GRAIN SA
GRAAN SA

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PULA IMVULA

Grain SA magazine for developing producers

A succesful business plan needs proper planning

As a result of the success that we have achieved through the recapitalisation programme in the Free State, we have been inundated with requests for business plans. It also seems that some people think that someone else is going to write a plan that will take you to instant success and instant riches. I do not believe that this is the case!

When we at Grain SA prepare a business plan, we start with a thorough resource assessment. You need to know what you have to work with before you can start making plans. We need to look at the farmer – the driver of the entire process. It is important to know how experienced the farmer is, whether he lives on the farm, if there are other partners involved as well as whether this farmer has been part of the development programme, thereby having the knowledge of what they are planning to do.

Then the land – not all land is suited to any type of farming. We need to know how much land is available, how many hectares of arable land and how many hectares of grazing land. What is the condition of the grazing land and related to that, how many livestock units can be accommodated on the farm? What crops are planted in the region and what is the soil depth on this land? We must always remember that in one small area, the soil depth can vary very much. One land can be good for maize production, whereas a land nearby should be planted to permanent pastures. What crop rotations are possible in this region – it is not good practice to continue planting the same crop on the same land for a number of years.

Tractors and implements are critical to commercial grain production – the number and size of the tractors are important, but almost more important is the condition of the tractors. Will these tractors be able to do the work in the busy season? Grain production is dependent on the timing of all the operations – if the tractors are in a poor condition, they will break at a time when you need them the most.

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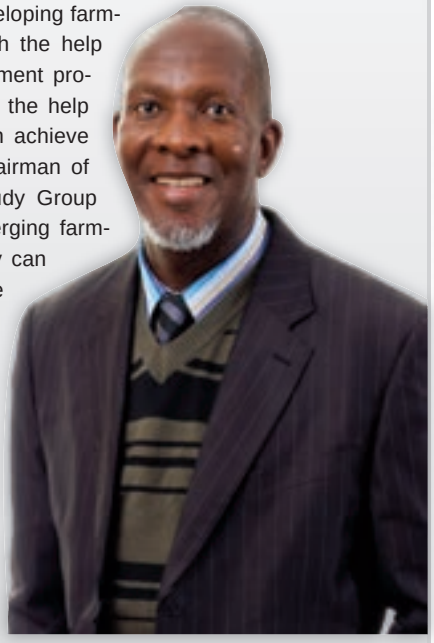
Mme Jane says...

Change is part of life and at present we are definitely noticing changes in our weather pattern as well. Just when everyone was getting ready to do some spring cleaning, mountain passes and roads were closed on account of the weather. We were greeted by icy weather with snow falling in many parts of the country. Fortunately we know that after winter, spring has to come…eventually.

At Grain SA change occurred with the appointment of Mr Victor Mongoato. In support of transformation within the organisation, Victor was co-opted by the Executive Management on 24 July 2012 as a member of the Executive Committee. Earlier this year he was also appointed as chairman of the Grain SA Farmer Development Working Group.

Victor farms with maize and drybeans in the Eastern Cape at the foot of the western part of the Drakensberg in the Matatiele district. When I spoke to him, his farm was covered in snow and he was arranging for extra fodder to be delivered for his cattle and sheep.

According to him many developing farmers have been established with the help of Grain SA's Farmer Development programme. He believes that with the help of this programme farmers can achieve new heights. In his role as chairman of the Developing Agriculture Study Group he hopes to further assist emerging farmers achieve their goals so they can become farmers, who produce food to feed the country; farmers equal to their counterparts. Victor is very positive about the future of agriculture in South Africa and believes that the current group of farmers will be able to stand up to any challenge that the agriculture industry may face in the future. We wish Victor all the best for the future.



Victor Mongoato, Chairman of the Grain SA Farmer Development Working Group.

A succesful business plan needs proper planning

Some farms have implements, but they are outdated. The time for ploughing has passed – we must move towards tine implements and later to minimum and reduced tillage. We have to start looking into the health of our soils and always remember that we have the land on loan from the generations to come. We have a huge responsibility to take care of the land so that future generations will also be able to use the land for production purposes.

In the grain producing areas, we know how much tractor power is required to work the land – we also have knowledge concerning the implements that are required. It is really important to match the tractors and implements to the size of the farm and the production plan.

