cape (Mthatha)
▸ 076 674 0915 ◂
▸ Office: 047 531 0619 ◂
lawrence@grainsa.co.za
Cwayita Mpotyi

Toit Wessels
Western Cape (Paarl)
▸ 082 658 6552 ◂
toit@grainsa.co.za

DESIGN, LAYOUT AND PRINTING
Infoworks
▸ (018) 468-2716 ◂
www.infoworks.biz

infoworks
your ideas can fly

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

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

Succession planning for farmers

When the succession plan is started, the required training and skills development plan for specific roles by individual members can then be addressed. In some cases, sons or daughters or their marriage partners might prefer running the livestock side of the business, rather than the mechanisation or cropping side of the business. Others might prefer financial planning, office administration or staff management for example.

Practical experience has shown that a mentorship period of around eight to ten years in a particular farming operation is required to ensure a firm understanding of practical farming and successful financial management in the future. Every area in South Africa will have unique production problems. The management, practical experience and skills required can only be acquired by actually working in the farming business.

Factors to consider at the outset

Before preparing the succession plan, it should be agreed at the start that the family goal is to transfer the farm business in an orderly fashion to the next generation. If the answer is in the affirmative, potential successors need to be part of the entire discussion and decision.

An important aspect is a very detailed financial analysis of the current and future profitability of the current farming business. These financial facts and figures and projections will give an idea of how many of the family members can be accommodated and at what level of lifestyle. It might be evident that it would be better for some members to pursue other professions, seeing as there will just not be “space” in an enterprise at its current size.

The financial considerations are complicated by the sometimes considerable increase in value of the land assets over time, compared to the sometimes more moderate incoming generating capacity of those assets. The transfer of ownership of assets encompasses the actual purchase by the younger generation or sale and gifting or donation of the implements, cattle or land by the older generation to other family members.

A timetable for the implementation of the plan should be worked out and be clear to everyone. The requirement for certain actions might be from almost immediate to several years.

The written farm business succession plan should be a reflection of the above issues discussed fully, understood and agreed to by all role players.

The components of a written succession plan

The following considerations and components that are recommended and required to document the plan will include an executive summary, business overview, strategic plan, retirement plan for those phased out of the business, management, control and labour transfer plan, current and future financial plans and projections, action plan and implementable timetable as well as supporting documents for each action.

An important aspect in the planning is a detailed plan of the financing required, the various sources available and the various financing options. The plan should also address the concerns of children that might not be absorbed by the farming business. Their inheritance could take the form of donations or the proceeds of life policy insurance.

Other aspects that can be written down are the training and development plans for the successors, well-defined channels of communication and a contingency plan for any matters, either farming or personal, that require immediate action.

All the above should be prepared according to the prevailing laws of the country’s governing wills, estates, property transfer and also comply with the tax laws of the country.

Many costs can quantify and be saved by planning well ahead within the various laws and tax concessions.

Considerations of the transfer or change of various legal entities of a sole owner/operator, partnership, close corporation or company Pty (Ltd) to include all family members in a share of the future business, can be considered. Working members, partners or shareholders could benefit from working income, passive receipt of dividends or long-term appreciation of the assets.

As can be realised, the possibilities for equitable solutions are many and varied and require openness by all role players as to their expectation and full discussions amongst all role players of the many options available.

Conclusion

A well thought succession plan can reduce the possibility of family conflict and ensure that expectations and future livelihoods are retained for many generations to come.

ARTICLE SUBMITTED BY A RETIRED FARMER