PULA IMVULA

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NKGONO JANE SAYS...

IN THIS ISSUE...

COVER ARTICLES

04 Grain SA's 2013 harvest of farmers
The Grain SA/Absa Developing Grain Producer of the Year was awarded to Maurice Mthandeki Boki...

INSIDE

07 The use of post-emergent herbicide for weed control
It can be a very daunting task when it comes to selecting...

08 Management and control of stalk borer
African stalk borer, classified by its Latin designation and scientific name as Busseola fusca...

10 Who is the Winter Cereal Trust?
During the phasing-out process of the agricultural control boards, the winter cereal industry identified the need for...

11 Successful days held in Western Cape for farmers
Two very exciting and inspiring farmers days were held...

12 Wheat management factors to consider for December
The main factors to consider during December 2013 for...

This is a wonderful time of the year – most families get to spend quality time together and enjoy the period of peace and rest.

For many farmers, this can be a busy time, seeing as the weeds are not concerned about "having a holiday" and they take every advantage of growing while the farmer is resting! Please be vigilant in your lands during this period and make sure that your weed control is good. Weeds remain the number one enemy of the crop farmer!

We hope that you have all managed to plant all the maize you planned and perhaps even some of the sunflowers. We must try to remember that late planting really has a negative effect on yields – plants require heat in order to grow and produce grain; when you plant late, the days will be starting to shorten as we reach the end of the summer and you will be disappointed with your crop.

Unfortunately we have been let down by our partnerships with the government this year. We were told by very senior people in the Department of Rural Development and Land Reform that they would fund farmers on 60 000 ha this year. As Grain SA we prepared all the business plans which we submitted to the DRDLR during July 2013 and nothing came of that huge effort. This is a great opportunity lost – 466 farmers could have planted crops on more than 60 000 ha. This could have made a real difference in the lives of many people living in the rural areas.

As Grain SA, we wish you all a very blessed Christmas and we hope that 2014 will bring you much happiness. May God's blessings be showered on you.

14 When the harvest is in the silo…
In the Western Cape the summer months are in most cases the time to wind down following a full grain...

14 The advantages of biotechnology for developing farmers
Herbicides have been used for more than 50 years to...

15 Earthworms: The farmer's important partner in conservation farming
Did you think earthworms are good only for fishing?...

16 The do's and don'ts of plant-parasitic nematode control on soybeans
Nematodes on soybeans are one of the pests that has...

17 Include machinery maintenance in your routine
One of the most vital aspects in our farming operations...

18 A road map through the 'potholes' and 'mud holes' of groundnut leaf spots
Groundnut production has to follow a 'road map' very...

19 Biosecurity in the stock industry
It is important to the stock farmer that new diseases (new infestations) do not enter his farm and spread...

23 The Corner Post
The Land and Agricultural Development Bank of South Africa is a specialist agricultural bank guided by a...

On our front page: from left: Louw Steytler (chairman of Grain SA), Brienne van der Walt (Absa), Maurice Boki, Jannie de Villiers (CEO: Grain SA) and Ian Househam (provincial coordinator: Grain SA Farmer Development Programme, Eastern Cape). In front is Jane McPherson (programme manager: Farmer Development Programme, Grain SA) and Landi Kruger (data administrator and economist: Grain SA Farmer Development Programme).

Grain SA's 2013 harvest of farmers

The Grain SA/Absa Developing Grain Producer of the Year was awarded to Maurice Mthandeki Boki from Matatiele on 11 October 2013 in Midrand, Gauteng. With Maurice's crowning still fresh in the mind, the Day of Celebration also placed the spotlight on the other achievers in the Farmer Development Programme.

On Thursday, 17 October 2013 Grain SA hosted a Day of Celebration, where recognition was given to emerging farmers for their contribution to the country's food security. This year the function was held at Amanzi Game Lodge on the outskirts of Brandfort in the Free State. More than 200 guests, which included approximately 120 emerging farmers, joined in the celebration.

During the function a number of farmers were awarded membership to the 250 Ton club or advanced to a higher level, while others graduated from the Grain SA Farmer Development Programme. This programme ensures that farmers are equipped with the necessary information and skills to contribute to food security in the country.

In her speech Jane McPherson (programme manager: Farmer Development, Grain SA) explained that the 250 Ton club was established to recognise the progress emerging farmers were making. "Becoming a farmer is a slow and tedious process, and through this club it is exciting to see the progress being made in the field," she said. She added that it gives farmers hope to see other farmers growing into the bigger categories. The Department of Agriculture and Rural Development as well as other parties were also acknowledged for their continued cooperation and support in keeping the programme alive. "We celebrate what you have made possible," she concluded.

Other speakers included Louw Steytler (chairman: Grain SA), Jannie de Villiers (CEO: Grain SA) and Karabo Pele (chairman: Maize Trust). Victor Mahlinza, a farmer from KwaZulu-Natal, encouraged the other farmers by sharing his story whilst wearing colourful trousers, which symbolised the rainbow nation. "Don't give up. Keep on keeping on," he said.

Vice chairman of Grain SA, Victor Mongoato, who acted as the programme leader, shared a Sesotho custom with guests. According to legend, a wooden spoon is passed amongst inhabitants of a community during a time of drought to symbolise the fact that

Jane McPherson

Jannie de Villiers

250 TON: The new members of the 250 Ton club: Seated from the left are Joel Ralekhetla (Welkom), Lebohang Khitleli (Matatiele) and Mncedisi Dlamini (Iyay'phandela Farming, Delmas). Standing: Victor Mahlinza (Nthabamhlopphi), Thabang Tsepe (Matatiele), Frans Mokoena (Tweespruit) and David Mongaoto (Matatiele).

500 TON: Maurice Boki (Matatiele) and Keith Middleton (Jacobsdal) joined the 500 Ton club.

1 000 TON: Tikwe Farming (Hoopstad) joined the 1 000 Ton club and was represented by Solomon Ncholu, Lukas Skei and Andries Mosoeu.

SMALLHOLDER: Vuyani Kama (Elliot), Victor Mahlinza (Estcourt, winner) and Jalisa Simphiwe (Elliot) were finalists in the Smallholder of the Year category.

SUBSISTENCE: The Subsistence Farmer of the Year is TO Mdluli (in the centre), with finalists Emmanual Hadebe (left, Estcourt) and Patrick Nxumalo (right, Estcourt).

WINNER: TO Mdluli (Subsistence Farmer of the Year) with her prize, a Husqvarna T536 tiller worth R25 000. With her is Darryl Elliot (sales representative: Husqvarna).

Grain SA's 2013 harvest of farmers

everyone will have food to eat. Landi Kruger (data administrator and economist: Grain SA) started the "passing of the spoon" and guests joined in enthusiastically.

Contributors who received a certificate for their continued support and contribution were Pannar, Profert, Sasol Nitro, the Department of Agriculture Mpumalanga, the Department of Agriculture Eastern Cape and Dirk van Rensburg.

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

- Smallholder Farmer of the Year (from 10 ha to producing 250 ton): Victor Mahlinza; and
- Subsistence Farmer of the Year (farmers who produce less than 10 ha): TO Mdluli. The elated TO not only received a supply of fertiliser from Profert, but Husqvarna also donated a T536 tiller to the winner of this category.

Gift Mafuleka moved up from the 500 Ton club to the platinum category for farmers producing at least 1 500 tons of maize annually. Three new members were added to the gold level for farmers producing over 1 000 tons: ZP Motshwene, Fanie Nkosi and Tikwe Farming (Hoopstad). Solomon Masango Farming Enterprises, Keith Middleton, Maurice Boki (Grain SA's Developing Farmer of the year) and Khaya Nkuhlu entered the silver level for farmers producing over 500 tons. The 250 Ton club's bronze division awarded certificates and badges to nine new members: Iyay'phandela farming, Musi Twala Mpumalanga, Victor Mahlinza, David Mongaoto, Victor Mongoato (vice chairman: Grain SA), Thabang Tsephe, Lebohang Khitleli, Joel Ralekhetla and Frans Mokoena.