Most farms have a livestock component and these animals have to be managed. The business plan must deal with the condition of the fencing and water supply – also the crush and handling facility. It is really important that there should be watering points in each camp. The animals waste energy if they have to walk long distances to drink water and it is more cost-effective to bring the water to the cattle rather than have the cattle walk to the water.

The last focus area of the business plan is the actual enterprise budget for the crops that are being planned. It is not always possible to do the exact costing early in the season, seeing as the prices of all the inputs change quite regularly. However, it is essential to have a good estimate of the production costs.

After reading this above discussion, you will realise that a business plan is not something that someone can write for you in the office. If the plan is to have any value and if the plan is to be implemented with success, all the above factors must be included and the plan must be matched to the farmer and the natural resource.

JANE MCPHERSON,
PROGRAMME MANAGER
OF THE GRAIN SA FARMER
DEVELOPMENT PROGRAMME

Conserve the timber on your farm

Increasing population numbers and decreasing access to land are putting pressure on cropland. The active clearing of natural vegetation for wood to build with, wood to use as firewood and fuel and also to make more space to plant crops, is leading to serious declines of forests and woodland.

More and more farmers around the globe are beginning to understand that trees are a valuable resource and they are paying more attention to their existing trees, even becoming proactive about planting more trees on their farms. There is no better time than the present to learn how and why timber must be conserved.

It is good practice for grain farmers to grow windbreaks around their cultivated lands. This is usually done by planting small plantations of timber in areas fringing the edge of crop lands; this process is known as agro forestry. For many years, farmers who plant crops in areas where high winds are experienced have already been planting windbreaks either of trees or shrubs (bushes). Windbreaks can be comprised of between 1 - 4 rows or 10% of a land without affecting agricultural productivity. This practice is beneficial, because many young crops are sensitive to winds and because barren fields left open to winds suffer greater evaporation. Crops like maize and sunflowers in their delicate and most vulnerable post-emergence stages can get burnt by windswept sand granules that may significantly stunt their growth and negatively affect their yields. It is unfortunate that far too many farmers, especially new developing farmers, are falling prey to this risk of wind damage. Two primary reasons for this being the case is the following:

1. Established plantations are not being conserved, but are rather being utilised as a fuel source.
2. Farmers are not planting new plantations due to lack of awareness of their benefits.

There is no doubt that there is an immense need for wood as a fuel source, but it is essential that timber resources are conserved and utilised sustainably. Thus a balance needs to be achieved between utilisation and conservation.

How to achieve a balance between utilisation and conservation

Replace what you take

When there is a need to cut down trees, be it for fuel or construction, take the initiative to re-plant and replace what you are removing. If there is a cost involved in purchasing seedling trees, consider it as an investment seeing as it will benefit you in the future. You may however be able to re-plant seedlings which have sprouted below the tree canopy from fallen seed and avoid incurring any cost at all. **Blue gum** (*Eucalyptus Grandis*) and **Black wattle** (*Acacia Mearnsil*) are the most commonly used species for windbreaks in South Africa. They grow very rapidly, they produce a good thicket of branches and leaves for slowing down wind, they are hardy species and they are suited to many regions of the country. They are however alien species and not indigenous (local) to South Africa.

Conserve the timber on your farm

The **Wild Peach** (*Kiggelaria Africana*) is an indigenous tree which is becoming very popular as a windbreak and a shade tree for livestock and may be a good alternative to replace harvested trees with. The tree grows rapidly in many regions of South Africa, leaves grow densely and are unpalatable to livestock and the wood is also strong and durable to winds.

Harvest wisely

Take time to understand the trees that grow on your property. Many trees respond differently to different methods of harvest. For example, if you have Blue gum plantations, then you can benefit from them for many generations if you understand the best method of harvesting. Don't remove the stump when felling, but rather harvest the shoots which grow from the stump. Leave two shoots per stump behind for shade and balance. Black wattle, on the other hand, does not produce shoots in such an extensive manner. However, it is a *phyrophytic* species, which means it responds well to being burnt; fire will set dormant seeds in the top soil into germination. This will subsequently create a thick plantation. Be careful to control the burnings, seeing as wattle can easily become invasive if it is not managed effectively.

Utilise alternative fuels

There are many naturally occurring fuel sources that can be used other than wood. Maize cobs are excellent due to the fact that they can be collected after harvest and stored. They are good heat retainers and are thus good for cooking and warming the home. The dung from cattle is also a very good fuel source once it is dry; it is also cheap to collect. If you have a mixed grain and cattle operation, then you should have access to both of these products.

Spread the word

Be proactive and share your knowledge concerning timber conservation and cautious utilisation. Don't stand idle and watch your neighbour remove all his or her windbreaks. Teach your farming friends about the benefits of the plantations and encourage the establishment of new ones.

What are the benefits of a windbreak plantation?

- They provide crop protection.
- They assist in conserving the top soil, as it is not blown away as easily. Wind erosion is severe in many places and leads to loss of soil and soil fertility, which means less area for growing food supplies and planting crops. Windbreaks reduce wind speed and prevent permanent loss of crop lands.
- They provide a habitat to woodland creatures, therefore maintaining biodiversity.
- They assist in creating a good soil structure as their roots help to bind the soil.
- They produce dry organic matter which acts as a mulch and fodder.
- They reduce the amount of wind evaporation and in improving the conditions for crops, they usually lead to an increase in yield.
- If managed correctly, they can provide good fuel wood and building material.
- They can provide shade.

To reap these benefits on our farms, we need to implement the four main practices consistently and continuously. If we can manage our plantations effectively, our farms and us will benefit tremendously and it will result in an environment which is more sustainable in the future.

GAVIN MATHEWS, BACHELOR OF ENVIRONMENTAL MANAGEMENT, UKZN

Budgeting puts you in control of your business

When compiled and used correctly in conjunction with a production management program that helps you plan your business, a budget becomes a great management tool, enabling you to organise, implement and control all of your actions. As such, it basically allows you to be in complete control of your business.

Someone once said that if you do not know where you are going, you could end up somewhere else. This saying is especially applicable with regards to your business. If you do not plan and budget properly, you could end up not reaching the destination (objectives) that you originally set out to achieve. What is the objective of your business? Even though you probably have a number of objectives, becoming financially successful is most probably one of your main ones. Being financially successful includes maintaining a sustainable profit, maintaining liquidity as well as maintaining a sound cash flow over the long term.

You must remember that a budget is defined as a written plan, expressed in physical and financial quantities, containing future actions regarding your business in order to achieve the objectives set.

The challenge when compiling a budget is that you have no source documents. Seeing as no transaction has taken place yet, you need to calculate all expected income and expenditures.

The calculation of the future income or expenditures for all items included in your budget poses a challenge, because you need information regarding the expected prices of all items.

The following are useful to assist in this regard:

- If you have historical information regarding the income and expenditures of previous years, it is very helpful. It creates a useful basis for the budget of the following year.
- Gather as much information as possible – read agricultural magazines, listen to radio reports, attend farmers' days and study groups, acquire information on the internet, attend NAMPO, read newspapers and so forth.
- Contact the buyers of your products and ask them to supply you with information regarding expected prices for outputs.
- Contact all your suppliers in order to indicate expected prices for inputs.

It is not possible to illustrate the compilation of a complete budget within the limits of an article. However, we will attempt to illustrate the principle of determining expected income and expenditures by means of a few examples. Keep in mind that your budget must be as realistic as possible. Be conservative regarding income and progressive regarding expenditures. Training and experience will overcome the difficulties of compiling a budget.

Examples of income

Maize

According to your production management program, you plan on planting 150 hectares of maize during November 2012 with a production of 4,5 ton/ha. From information gathered, you expect the price of maize to be R1 800 per ton on average during the next season.

Maize

Hectares (a)	Production per hectare (b)	Total production (c)	Expected income per ton (d)	Income per hectare (e)	Total expected income
150	4,5 tons	675 tons (a x b)	R1 800	R8 100 (c x d)	R1 215 000 (a x e) or (c x d)

Budgeting puts you in control of your business

Seed

Hectares to be planted (a)	Seed per hectare (b)	Total seed (kg) (c)	Expected price per 25 kg bag (d)	No of bags to purchase (e)	Total expected cost
150	6 kg	900 kg (a x b)	R1 500	36 bags (c / 25kg)	R54 000 (d x e)

Diesel

Km's per month (a)	Total km per year (b)	Consumption (c)	Litres diesel used per month (d)	Litres diesel used per year (e)	Expected price of diesel (f)	Cost per month (g)	Total expected cost (h)
1 250	15 000 (a x 12 moths)	10 km/litre	125 (a/c)	1 500 (b/c)	R11,50	R1 437,50 (d x f) or (h/12)	R17 250

Telephone

Total cost for previous year (a)	Cost per month previous year (b)	Percentage increase (c)	Cost per month for next year (d)	Total expected cost for the next year (e)
R7 380	R615	6%	R652	R7 823

Examples of expenditures

Seed

According to your production management program, you plan on using 6 kg of seed per hectare to obtain a plant population of 20 000 plant per hectare during November 2012. You will be using a specific cultivar called YYYGGG. From information gathered, you expect the price of seed to be R1 500 per bag during the next season.