Article submitted by Louise Kunz, Pula/Imvula contributor.

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The use of post-emergent herbicide for weed control

It can be a very daunting task when it comes to selecting the chemicals to use in order to control weeds in the lands effectively. There are so many products available today, all of which have different effects and impacts on our soils and the surrounding environment. Thus it is very important to be wise in seeking the correct advice in order to get the best possible results with the least possible negative impacts.

One of the big decisions that need to be made is whether to use pre- or post-emergent herbicides. Both of these are used at different stages of the weed growth period, as the names suggest; before the weeds have emerged (preventing germination) or after they have emerged. There can be advantages to both, but the ultimate deciding factor is the following: What will fit in best with your weed control programme? In this article we will specifically take a look at post-emergent weed control.

What is a post-emergent herbicide?

Post-emergent herbicides are chemicals that will kill weeds after they have penetrated the soil surface and have started growing. If these chemicals are applied before weeds have emerged, they will have little or no effect. Most growing seasons will require several applications of post-emergent herbicides. There are different kinds of post-emergent herbicides available on the market today. These all work differently in the way that they kill the weed; some may also vary in the method that they need to be applied. Here are the most common ones:

Systemic post-emergent herbicides

These herbicides are absorbed by the plant and make their way into the root system; they are usually used for controlling perennial weeds and work best when the weed is still actively growing.

Contact post-emergent herbicides

This kind of herbicide will kill only the portion of plant that it comes into contact with; they are used to control small annual weeds and require a good spray that will give a good coverage of the chemical.

Selective post-emergent herbicides

This kind of herbicide will kill specific plants, that is, when we want to kill all the grass type weeds and not the broadleaf types.

Non-selective post-emergent herbicides

Roundup is becoming the most commonly used non-selective herbicide, seeing as it will kill or injures any plant that it comes into contact with. Make sure your maize is “Roundup Ready” or else it will also die.

Remember

It is very important to be well informed about the herbicide that you are applying. Ask your chemical agent as many questions as possible before you go ahead and spray the chemical.

- Find out the rate of application;
- Find out the best time for application;
- Find out possible side effects;
- Find out about the drying time to get the best effectiveness;
- Ask about previous trials and results; and
- Get in contact with some of his other clients as a reference.

Being poorly informed may lead to a big cost down the line. The case of a farmer in KwaZulu-Natal can be mentioned as an example. He planted normal maize as well as Roundup Ready maize in the same land and then made the fatal mistake of using Roundup herbicide on the entire maize land. His land was dotted with the odd green plant, the rest were all dead. Beware not to make the same mistake due to negligence. The chemical rep is there to help and inform you; that is his job and we need to make use of it. Many farmers are too proud to ask questions, don’t be!

Applying herbicides

- To achieve best results it is recommended to apply herbicides on a calm day when wind won’t interfere with your spraying. Most post-emergent herbicides are also more effective when applied on a sunny day in order to have time to be absorbed.
- Caution-caution-caution! These are chemicals and may be potentially hazardous to humans, handle them with care. Always wear protective gloves and a respiratory mask when handling chemicals. Read and follow the directions on the herbicides label correctly and always wash your hands after use!

It is vital for us to develop a weed control strategy which is ongoing, safe and effective in all aspects. Post-emergent herbicides can be a good inclusion in that strategy, because of their effectiveness on established weeds in our lands.

Article submitted by Gavin Mathews, Bachelor in Environmental Management. For more information, send an email to gavmat@gmail.com.

Management and control of stalk borer

African stalk borer, classified by its Latin designation and scientific name as Busseola fusca, or insect order of Lepidoptera (butterflies) and the family of Noctuidae or owlet moths, has been a pest of commercial maize and sorghum production for many decades. Research on the life cycle of the African stalk borer and possible control measures has taken place since the early 1900's. This stalk borer is indigenous to Africa, being a pest mainly at altitudes of 600 m above sea level.

Damage

A high infestation in a maize land can have devastating effects on a perfectly planted crop. Damage to maize stalks and cobs have resulted in yield losses of up to 50% which were reported in certain irrigation areas, including the Kimberley production region, in the 2012 production season. The poor final grain quality of the remaining kernels harvested from damaged cobs also impacts negatively on the maize enterprise income.

Damage is caused by the caterpillars, or worm phase, which first feed on the young leaves and then enter the stems of the growing maize plants. Growth points of the stems can be cut off and killed. This is known as dead-heart, with the youngest leaves being easily pulled off. White leaves within a canopy are evidence of an advanced worm infestation.

At a later stage of the maize plants' growth cycle, the caterpillars make extensive tunnels inside the stem resulting in loss of nutrients and collapse of the stem.

The production potential of the whole plant is thus reduced. Depending on the planting date, maize plants can be affected by two generations of caterpillars, with the first inflicting damage on the stalks and the second by boring into the maize cobs.

Life cycle

Eggs

The moths lay eggs which are round flattened and about 1 mm across in diameter. Batches of eggs of between 30 and 100 at a time are laid under the sheaths of leaves between the new stems and growing leaves. The very small black caterpillars hatch from the eggs in about seven to ten days.

Farmers should regularly inspect their maize plants at all stages to scout for the telltale egg batches under the sheaves.

A stalk borer can have devastating effects on a perfectly planted crop.

Caterpillars

The caterpillars then crawl up into the leaf funnel after hatching, where they feed for two to three days.

Farmers usually see the tiny "shot shell" symptomatic holes in straight lines on the leaves as the first warning that an infection has taken place. More extensive damage is indicated by the appearance of larger "window panes" in the leaves as the caterpillars eat more of the leaf surface area.

The worms can then migrate to other maize plants or tunnel into the stem where they feed and grow within the stems for two to three weeks. After full growth maturity, a hole is cut in the side of the maize plant stem after which the worms start the pupation phase. Pupation is the next phase in which the caterpillars metamorphose or undergo a biological change to form a pupa, which in turn develops into a moth. No silky protective cocoon is made as is usual for other moths and butterflies.

This larval period is usually about 35 days in favourable conditions, but during dry and/or cold conditions the caterpillars enter into a resting period of six months or more in stems, stubble and other plant residues. With the onset of the first spring rains the caterpillars pupate within the stems.

After 7 to 14 days the adult moths, with a 25 mm wingspan, emerge from the pupae, come out of the stem and start flying mainly at night at about 60 cm from the ground. The moths are rarely seen during the daytime.

Moths

After the male and female moths have mated, another life cycle is then repeated when the adult female lays eggs on suitable plants.

Control and management of the problem

As most chemical consultants will attest, there is little to be done once the larvae have entered the stem. The more potent insecticides that

have a systemic action, which work throughout the plant as it grows, have been officially withdrawn from the market in the interests of promoting a safer ecological environment.

Farmers must rely on the spraying of one of the many commercial pyrethroid plant chemicals that can kill the early larval stages of the stalk borer. Pyrethroid chemicals, when applied, are safe to the environment. Treatments which include overall spraying or hand placement of the pyrethrum mix down the maize leaf funnel, are really only partially effective and only effective when the small larvae are exposed at the "shot leaf" stage.

Control of the pest in irrigated maize plantings has been successful with the application of commercial pyrethroid chemicals through the pivot watering system every ten days. Ask your chemical consultant for further information.

The incidence of the flight of the maize stalk borer moths can also be monitored by using specially designed pheromone traps that attract the moths at night. The traps can be checked and the concentration of moths trapped will enable a prediction of when any larvae might emerge.