Diesel for the farm bakkie

Information from previous years makes you realise that you will travel an average of 1 250 km per month, totalling 15 000 km for the year. You also know that your vehicle can do 10 km per litre diesel on average. From information gathered, you expect the price of diesel to be R11,50 per litre on average during the next season.

The previous calculation is known as zero based budgeting, while the next example for telephone costs will be add-on basis.

Telephone costs

It is very difficult to plan for telephone costs. Therefore one would normally use the previous year's cost as a basis and increase the costs by a percentage, such as the expected inflation rate of about 6%.

As can be seen in the examples above, you need to calculate the expected cost for each and every cost item in your business. Although a daunting task the first time you do it, whether you do it manually or on a computer, doing it the next year will already be that much easier, especially when using a computer. The more you do it, the easier it becomes and the more accurate your budgets become.

All the information is then used to compile the final three budgeted financial statements, reflecting the expected financial success of your business for the next year.

How to use a detailed budget in combination with your production management program

- When buying products, use the information in your budget and production management program. You must buy 36 bags of cultivar seed YYYGGG before November at an expected cost of R54 000. Therefore purchase according to your plan. At times there will be unforeseen price increases and the seed could cost more than R54 000. However, you need to accept that, because to buy less seed will affect your production negatively, but be aware that it could have an adverse effect on your profit.
- When an action has been completed, use your budget and production management program for the final control. What was the actual income and/or expenditure compared to that of your budget? Any deviation needs to be explained. Take the reason for any deviation in consideration when compiling your next budget – this will help you to improve your business.
- Control diesel costs and telephone costs on a monthly basis. If you have overspent one month, try and save during the next month in order to remain within your average budget per month. Consider the necessity of trips, plan your trips with the bakkie more thoroughly, consider the necessity of a telephone call and also investigate cheaper means of communication.

When a budget is compiled and used as explained, it becomes a great management tool seeing as it puts you in control of your business. In a follow-up article we will have a look at the advantages of a budget.

ARTICLE SUBMITTED BY MARIUS GREYLING

About weeds, headaches and herbicides

As we plan our strategies for the new season, it is also time to consider the best approach with regards to the weeds in your fields. Weeds are a big headache for farmers and can seriously threaten a farmer's entire crop if left unmanaged!

Many farmers struggle with old, outdated or broken equipment that makes proper land preparation a challenge. Labour and diesel costs also sometimes force farmers to cut down on their land cultivation processes. The truth is that if poor machinery, old implements and limited finances prevent a farmer from attending to the "weeds headache", he is only going to have a much bigger headache when he harvests a poor crop and finds he can't pay back loans, fix equipment or buy diesel.

Every farmer should be familiar with the types of weeds growing in his farming lands and he must know what threat the weeds pose to his proposed cropping program. He needs to decide on the best way to get his lands cleaned and even before the season begins, he must have a plan as to how he will keep his lands cleared of the invasive weeds that could steal critical water and nutrient supplies that should be available to the crops he will plant.

There are many different strategies one can employ in the battle against weeds through both physical and chemical methods.

- **Physical methods** of weed control include hand pulling, hoeing, discing, ploughing, cultivating and mowing.
- **Chemical methods** would include the application of approved herbicides to control specific problems. Many farmers choose to consult with chemical specialists who help them with the identification of the weeds and advise them on the best program and products to use.

Grain SA advises farmers to make wise choices when selecting an herbicide program. Where fields are seriously contaminated with weeds and crop production will be severely inhibited, a drastic approach may be necessary – but this will not always be the case and more moderate and economical programs can also be used. An increasing number of farmers are learning through our Grain SA Study Group and Training Courses that effective use of herbicide can make a very significant difference to the fruits (or yield) of a season of hard labour. The many reports we are receiving about the improved yields on farms, both big and small, are very encouraging. Due to the fact that we are seeing such excellent results and such greatly improved yields, our farmers are looking at improving their spray equipment, whether it means buying a new boom sprayer or even buying more knapsack sprayers.

In the end, the chemicals we use must provide the desired control of the target species while limiting the threat to the environment and the people working with the chemicals. It is important to understand that chemicals are poisons which are only helpful if they are used correctly and with great care.

How to use herbicides and pesticides

Read the labels

It is very important to read the labels on every container of herbicide or pesticide very carefully. All the advice on the labels is given after many tests have been done using the product in different test environments. You must read the labels every time you buy a new bottle in case there are changes or new discoveries and advice.

It is very important that the farmer understands how to use the product safely and he must teach all of his co-workers too. You must never put yourself, your produce or your consumers at risk as a result of poor herbicide application practices.

- Pesticide labels will describe the correct conditions to use the product by clearly indicating which crops it can be safely used on and it will specify the product's "field of use", which means the weeds, pests or diseases against which the product can be used. The product should only be used to control problems listed on its label.
- The label will also pass on vital information to users, including how to make up the spray solution, the best way to apply the spray, the rate of application, the number of times you can apply the product to one crop and the critical time period between the final application and the harvest.
- For example, one very important aspect surrounding Roundup application is the need to use absolutely clean water. Roundup gets attached to clay particles and therefore gets nullified and can't do its work. This makes it imperative for the correct water quality to be used. A farmer who mixes this product with water from an open dam or a stream is actually wasting his money, because the expensive treatment will not achieve the desired results.
- The label will also inform you what protective gear should be worn by the person applying the poison and there are also normally instructions as to treatment if there is an accident or a spill. The most vulnerable area of exposure to the poison is through the skin and also through the inhalation of fumes.

The label on the herbicide or pesticide bottles is a critical link between the manufacturer and the farmer towards best practices and responsible stewardship!

Keep your herbicides and pesticides locked up

Responsible farmers keep their pesticides stored in a safe place and locked away. Many sad stories can be told how pesticides have caused unnecessary illness, hospitalisation and death. It is estimated that over 250 000 people commit suicide every year by deliberately drinking pesticides. Please don't let this happen and keep the key to your lock-up storage safely hidden where only the responsible handlers can access it! You must also make sure the store is safe from fire, because some of these products are highly flammable and will add fuel to the fire or even explode. You must also ensure that they are stored safe from heavy rain and floodwaters since poisons will quickly contaminate waters and the negative impact of such a disaster would be far-reaching!

Care of spray equipment

Your spray equipment will enable your spray program to help you achieve the desired results – or not. It is thus important to look after these tools very well. It is just as important to wash the equipment well after use and keep it stored safely and away from animals or feed. Check all the working parts frequently, repair leaks and replace nozzles. The spray should be calibrated carefully and accurately. Make very sure the spray equipment will not leak any pesticide mixtures, seeing as this is not only wasteful, but potentially harmful too.

About weeds and headaches and herbicides

The equipment used to measure or weigh the sprays must not be used for anything else. Never use food containers or cutlery. Thoroughly wash all the equipment used.

Dispose of your empty containers

Empty containers should be washed thoroughly and they should not be recycled, seeing as they have carried poisons and subsequently present a health risk to humans and animals and also contribute to environment pollution. Even if you know the container will not be used again, it is still your responsibility as the user to thoroughly wash the container before disposal. The generally agreed best practice is to rinse the container at least three times. Following this, the containers should be punctured full of holes to discourage reuse and then they should be dumped where they can be burned if there is no professional recycling facility available. The chemical companies are nowadays advising that this is not done on our farmland, but rather in larger dump sites, seeing as containers that held poisons should not be burned near humans or livestock. The other alternative is to bury the containers in a very deep pit where it will not affect underground water supply or be likely to flood.

Be a responsible spray operator

Be sure to wear the prescribed protective clothing. At the very least you should ensure that your skin is not exposed, so wear a long-sleeved shirt, long trousers, closed shoes with long socks and a hat. Gloves should be worn and washed thoroughly before they are taken off. Wash any splashes on your skin or in your eyes off immediately. Sometimes it is also necessary to wear protective eye wear like goggles and masks that filter the air you breathe. Do not put any other people at risk and make sure all animals are a safe distance away from the spraying activities.