Long-term preventative measures

The only answer to lessen the impact of the crop must come from other management or control strategies. These will include cultural practices that emphasise proper crop rotation, improvement of soils and soil fertility (as strong healthy plants resist insect attack), choice of resistant cultivars or Bt maize trans generic cultivars, that if carefully managed can restrict the maize stalk borer problem.

As the moths overwinter in maize residues, any management practice that can ensure the reduction or destruction of maize stubble will decrease the likelihood of larvae overwintering. This is especially important in dryland or irrigation areas where maize is continuously produced under monoculture.

Slashing maize stubble as well as disking and ploughing or burning, as is practiced in irrigation rotation of maize with wheat, can almost eliminate the carry of larvae to the next season. Maize residues can be baled and fed to livestock or turned into compost and returned to the land. Each farmer needs to assess which measures will work or are sustainable and in line with the enhancement, preservation and conservation of our soils. The application of proper conservation tillage techniques can make these measures impractical to implement.

The responsible use of Bt maize cultivars

The Bt trans generic or insect resistant maize cultivars were introduced to South Africa in 1997 and have been widely adopted by both dryland and irrigation maize farmers. The first generation of these cultivars were extremely resistant to stalk borer infestations in the first few years with no loss of yield to stalk borer being evident. The use of Bt cultivars approaches almost 100% in certain production areas.

During 2007 the first resistance to stalk borer in Bt maize was reported and the situation has deteriorated ever since.

When using Bt maize the farmer is contracted to plant areas of normal or non-Bt maize cultivars of between 5% and 10% of the total area planted as strips or bands within the main Bt maize planted land. For instance, eight rows of normal maize would be planted about every 200 m, starting with a strip at the edge of the land.

The non-Bt maize is infected with stalk borer as normal, but all survive. On the other hand, some of the millions of larvae that have infected the Bt maize won't be killed and survive to infect the next year's Bt maize planting. This method only delays, by a number of years, the build-up of stalk borers that are no longer controlled by the Bt maize cultivars being planted.

It is vital for all farmers to comply with the regulations that go with responsible use of Bt maize cultivars as they are a very important tool to be used against future stalk borer infestations and huge commercial loss. The development of new Bt maize cultivars that are resistant to stalk borer is a long and very costly process.

Summary

Stalk borer cannot be ever completely controlled, but the farmer can manage the reduction of the incidence of the pest and loss of income by using a variety of proven methods within the constraints of a responsible holistic long-term outlook.

Article submitted by a retired farmer.

Who is the Winter Cereals Trust?

During the phasing-out process of the agricultural control boards, the winter cereal industry identified the need for certain functions executed by the Wheat Board to be continued after dissolution thereof.

The functions which were identified for continuation were the provision of market information, laboratory services and financial support to research projects.

The winter cereal industry decided to establish two separate trusts, namely the Winter Cereal General Trust and the Winter Cereal Research Trust. The objectives of the Winter Cereal General Trust were "the maintenance of information required by the industry" and the broadening of the market for South African produced winter cereals. The objective of the Winter Cereal Trust was to undertake and/or support research with regard to winter cereal in South Africa.

The two trusts were established in 1997, the same year in which the Wheat Board ceased its activities as an agricultural control board.

As the Wheat Board did not have excessive funds which could be transferred to the trusts, the industry requested the Minister of Agriculture to impose statutory levies on wheat , barley, oats and durum (the levy on durum was terminated in 2010) to finance the functions as described in the objectives of the trusts.

In 2000, the Boards of Trustees of the two trusts decided to amalgamate the two trusts and with certain amendments to the original Deed of Trust of the Winter Cereal Research Trust, the Winter Cereal Trust was established.

The responsibilities of Winter Cereal Trust

The Winter Cereal Trust has been appointed by the Minister of Agriculture to administer the statutory levy on winter cereal. The administration of the levy must be done within the objectives of the trust and the provisions set by the minister with the approval of the levy.

One of the provisions set by the minister is that 20% of the funds collected by means of the levies, must be utilised for transformation purposes.

The Board of Trustees of the Winter Cereal Trust annually reserves 20% of levy funds collected for transformation.

Composition of the Board of Trustees

The composition of the Board of Trustees is prescribed in the Deed of Trust and makes provision for the following representation:

- Producers of wheat – 1;
- Producers of barley – 1;
- Grain handlers (silo owners) – 1;
- Processors of wheat, barley and oats – 1;
- Bakers – 1;
- Consumers – 1;
- Minister of Agriculture, Forestry and Fisheries – 6.

The Deed of the Trust specifically states that one of the ministerial representatives must be nominated by an emerging farmers' organisation.

Contribution towards Farmer Development Programme

The Winter Cereal Trust has been contributing to the Grain SA Farmer Development Programme since 2008. The contribution is in the form of direct financial support only and the trust is not physically involved in the programme, although a special Working Group annually evaluates the progress and outcomes of the programme. To date R5 146 595 has been contributed. The annual contribution increased substantially, since the expansion of the programme to include development in the Western and Southern Cape.

Importance of farmer development

The winter cereal industry is committed to support farmer development, with the focus on the development of farmers who has the potential to become sustainable commercial farmers who can contribute to food security in SA.

Message to developing farmers

Be involved in organised agricultural structures in order to share in established commercial farmers' experience and to experience the full benefits of new technology and research.

Article submitted by Awie Coetzee, Winter Cereals Trust Administrator, and Ishmael Tshiame, Winter Cereals Trust Senior Official: Administration. For more information, send an email to awie.coetzee@wctrust.co.za or ishmael.tshiame@wctrust.co.za.

Ishmael Tshiame

Awie Coetzee

MADE POSSIBLE BY THE WINTER CEREALS TRUST

Successful days held in Western Cape for farmers

Two very exciting and inspiring farmers days were held in the Western Cape on 2 and 3 October 2013. The first of these was held in Mooreesburg at the Langgewens Experimental Farm, while the other took place in Suurbraak on Alan Jeftha's farm.

The two days were a huge success and many of our developing farmers, input suppliers and officials from the Department of Agriculture attended.

The main aim of farmers days such as these is to give our developing farmers the opportunity to build networks with input suppliers and industry role-players within your area. During these two days information was presented by the Department of Agriculture regarding the correct procedures when applying for funds at the Grain CPAC. Representatives from the local cooperatives in each area were invited to not only share information, but also to communicate the support structures which they have available for developing farmers.

Many of our developing farmers in the Western Cape receive support from the Department of Agriculture, which is really good to help our farmers get on their feet. Grants are, however, not sustainable and it is very important that farmers start to plan ahead regarding how they will support themselves in future. For this reason representatives from the Land Bank were invited to give our farmers some information regarding loan options available. On-farm trials were planted by Wilmar Adams from the Suurbraak Grain Farmers Cooperative, which was also viewed and discussed on 3 October.

We would like to thank all participants for their attendance and active involvement, and believe that these farmers days have paved the way for long-term relationships between our developing farmers and industry role-players.

Article submitted by Liana Stroebel, Western Cape Farmer Development Co-ordinator. For more information, send an email to liana@grainsa.co.za.

Pieter van Wyk (a farmer from Slangrivier, Suurbraak), left, and Solomon Tshonghweni (Department of Agriculture, Landcare: Auxillary Officer, Swellendam) discussing the on-farm trials planted.

Wheat management factors to consider for December

The main factors to consider during December 2013 for wheat farmers include the completion of harvesting of the 2013 wheat crop, storage and optimum marketing of the crop.

The Western Cape wheat farmers, depending on the rainfall received during late October or November, would be concentrating on the final decisions regarding the marketing of the wheat crop. Weather conditions will also determine the quality of the grain harvested.

Production overview

The area planted to wheat in 2012 was estimated at 511 200 ha, with a final yield average per hectare of 3,75 tons/ha. As can be seen from **Table 1**, wheat is still produced in every province in South Africa. The Western Cape, at 46% of total production, provides by far the major portion of wheat in South Africa. Although there has been a decline for the Western Cape from about 340 000 tons in 2008 to about 272 000 tons in 2012, production trends show that production seems to be stabilising at about 280 000 tons. One can conclude that wheat farmers in the Western Cape still find this a profitable crop to grow within the general crop planning in this area.