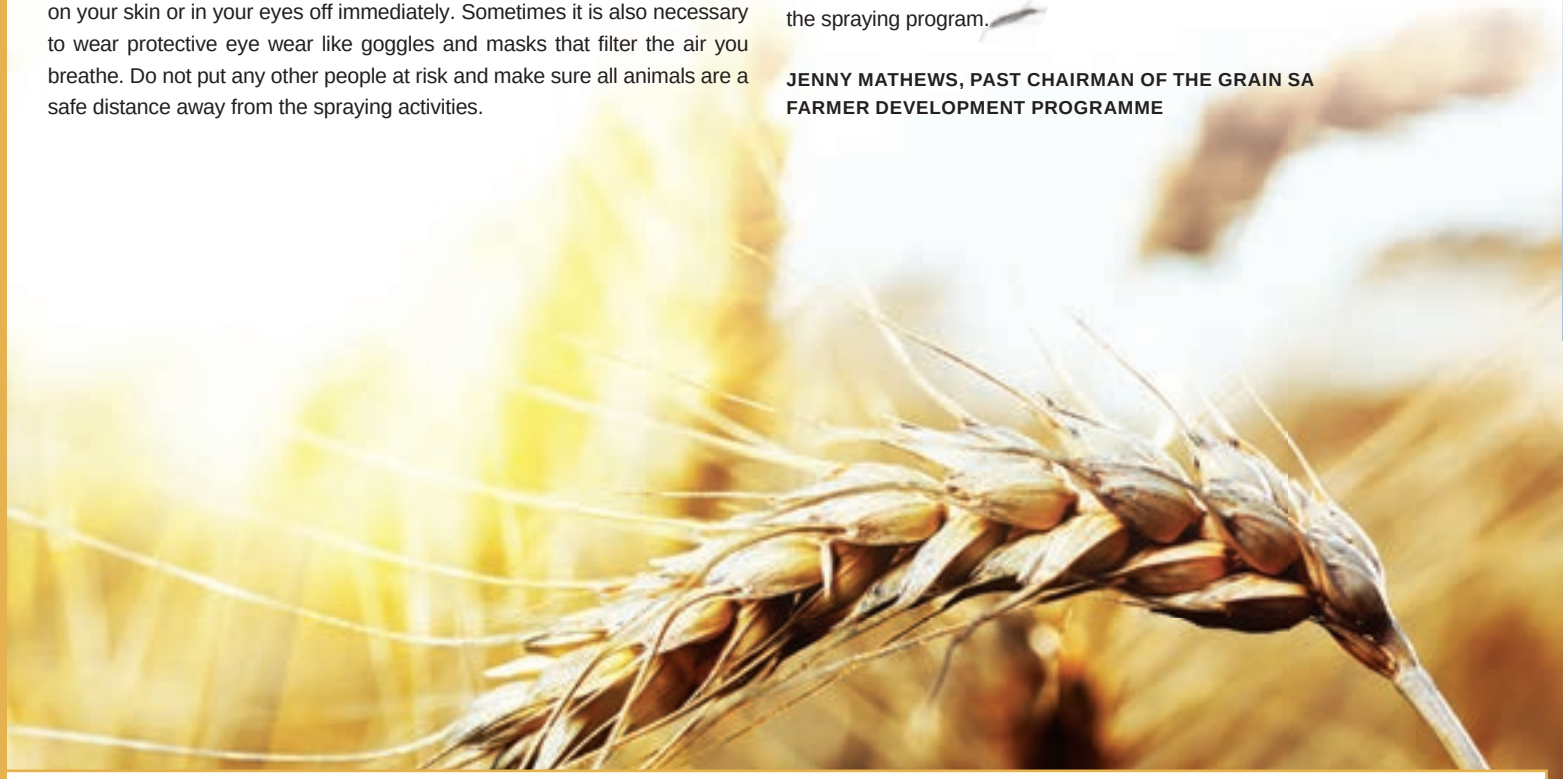
Spray operators are advised to drink lots of water in order to avoid dehydration and they should never smoke, eat or drink while actually handling the spray. It is not advisable to spray during the hottest part of the day. It is also not advisable to spray if the target area is either wet or if it looks as if it is about to rain. Be wise and avoid exposure to any spray drift by walking upwind from the spray and never spray in windy conditions.

What is spray drift?

This refers to the smallest droplets of pesticide or herbicide spray which float along on the wind and drift away from the specific area which is being treated. These droplets are so tiny and light that even a gentle breeze carries them. This is why the operators of a knapsack spray must be aware of wind direction and try to keep walking on the up-wind angle so the drift flows away from them. Where drift occurs onto a land which is not meant to be sprayed, serious damage to crops can occur and those costs will be calculated, with the spray operator having to pay up.