The total area under irrigated wheat is currently about 146 500 ha. The high average yields indicated for the Northern Cape as well as other areas reflect the yields realised with the planting of wheat under irrigation. The Free State average yields would include some irrigation and so are not reflective of actual dryland yields realised in a rainfall season, with very mixed patterns of high and low rainfall. The statistics indicate an average dryland yield of about 2 tons for the Free State Province. These yields would, however, have shown a large variance between the Central Free State and Eastern Free State.

The estimations of the “intentions” to plant areas will, however, have been determined by December with the harvesting of actual areas planted.


1


2


3

Photo 1 - 3: Planning for planting the next crop begins as the previous crop is harvested.

MADE POSSIBLE BY THE WINTER CEREALS TRUST

Market factors

Wheat futures shown on Safex for B1 grade wheat show very little variability, with prices for delivery in October and December 2013 fluctuating in a narrow band between R3 460 and R3 475/ton delivered. March futures are indicated at about R3 544/ton. There is thus little incentive, taking into account storage costs from November to March, to hold back the sale of the current crop. Storage costs can be estimated at 0,71c/ton/day. Over 120 days this could amount to R85,00/ton plus interest on the October futures price at 6,5% per annum would amount to about R150,00/ton. A futures price of R3 695 would have to be indicated to justify holding back the sale of your crop in March.

Keep in mind that a B2 grade would be about R135/ton lower and a B3 grade about R270/ton lower than the Safex quoted prices.

Transport differentials

Most farmers probably use the services provided by their co-ops to hedge the marketing of their wheat crop on the futures exchange. Due to the financial commitments undertaken through co-ops and other financial institutions, wheat farmers will usually accept the local "spot" price offered. Please make sure that you are aware of the transport differential, which is deducted from the quoted Safex price. The Western Cape now has its own differential system based for deliveries in Paarl and not Randfontein. These differentials can range from R61 - R239/ton in the Western Cape. The distance of the producer from Randfontein is the reference point for the differential calculation for other farmers and can vary between R110 and R560/ton. These differentials can be seen for your area and nearest silo on the Safex website.

When the differentials are deducted to calculate the "spot" price of wheat, the net amount realised in the farmers' pocket can vary from between R3 483 and R 2 984/ton. At the average yields realised in the Western Cape for example, this implies a gross income range of between R10 675 and R11 320/ha.

Detailed planning with regards to when and where you sell you crop is critical to the profitability of your crop.

Summary

A wheat farmer should study the production trends and carefully estimate the probable yields that could be realised under their own farming conditions. Planning for planting the next crop begins as the previous crop is harvested. The projected future prices less transport will indicate whether or not the next wheat crop will be profitable.

Article submitted by a retired farmer.

Table 1: Wheat production dynamics in South Africa.

Wheat production dynamics in South Africa 2012 and 2013						
Item	**Province**	**Intentions to plant in 2013 in hectares**	**Area planted for 2012 in hectares**	**Final estimate – tons**	**Average yield in tons per hectare**	**Production % of total**
1	**Western Cape**	285 000	272 000	884 000	3,25	46,15%
2	**Northern Cape**	43 000	42 000	289 800	6,90	15,13%
3	**Free State**	125 000	130 000	377 000	2,90	19,68%
4	**Eastern Cape**	4 000	4 500	20 700	4,60	1,08%
5	**KwaZulu-Natal**	6 600	6 500	33 800	5,20	1,76%
6	**Mpumalanga**	4 500	4 700	27 260	5,80	1,42%
7	**Limpopo**	27 000	30 000	159 000	5,30	8,30%
8	**Gauteng**	1 500	1 500	9 750	6,50	0,51%
9	**North West**	20 000	20 000	114 000	5,70	5,95%
		516 600	**511 200**	**1 915 310**	**3,75**	**100,00%**

Note: Adapted from SAGIS statistics from the April 2013 crop estimates.

When the harvest is in the silo...

In the Western Cape the summer months are in most cases the time to wind down following a full grain crop production year. Most farmers take a week or two leave over the Christmas season to relax, but it is also an important time to plan the next crop production season.

The importance of planning your production season cannot be stressed enough. Are you sure what crops and which cultivars you are going to plant? Have you taken soil samples to be analysed in order to plan your fertiliser inputs?

Planning your production season starts with your cropping rotation. You have to map out which camp will be hosting which crop, since that will determine the amount of seed to be ordered. Make sure to order your seed early. Enough information is available to make informed decisions on which cultivars are best suited to your production area.

The next step would be to take soil samples from all your camps and have it analysed to determine the pH, acidity as well as the macro- and micro-element status of the soil. It is important to know these things, since it relates directly to your fertiliser needs. If you have to apply lime or gypsum to correct the pH of a camp, it must be done before the production season starts. Use a reliable laboratory to do the analysis and get a trusted source to determine the fertiliser needs from the analysis.

Summer weed control is also very important. Make sure that you prevent weeds from stealing your soil moisture. It might be necessary to spray more than once during the summer.

During the slow season it is also time to address your record keeping. Make sure that you have records for each camp on your farm, since the history of each camp is important in making any future decisions relating to that camp. Make notes during the season on the occurrence of weed types, possible problems experienced, input costs and yields. Precise record keeping can help manage your rotation system effectively and help make quick decisions if a change might be necessary due to the occurrence of a disease or weed problem on a specific camp.

The final step of preparation is to read. Read as much and as often as you can, but not a kiss-me-quick. Get your hands on reading material related to your farming operation; this will help in streamlining your operation and might also supply you with new ideas and valuable knowledge.

Article submitted by Dr Johann Strauss, Scientist: Sustainable cropping systems, Directorate Plant Science, Western Cape Department of Agriculture. For more information, send an email to johannst@elsenburg.com.

The advantages of biotechnology for developing farmers

Herbicides have been used for more than 50 years to protect crops from weeds. To date, herbicide use is part of food production over the world. Weed management is the number one challenge for most of the emerging farmer's problems.

With the introduction of Genetically Modified Organisms (GMO) crops more than 15 years ago, crop production took a different direction and we saw massive adoption of these crops (cotton, maize and soybean) in South Africa. The three crops can now be identified easily under a single brand known as Genuity. Biotechnology crops have undergone a rigorous safety assessment following internationally accepted guidelines and no verifiable cases of harm to human or animal health have occurred.

Demonstrations for the use of glyphosate (Roundup PowerMax) on DEKALB products, such as DKC 78-35R and DKC 78-45BR, were conducted in four regions, namely Hlabisa (Northern KwaZulu-Natal), Qwaqwa (east of Bloemfontein), Fenie (Mpumalanga) and Matlerekeng (Limpopo). These two products contain the Roundup Ready gene which provides the farmer with excellent control of weeds for maximum profits, while DKC 78-45BR also contains the Bt (Bacillus thuringiensis) gene for stalk borer control.

Glyphosate herbicide has been used effectively for more than 30 years to the benefit of farmers around the globe. It is post-emergent herbicides which farmers need to take note of. The most important thing to remember when planting Bt and YieldGard maize is to always plant a 5% "refuge area". Monsanto can also pay a visit to your field to inspect whether a sufficient "refuge area" has been planted.

Ngema started with the Bt maize and when Monsanto introduced Roundup maize (DKC 78-15R), he was the first in the region to plant it. Farmers in Hlabisa and nearby villages are following in his footsteps. Weed control is no longer a nightmare, because glyphosate is safe and easy to apply, and offers the best protection for YieldGard maize (DKC 78-45BR).