Many incidents have been reported where for example Roundup was being sprayed onto Roundup Ready maize, but windy conditions or carelessness caused spray drift to fall onto non-Roundup Ready crops with disastrous results! Spray drift has caused much unhappiness where water in rivers has been polluted or even where human settlements have felt they have been exposed involuntarily to the toxic drift. Therefore all spray owners and operators must take full responsibility for their actions and exercise precaution during application. If wind speeds are too high, it is wisest to delay the spraying program.

JENNY MATHEWS, PAST CHAIRMAN OF THE GRAIN SA FARMER DEVELOPMENT PROGRAMME



This special feature is made possible by the contribution of the Winter Cereals Trust.

News from the North West Province

Since the beginning of May, Grain SA has implemented new actions in the North West Province with the assistance of four development officers. The amount of interest in Grain SA activities in the region is increasing and in order to service this in the best way possible, it has been necessary to consolidate and base new study groups in larger centres rather than in each village as in the years past.

The reality is that it is very costly to hold meetings in the villages when we could rather offer just as effective sessions with larger groups. We sincerely hope people understand that we are aiming to reach even more people than ever before! Food security issues and land reform mean that more and more farmers must be reached with information and assistance toward best farming practices. Study group teaching sessions will be the same in each centre and the officers will continue to facilitate farmer's days, trial plots and training courses in the region.

Study groups have been launched with:

- Raymond Boardman in Potchefstroom, Ventersdorp and Koster;
- Arthur Clayton in Lichtenburg and Coligny;
- John Mathews in Mafikeng and Mooifontein; and
- Jan Pretorius in Delareyville, Ottosdal, Sannieshof and Wolmaransstad.

Grain SA is further busy with negotiations with the Department of Rural Development and Land Reform and the Department of Agriculture, Forestry and Fisheries. Following a successful partnership on 16 Free State farms in 2011 - 2012, it is hoped that we will be able to become a strategic partner with the departments and work together to recapitalise farms in the North West Province in the same way.

Quite a number of business plans have already been drawn up following on-farm visits and we sincerely hope that it will just be the beginning of more good things to come. Farmers should thus remember to keep on working hard in the fields and do what they can for their own businesses. They should also stay committed by having realistic goals rather than simply waiting around to see whether recapitalisation will come to them.

JENNY MATHEWS, PAST CHAIRMAN OF THE GRAIN SA FARMER DEVELOPMENT PROGRAMME

Understanding veld management

It is always sad to see the condition of the veld this time of the year. In most cases, the grazing has been devastated and the cattle are very thin. The bad news is that the grass will only really recover after the first spring rains. It is so very important that our farmers begin to understand veld management.

Grass and grazing land have to be understood and managed so that it can become an asset for our generation and future generations. At this stage, there are many areas where the overgrazing is so bad that I wonder if future generations will even know what it looked like.

The natural veld in South Africa can be considered as being part of the many complex and already well-defined grass veld types that occur broadly as sweetveld, sourveld and mixed veld.

The distinction of these veld types is made mainly according to the feeding value and palatability of the grasses for both small and large livestock during the winter months.

As a general rule of thumb, in areas of high rainfall, the possibility of the nutrients in the soil being leached is also high. In lower rainfall areas, more nutrients are retained and so the feeding value of the veld or natural pastures is thus higher in the winter.

To prepare for the cold and harsh winters experienced on the highveld, veld grasses transfer or translocate nutrients into their roots at the end of summer and prior to the onset of the first frosts.

This factor is an important aspect to consider when managing your veld. Grazing for too long before the winter will not give the grass enough time to be able to grow more leaves, which will enable it to make the plant nutrients that will be stored in the roots. The nutrients are essential to enable the plant to start growing strongly at the beginning of spring. Inspect your camps from time to time throughout the summer in order to assess whether or not overgrazing is occurring. The cattle can then be moved to other camps. A brief and broad description of the important aspects of the main veld types are shown below.

Important sweetveld factors

Sweetveld occurs mainly in low-lying and nearly frost-free areas in a rainfall range of 250 mm to 625 mm per year. The grasses usually provide palatable grazing throughout the year in well-conserved and well-managed veld.

When you walk through the veld on your farm in winter, the main leaf stems that remain in the mix of grasses can be tested as follows. The leaf stems of the palatable grasses break very easily between your

Rooigras tuft that was removed during the middle of July, after about 40 mm of rain was received during June.

fingers, with the less palatable grasses being quite tough to break. This test will give an indication of the ratio of sweet to sour grasses that make up your veld.