In Qwaqwa Johan Bibbey presented emerging farmers with a thorough explanation regarding the effects and benefits of Roundup PowerMax. Bibbey also conducted a demonstration of this product on Thabo Macholo's farm. Refuge planting was highlighted as vital when planting the Bt maize. As the season is gradually coming to an end, it is also important to start preparing for the next season now. Never wait for the first rains before purchasing basic inputs like seed, herbicides and fertilisers. Rather act now and start planning to avoid an unnecessary rush at the beginning of the rain season.

Johan Bibbey (Monsanto), Thabo Macholo and his father, and Dudu Mashile at the Farmers Day in Qwaqwa. Technical aspects about biotech maize were explained to farmers.

Article submitted by Magda du Toit, Corporate Communication Manager, Monsanto SS Africa. For more information, send an email to magda.du.toit@monsanto.com or contact Johan Bibbey at 082 924 1077 or John Ramashala at 083 289 9233.

EARTHWORMS:
The farmer's important partner in conservation farming

Did you think earthworms are good only for fishing? Think again…These worms, which are often overlooked, are so beneficial to the soil that they really deserve a little more attention.

The earthworm Eisenia andrei.

In the first place, an earthworm is not just an earthworm – there are different types with different functions. There are those that live in the upper soil layers and feed on plant residues. Then there are those that live in permanent, deep, vertical tunnels in which they store plant residues gathered from the surface.

There is also a third type, which lives in the soil and feeds off organic matter. All three types are not necessarily found in the same area because they require different types of soil and climatic conditions.

In soil with an acid pH or in areas where the weather is too wet or too dry, or too cold or too hot, earthworms can be scarce or even completely absent. Unfortunately, large parts of our maize production areas fall in the latter category.

Earthworms play an important role in soil, as they help to improve its structure – among other things. They do this by digging their tunnels while searching for food, and in the process they loosen soil particles and form tunnels through the upper layers of soil.

These tunnels then aerate the soil and drain rainwater from the surface. When the earthworms dig these tunnels, they draw organic matter into the soil, which in turn improves the fertility of the soil.

The earthworms also use the organic matter as food, which makes plant nutrients available. Soil that has moved through the earthworm's body is known as casts.

These casts give a crumbly texture to the soil, which is beneficial for plant growth. When earthworm casts were analysed, it was found that they contained more nitrogen, potassium, phosphorus, magnesium and calcium than the surrounding soil, which once more proves how earthworms improve the quality of soil.

Earthworms limit the number of nematodes in soil, as they are ingested together with plant residues and soil and digested. Nematodes are thus removed from the soil. Even root diseases like root rot in wheat can be reduced by earthworms feeding on the fungi that cause the diseases.

Microbial activity in soil is stimulated by earthworms. Good soil microbiology is important, as the soil micro-organisms and enzymes regulate nutrient circulation.

Micro-organisms are involved in breaking down and mineralising complex organic materials. These organisms can also break down human-made organic components and can prevent pollution by making sure these components do not end up in water.

Earthworms are also excellent indicators of pollution in soil, and are therefore used in ecotoxicological scientific tests. This involves observing interactions existing between environmental chemicals and biota.

These tests focus on different biological levels of organisation that are used as parameters for toxicity. As earthworms are continuously in contact with one another, the soil, plants and micro-organisms in the soil, they are ideal for these tests.

As soon as disturbances occur in the soil, the effects of these will be observed in the earthworms. The survival, biomass and propagation rates of earthworms can be monitored to obtain an idea of the level of pollution in the soil.

A favourable habitat for earthworms is created when no tillage takes place, as the plant residues are increased. Soil moisture, temperature and quality feeding are extremely important in promoting the growth of the earthworm population.

It has been found that crop rotation with legumes has a beneficial effect on the growth of the earthworm population, as they provide quality food to the worms. It is also important to regulate the pH of the soil, as a low pH reduces the earthworms' chance of survival.

Good irrigation and drainage of sandy and clay soil in particular, as well as the addition of fertiliser and organic additives, also help to create favourable conditions. It is also important to check on the application of toxins, as some, like aldicarb, carbaryl, carbofuran, chlorpyrifos and methomyl, are harmful to earthworms.

Because of the function of earthworms in the soil, they are an extremely important partner to farmers. This applies particularly in conservation farming systems, where the soil is no longer disturbed. The number of earthworms quickly increases as soon as the conditions in the soil are favourable. Conservation farming farmers therefore use the number of earthworms in the soil as an indicator of soil quality.

Article submitted by Charné van Coller, ARC-Grain Crops Institute, for SA Graan/Grain December 2012. For more information, send an email to VancollerC@arc.agric.za.

The number of earthworms quickly increases as soon as the conditions in the soil are favourable.

The do's and don'ts of plant-parasitic nematode control on soybeans

Nematodes on soybeans are one of the pests that has the most serious financial consequences and can cause the farmer considerable harm if he is caught unawares.

Unfortunately, nematodes often catch the farmer unawares, because they are not visible to the naked eye like insects for example. They therefore have the chance to make themselves at home in the soybeans. By the time the farmer observes that something is wrong, it is often far too late.

Eelworms that occur the most on soybeans

Among all the plant-parasitic nematodes found on soybeans, root-knot nematodes (Meloidogyne spp.) and lesion nematodes (*Pratylenchus* spp.) are the nematode species found most often on soybeans.

Seeing as they have such a wide range of hosts, root-knot nematodes cause the most problems of these two nematode species. Root-knot nematodes parasitise not only on soybeans, but also on most of the other crops that are often included in a soybean-based crop rotation system.

It is therefore not easy to get rid of root-knot nematode. All the farmer can do in such a case is to try and keep the nematode numbers low enough so that the damage they cause does not affect his pocket. The control methods discussed below will work not only for the root-knot nematode, but also for all the other nematode species.

Control measures for nematodes on soybeans

Once again it is very important to combine two or more of the control measures, so that if the one measure fails for some reason during the season, the farmer can still fall back on the other control measure. This will spread the risk for the farmer and will increase his chance of harvesting a good soy crop.

Chemical control

To date, no chemical control measures have been registered for controlling nematodes on soybeans. The other measures that are discussed below should therefore be implemented.

Crop rotation

Crop rotation is strongly recommended, not only because crops can benefit from one another, but also because diseases can be stopped. Unfortunately, many farmers do not have a very wide choice with regard to crops that can be included in their soybean-based crop rotation systems.

However, there are many levels of resistance between cultivars of a specific crop. If the farmer has problems with root-knot nematodes, the agent from whom the seed is purchased can indicate whether nematode-resistant cultivars are available.

Crop rotation can be combined with all the other control measures.

Resistant soybean cultivars

If they are available, soybean cultivars that are nematode resistant can be very valuable to the farmer. Such a cultivar can ensure a good income for the farmer from nematode-infested fields, while the nematode population can be brought under control. This method is also environmentally friendly and can be included in existing pest-control programmes without too much effort.

This measure can be easily combined with all the other control measures. Unfortunately, Egret is the only root-knot nematode-resistant cultivar that is commercially available at this stage.

Biological control

Many farmers are now trying out this control measure. Take into account that this method can take up to five years before showing real results.

Biological control is based on the use of live bacteria and fungi that attack the nematodes. The product therefore contains live organisms. Be careful when handling these products and also remember that they may have to be stored in a certain way.

This control measure can be combined with crop rotation and resistant cultivars. However, be careful when using this with chemical control. The chemical pesticides can kill the organisms in the biological product as well, and spraying programmes should be developed very carefully.

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Include machinery maintenance in your routine

One of the most vital aspects in our farming operations is the maintenance of our machines. We often forget about it or put it off for a "rainy day", which unfortunately have been few and far between of late. We hope this will change!

However, we cannot afford to neglect this job considering the huge capital outlay that we make to acquire this equipment in the first place. The best practice when it comes to maintenance is routine, routine and more routine!