Sweet grasses are palatable, meaning good tasting, to your livestock and are also more easily digested in the stomachs of the animals. It is for this reason that sweetveld can be sensitive to overgrazing if too few animals are left in a camp over a too long period in the summer months. The animals then have time to pick out and continuously graze the better-tasting sweet grasses.

If correct grazing practices are practised, a camp of mixed sweet grasses can recover quickly after grazing if good rainfall conditions are experienced.

Rooigras or red grass is found in most sweetveld, can be the predominant climax species in certain areas and is a very important livestock feed resource that should be conserved.

Important sourveld factors

Sourveld occurs mainly at higher altitudes and lower temperatures than sweetveld, in areas with a rainfall range of 625 mm or more. The leaves and stems of the grasses in this sort of veld are harder and contain more lignin, a plant material that provides structural support in the stems of grasses that is less easily digested in the rumen of livestock than the sweetgrass veld types. These grasses are only palatable when green during the summer months and thus have a low nutrient value during the winter months.

This type of veld can tolerate overgrazing, resulting in a lower livestock production over time. If overgrazed, it recovers slower with better climatic conditions than sweetveld.

In Harrismith, large areas of sourveld can be observed while travelling on the main roads. This veld is often burnt during winter to control tick infestations and to promote a rush of green palatable growth during spring. This is however a questionable practice and definitely not a recommended practice for sweetveld or mixed veld areas.

Mixed veld

The characteristics of the mix of grass types in mixed veld is somewhere between and contains both species of sweet and sour grasses. If a mixed veld contains more sweet grasses than sour grasses, it is known as sweet mixed veld, or if it contains more sourveld type grasses than sweet grasses, it is known as sour mixed veld.

Rooigras or Red grass on your farm

The Latin name of Rooigras, as it is commonly known, is *Themeda Triandra* and is found in all veld types in South Africa and is also regarded as one of the most important naturally occurring sweet grasses for livestock production. It is the climax species of veld grasses in many areas. A climax species or veld type is made up of a type of grass plant that is self-perpetuating over many if not millions of years if left undisturbed and subject to natural grazing, for example long-term intermittent burning patterns caused by lighting strikes.

It is very useful to be able to identify this grass in your veld. On many farms that have been overgrazed, you will not find many tufts of rooigras in a veld mix, especially when observing the veld during winter.

The photo of a rooigras tuft removed during the middle of July, after about 40 mm of rain was received during June, is shown. The grass has already experienced frosts of up to 8˚C below freezing. If you look

Veld in the Eastern Free State with almost no rooigras tufts in evidence showing up as being very white.

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Understanding veld management

carefully, a few green leaves can be observed. These leaves are critical for the plant to be able to start growing the new roots for the new production season at the onset of spring.

As a general rule of thumb, although this plant is in the winter dormant stage, the extent of roots in the soil below the plant will be similar to the extent of growth above ground, whether determined during winter or summer growth.

Burn damage

It is a common or traditional practice to burn any veld to "promote" the growth of green shoots in spring. It however should be realised that if the above veld was extensively burned during August or September, the plants would suffer extreme harm and the green roots present would be destroyed.

Although the camp will look beautifully green in spring, the farmer might be tempted to put the cattle or sheep in the camp. Any overgrazing will severely deplete the reserves of the plants, which might not have enough nutrients to be able to put down the roots that will enable the much-desired maximum leaf and plant development required during the summer months.

A well-conserved "climax" rooigras camp will have predominantly red leaves in winter and blue-green leaves during the high growth periods in the summer months.

It would be to your advantage and education as a farmer to purchase a book on the grasses of South Africa so that you can be able to identify rooigras on your own farm. Rooigras is easily confused with the red-looking tufts of turpentine grass commonly found in overgrazed veld.
Rooigras is regarded as one of the best grazing grasses in the highveld regions, seeing as its leaf production is high and very palatable when young during the spring and summer. If a camp is left rested and ungrazed during the summer, a well-conserved cover can very well be utilised to take the livestock through the winter.

If the correctly combined salt and phosphate licks are used, good rooigras veld can be regarded as a very strategic, cost effective and palatable source of feed in the fodder flow plan during winter. Together with controlled summer grazing and in conjunction with maize and other crop residues in the winter, it is a resource that will respond to well-planned and good management.

ARTICLE SUBMITTED BY A RETIRED FARMER