Our farming machines and implements are made up of many intricate parts, parts that move, spin, turn, twist and shake. All of this causes wear and tear and therefore requires routine maintenance in order to keep them operating without a hitch. There is nothing more frustrating than having a hold-up in the middle of a busy planting or harvesting time due to our neglecting to look after our machines and tools. This also usually costs us a lot more money than if we had simply serviced everything before the seasonal work started.

In the time leading up to planting season, we should be disciplined about planning our maintenance schedule. Here are some important guidelines:

1. Identify priority machines, that is, ones that do the hardest work.
2. Start on the most hard working machine and finish servicing them before moving on to the next job.
3. Identify the parts on each machine or implement that take the most strain, such as bearings and belts, and get them moving and grooving like they should.
4. Once you think you are done, it is important to do one last scan through everything, because often we find that we forgot to tighten or replace something small.
5. Finally move the serviced machine out of your working space and park it somewhere where it is ready to hook up and go.

Whilst using the equipment, we once again cannot afford to abuse our machines. We need to give them the correct care and attention at all times. Usually the best method with regard to on-the-job checks is to have a "pre work" routine. It is also vital that you instil this routine into your labour force. Make it a rule that before any tractor or implement enters a land that:

1. Everything is fuelled up;
2. Everything is greased up;
3. Tyres are checked;
4. Oil is checked; and
5. All moving parts are given a good spin.

These checks may very possibly save you an unwanted stop, which would more often than not happen at the worst time possible. So don't be slack about it, rather be proactive and save time and money in the long run.

The buck does not stop there I'm afraid. We can't be good about it right through the season and then let it slip once all is in the ground or off the ground. Remember that maintenance is an ongoing job!

Tips

Here are some tips as to how you can care for your machines before you put them away for a while.

1. Firstly everything can be given a good power wash to get rid of all soil and dirt.
2. After a good wash, all ploughs and discs should be brushed down with a light coat of old oil to prevent rusting.
3. Bearings should be greased and hydraulic hose nozzles covered so that they are protected from the elements.
4. All remaining seed in planter bins must be removed so that you don't have a small crop growing in your planter as well.
5. Fertiliser hoppers on planters and spreaders must also be cleaned out to prevent rust.
6. All chains must be checked and oiled; many farmers even take them off during the down season and store them in the shed.
7. The same can be said for planter plates and fingers.
8. Chemical sprays must be cleaned out with fresh water, while nozzles should be cleaned, removed and stored away in the shed.
9. Finally, after the harvest, we need to take care of our combines and de-bulkers.
10. Spray machines down and clean out all remaining seed.
11. Grease bearings and oil chains.
12. If there was something small that was hassling during the harvest, then it is a good idea to sort it out before putting the machine into storage.

Photo 1 & 2: Routine maintenance on your machinery is one of the most vital aspects of your farming operations.

Farming can be a very pleasant experience when things are going well, thus we need to do everything we can to keep them going well.

Article submitted by Gavin Mathews, Bachelor in Environmental Management. For more information, send an email to gavmat@gmail.com.

A road map through the 'potholes' and 'mud holes' of groundnut leaf spots

Groundnut production has to follow a 'road map' very carefully. Taking shortcuts usually leads to trouble. There are 'potholes' and 'mud holes' that can make your journey difficult and often turn out to be very expensive. Your groundnut 'vehicle' requires maintenance, and a good service plan just facilitates the task.

Regular inspection of your 'vehicle' is the first step in ensuring that the necessary maintenance is done at the right time. The inspection guideline for groundnuts is simple: it is vital to walk through the fields regularly.

Plants should be physically opened so that the core of the foliage can be examined for possible signs of leaf spots (**Photo 1**), as this is where you will find the first signs of leaf diseases.

As soon as the first signs of leaf spots are identified, corrective steps should be taken to limit the effect of the leaf disease. Because of the current high input costs, the producer has to decide himself whether he wants to do preventive or remedial spraying.

Make sure that only registered products are used on the groundnut plants, as GAP and HACCP regulations are strictly enforced. Together with the chemical representative, make sure that the chemicals are rotated regularly so that the disease-causing pathogens do not become resistant to the chemicals.

It is also important to identify the 'potholes' and to know which climatic conditions favour their development. The first major 'pothole' is early leaf spot, which usually occurs at the beginning of the season.

The symptoms of early leaf spot are brown scars with a yellow ring on the upper side of the leaf surface (**Photo 2**). The disease occurs in conditions of high humidity, in temperatures of 20°C and 24°C, and when the leaf surface does not dry off quickly enough. If the favourable conditions last for a long period, plants will become infected.

Late leaf spot is the second 'pothole'. This leaf spot appears as soon as the maximum temperatures are around 20°C and the leaf surface takes more than twelve hours to dry.

The symptoms occur on the underside of the leaf and appear as a dark brown to black scar (**Photo 3**), which causes excessive leaf drop over a short period.

Web blotch, which can occur any time from December, is the most unforeseen 'mud hole'. This type of leaf spot flourishes in conditions of high humidity where the leaf surface is slow to dry at temperatures of between 15°C and 20°C. In the beginning web blotch looks like ink spreading between the fibres of a sheet of paper. Later the scar becomes almost circular, with serrated edges, and a web-like shine can occur on the scar (**Photo 4**). If conditions are favourable for the pathogen, web blotch can cause the entire groundnut plant to defoliate within a matter of two weeks.

Leaf spots are difficult 'potholes' and 'mud holes' that have to be cleared very quickly. The early detection and the implementation of control measures will prevent the precious foliage of the groundnut plant from being lost, and will ensure that adequate nutrients are produced to fill the groundnut pods.

A healthy plant means a good yield. Protect the leaves of your groundnut plant to ensure a smile on the face of the owner of the groundnut 'vehicle' at the end of the season.

Article submitted by Loureine Salomon, ARC-Grain Crops Institute, for SA Graan/Grain December 2012. For more information, send an email to salomonl@arc.agric.za.

1

The examination of the foliage of a groundnut plant.

3

Web blotch in groundnuts.

2

Early leaf spot in groundnuts.

4

Late leaf spot in groundnuts.

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Biosecurity in the stock industry

It is important to the stock farmer that new diseases (new infestations) do not enter his farm and spread among herds or between herds.

Usually the animals on a farm do not have good or any resistance (no immunistatus) against new diseases that enter the farm. This new disease or diseases usually affect a number of animals, and many animals can also die, leading to major financial losses.

A biosecurity plan is therefore an essential instrument for helping the producer to control these diseases. Such a plan spells out all the activities required on the farm to ensure that new diseases do not enter the farm and infect all the animals.

State's responsibility

At national level the state is responsible for biosecurity control in the country. The import and export of all live animals should be controlled, and the state must ensure that imported animals are healthy and free of diseases and infections.

The state also controls the import of products like kitchen waste from international ships and aeroplanes that can contain disease-causing agents/micro-organisms like the foot-and-mouth disease virus.

Outbreaks of foot-and-mouth disease where animals were infected with the virus via kitchen waste have occurred in the past, with negative effects for the country's industry. Foot-and-mouth disease, which is a state-controlled disease in terms of the Animal Diseases Act of 1984, is therefore controlled by the government.

At national level the state is responsible for controlling 38 diseases in terms of the Animal Diseases Act, including rabies, anthrax, Africa horse sickness, rinderpest, Newcastle disease, brucellosis and tuberculosis.

Brucellosis and tuberculosis can be transferred from animals to humans, with negative effects. Diseases that can be transferred from animals to humans are called zoonoses. There are six such reportable diseases in terms of the Animal Diseases Act, including lumpy skin disease, Rift Valley fever, snotsiekte and blue tongue.

Responsibility of the stock owner

Diseases that do not pose a hazard to the stock industry at national level must be controlled by the stock owners at local level. The stock owner is therefore personally responsible for biosecurity at local level.

In most cases, vaccines are available against these diseases (e.g. blackleg, botulism, and redwater) that have to be controlled by the owner himself. When these diseases are controlled, good management of the farming activities is also important to restrict production losses and ensure good stock health.

Resistance of animals

It is important for the stock farmer to ensure that his animals' resistance is optimal for good health status and for biosecurity purposes.

Sound feed management, parasite control and the reduction of stress in the animals are important to ensure that the animals' health status is optimal. Animals experience considerable stress during periods of drought (when food is scarce), floods, the birth of calves and lambs, or when the calves and lambs are weaned (weaning shock).

If the animals' health is good, their resistance against disease will be optimal. The stock producer should therefore ensure that animals

Stock owners are responsible for controlling lumpy skin disease themselves. Here is an example of a cow with lumpy skin disease.

Biosecurity measures must be introduced to ensure that new diseases do not enter the farm.

Heartwater can develop in heartwater-free areas when cattle, goats or sheep transfer the heartwater tick to heartwater-free areas when the animals are moved from heartwater areas.

Biosecurity in the stock industry

are in a good condition and that their health is optimal when they are vaccinated against diseases, as their specific immunity against those diseases will then also be optimal.

Disease-causing factors that promote disease must be prevented or reduced as far as possible. Test animals that might be carriers of diseases like bovine viral diarrhoea, enzootic bovine leucosis or brucellosis.

When animals are purchased, make sure that the purchased animals are free of disease so that they do not spread diseases to your farm or herd. Dead animals should be buried or cremated, as the carcasses of infected animals left in the veld can be a source of botulism infestation for healthy animals licking them. Large numbers of deaths in animals (cattle, sheep) have occurred because they licked infected carcasses.

Prevention and control of diseases

When animal diseases are prevented and controlled on farms, the conditions on each farm, e.g. rainfall, temperature, the presence of parasites (ticks and worms), water sources, grazing, type of animal, production system, exchange of animals, presence of game and birds, and management practices, should be taken into account for effective disease control and biosecurity.

Table 1: Examples of the prevention and control of a few diseases.

Disease	A few important conditions
Brucellosis in cattle	New animals should be tested for brucellosis. Only disease-free animals should be introduced into an existing herd or farm. It is important to vaccinate all female animals against brucellosis.
Bovine viral diarrhoea in cattle	Chronically infected carrier animals with the bovine viral diarrhoea virus should be identified and removed from the herd. Consult the vet regarding the vaccination of animals against bovine viral diarrhoea.
Snotsiekte in cattle	Cattle and wildebeest should be separated by at least 1 000 m to prevent cattle from being infected. Control the movement/removal/transport of wildebeest. No effective treatment or vaccine against snotsiekte is available.
Rabies in cattle, humans, kudu and meerkat	The disease is controlled by the government. Dogs and cats should receive preventive vaccinations. The disease is a zoonosis and can infect humans as well.
Anthrax in stock, humans and game	Anthrax is controlled by the government. Annual immunisation of cattle is compulsory. People whose jobs expose them to anthrax can be vaccinated preventively against the disease.
Blue tongue in sheep and goats, cattle and game	The Culicoides midge transfers the blue tongue virus to sheep, goats and cattle. Plan the lambing season so that the ewes lamb during the peak blue tongue season (autumn and summer). Sheep have to be vaccinated.
Enzootic bovine leucosis	Infected animals remain infected with the virus for the rest of their lives. No treatment or vaccine is available against the disease. The immunity of infected animals is suppressed and their performance (milk production and reproduction) is affected. The disease has a negative economic impact on dairy herds.
Rift Valley fever in sheep, goats, cattle and humans	Rift Valley fever is a viral disease in sheep, cattle and goats that is transferred by insects (mosquitoes). This disease is also a zoonosis and affect humans. It is not practical to exterminate or effectively control the mosquitoes (vectors) carrying the Rift Valley fever. Immunisation of the above ungulates is the only practical and feasible control measure.
Horse sickness	The midge *Culicoides imicola* transmits the horse sickness virus to horses. Horses should be vaccinated annually. Horses should be stabled late in the afternoon, at night and early in the morning. The midges are nocturnal insects and do not tend to enter buildings. Preferably breed vaccinated mares. The breeding season should preferably be arranged so that the foals do not reach the age of six months during the period (summer months) when the midges are active.

The purchase of new animals and the movement of animals between camps have a material effect on animal health and should be taken into account. Ensure that all animals have been vaccinated against the prevailing diseases in the area and those that occur on the farm, and also make sure that the animals receive boosters as required.

Young heifers or bulls must receive a booster four weeks after their first vaccination against blackleg or anthrax (and other diseases) to ensure optimum immunity.

All new animals brought to the farm should be tested and free of diseases. It is advisable to consult your vet about the prevention and control of animal diseases and what steps should be taken to ensure that the biosecurity on your farm is optimal.

Effective vaccines are available for the most important diseases in South Africa to prevent diseases in animal, e.g. for blackleg, dikkop horse sickness, lumpy skin disease, blue tongue, pulpy kidney, horse sickness, brucellosis, strangles, and porcine parvovirus infection.

Where no vaccines are available to vaccinate animals, the prescribed management practices for preventing those diseases should be carefully followed, for example in the case of snotsiekte, tuberculosis and lung disease.

Farming systems

The biosecurity measures for an intensive farming system like dairy cows on a zero grazing system or cattle kept in a feeding pen differs from those for beef cattle, which are kept on an extensive system.

Contact your vet to compile a complete biosecurity programme that will work effectively for your specific farming system.

People can carry diseases and visitors can therefore inadvertently spread diseases from outside and from one farm to the next. All visitors should be aware of the biosecurity measures on the farm.

'No entry' signs can be used judiciously and visitors can be asked to wear rubber boots on the farm. Animals should be tested for diseases regularly and sick animals should be separated from the healthy ones.

It is wise to place newly purchased animals in quarantine for a period of three to four weeks.

Aspects of handling purchased animals

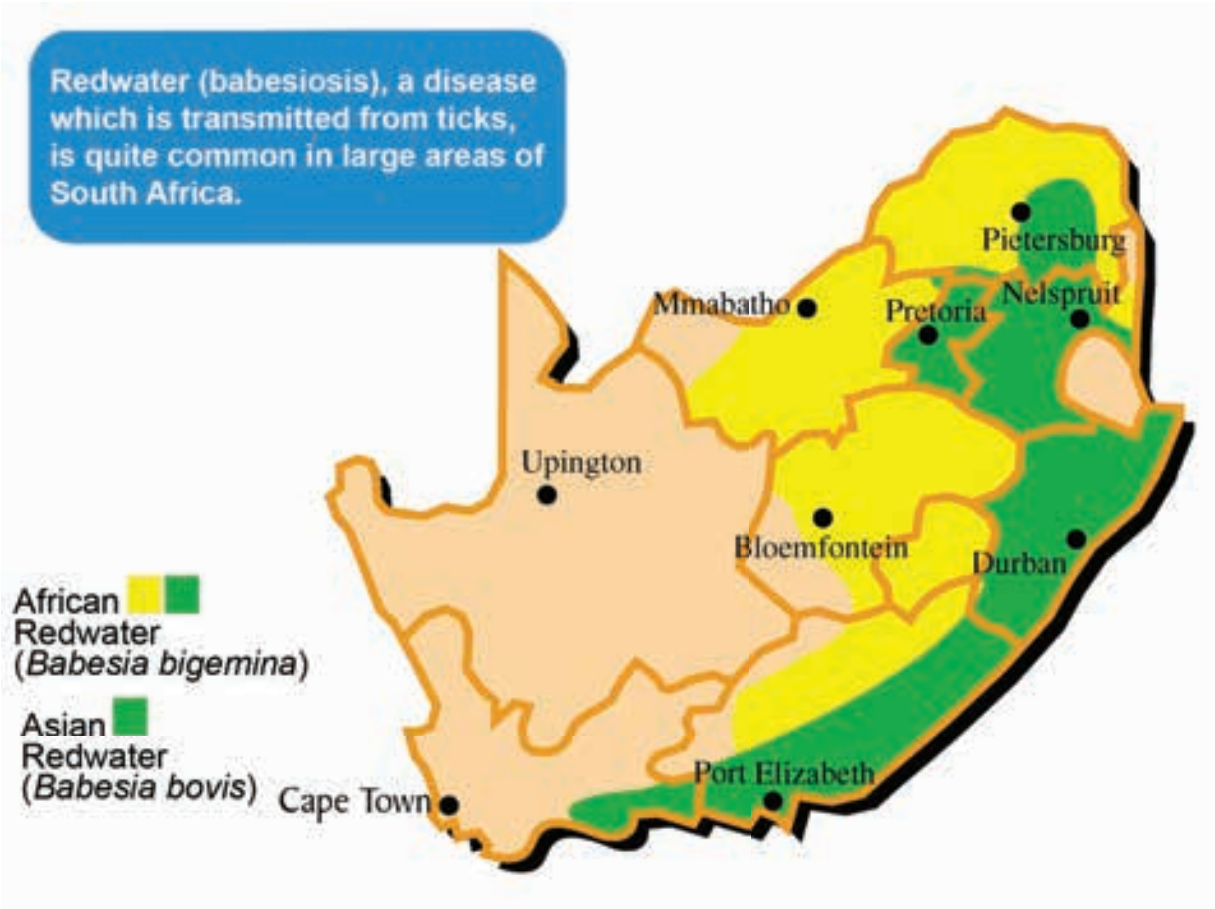
All animals that are purchased for the farm should be dipped to eliminate external parasites (for example ticks, lice and mites). Animals should preferably be dipped before they arrive on the farm.

If heartwater and redwater do not occur on a farm, purchased animals with heartwater or redwater ticks can infest the farm and already established animals can die of the above diseases if they are bitten and infected by the ticks.

Ensure that all purchased animals are preferably dewormed to eliminate internal parasites so that the farm is not infested. Consult your vet for particulars in this regard.

It is wise to keep purchased animals separate (in quarantine) for four weeks before adding them to other herds. If the purchased animals are sickening with something and are still in the incubation period, the disease will appear during the period of quarantine.

All animals that are purchased should be tested for certain diseases that are of financial and strategic importance, e.g. brucellosis, enzootic bovine leucosis and tuberculosis. Consult your vet for details. The purchase of carrier animals of dikkop



The map indicates the areas where redwater occurs in South Africa. Make sure that cattle that are moved from redwater-free areas to redwater areas are immunised.

Biosecurity in the stock industry

This dairy cow has enzootic bovine leucosis. Make sure that all animals purchased are tested and free of bovine leucosis.

Snotsiekte comes from blue and black wildebeest. Make sure that cattle and wildebeest are separated by at least 1 000 metres to prevent cattle from being infected.

Feeding pens represent an intensive cattle-farming system. Sound biosecurity measures are therefore extremely important here for animal health.

This horse died of acute dunkop horse sickness. Foam is visible in his nostrils. Make sure that horses are vaccinated against horse sickness annually.

blackleg germs (Clostridium novyi) or other micro-organisms poses a major hazard to non-immunised animals that are already on the farm. Consult your vet with regard to immunisation programmes (vaccination) to be followed to protect animals.

Moving animals between camps on the same farm always poses a potential hazard with regard to certain diseases like redwater, tick-borne gall sickness, blackleg and anthrax outbreaks. You should therefore ensure that the immunisation programme for your farm is up to date.

Conclusion

If the risks facing stock farmers are taken into account, it is wise to make sure that a biosecurity plan for the farm is in place and that everybody adheres to it. In this case – like in many others – prevention is better than cure.

Article submitted by Dr Jan H du Preez, Managing Director, Institute for Dairy Technology: MPO for SA Graan/Grain December 2012. For more information, send an email to jan.dupreez@mpo.co.za.

The Corner Post

Land Bank – a specialist agricultural bank

The Land and Agricultural Development Bank of South Africa is a specialist agricultural bank guided by a government mandate to provide financial services to the commercial farming sector and to agri-businesses through financial products that will facilitate access to finance by new entrants to agriculture from historically disadvantaged backgrounds.

The bank has been the leading agricultural financier in South Africa since its inception in 1912. It offers tailor made financial services to established and emerging farmers. The bank strives to be a provider of world class agricultural financial services. As a government owned institution, part of its mandate includes contributing to rural development and stability, social upliftment and job creation.

Vision statement

To be a profitable bank in land and commercial agribusiness banking and insurance in order to enable the generation of capital resources to deliver on the financial and non-financial development mandate in an impactful, visible and sustainable way.

Our mission

The mission of the Land Bank is:

- To develop and provide appropriate products for commercial and development clients.
- To leverage private sector investment into the agricultural sector. To develop partnerships with intermediaries for on lending.
- To develop techniques for financing high-risk agriculture and new business areas.
- To support programmes of the Minister of Agriculture and Land Affairs by aligning the bank's products with these programmes.
- To contribute to rural development by linking up with government structures and activities.

These include the Land Redistribution for Agricultural Development (LRAD), Agricultural Sector Plan and the government's Integrated Sustainable Rural Development Strategy (ISRDS). The Land Bank is in the business of lending money to clients. As a development finance institution, the bank is also constantly looking at ways of supporting the farmer and contributing to development, without focusing on profit as the only motive. The bank recognises that as an institution, it may not always directly provide all the elements, as some are not in its competence, but it will seek out partners and create alliances to ensure that collectively, the key ingredients that a farmer requires to be successful are delivered. The alliances and partnership entered into, seeks to ensure delivery on the most important aspects for emerging farmers' success, which are land, capacity/skills and financial resources.

Product offerings

Long-term loans

- Property purchase – up to 25 years.
- Capital improvements – up to 15 years.
- Livestock or implement purchases – up to 15 years.
- Repayment of agri-debt – 10 - 15 years.
- Repayment on the loans is scheduled according to income structures.

Medium-term loans

- Establishment of perennial crops, typically used for establishing sugar cane plantations, citrus and deciduous fruit orchards, wine grapes et cetera – up to ten years.
- Emerging and commercial farmers qualify to apply for this loan.

Short-term loans

- Tailored to meet important financing needs in the production cycle, including provision of advances for crop intakes, production requirements and other related services.
- Production credit loans are annually repayable over five years and reviewed once annually.
- Must be settled annually.
- Commercial and emerging farmers requiring production credit, qualify to apply for this loan.

LAND BANK
We stand by you

Instalment sale finance

- This loan product is used for the financing of hire purchase or the purchase of new or second hand implements, equipment and vehicles used for farming purposes – the loan repayment is for up to twelve years. For example, tractors can be financed as new for up to eight years, with the second hand tractors for up to five years.
- Harvesters can be financed for up to twelve years if they are bought as brand new and for up to eight years when they are second hand or previously owned.
- Scramblers can be financed for up to four years when they are new and up to two years when they have been previously owned or second hand goods.

ISF – large livestock

- For purchase of large livestock for stock and stud purposes which can be financed for up to eight years.
- Maximum loan of R100 000 for the purchase of large livestock for repayment term of eight years – only the livestock purchased as security.
- Maximum of R3 000 000 for the purchase of large livestock for a term of eight years – livestock to be purchased and existing livestock can be used as security.

This month's edition of The Corner Post was authored by Melita Moloi, Marketing Manager of the Land Bank. For more information, send an email to mmoloi@landbank.co.za.

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DKC73-76R	DKC78-17B
DKC62-84R	DKC78-45BR GEN
DKC73-74BR GEN	DKC78-45BR
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