PULA IMVULA

GRAIN SA
GRAAN SA

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>> GROWING FOOD >> GROWING PEOPLE >> GROWING PROSPERITY >>

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PULA IMVULA

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NKGONO JANE SAYS...

IN THIS ISSUE...

Grain SA has been in the fortunate position to manage a farmer development programme which has been a result of cooperation between the Maize Trust, the Winter Cereal Trust, the Sorghum Trust, the Oil and Protein Seeds Development Trust, the ARC and the AgriSETA. Over many years, a team of dedicated people have worked tirelessly to transfer skills and knowledge to farmers while assisting them to use that land that is available to them.

The purpose of the programme is simple and straightforward – to help the farmers use whatever land they have available for optimal crop production. Regrettably we are experiencing pressure from certain political quarters – people who want to take the programme away from Grain SA and possibly stop the programme altogether. Their agenda is unclear and they are certainly not acting in the best interests of the developing farmers. As Grain SA, we are going to do our very best to continue to serve you, our farmers. Over more than eleven years now, we have developed a relationship of trust with you and you are our priority.

Next month we will be celebrating our Day of Celebration in Bloemfontein again. This is a very happy occasion where we announce the winners of our Farmer of the Year Competition and promote farmers to the 250 Ton Club. There are so many farmers of all sizes who are progressing extremely well towards commercial production. At the subsistence level, this year we had two farmers who each planted 7 ha by hand and harvested 50 tons of maize – what an achievement. At the other end of the spectrum we had Mrs Kama from Ugie who harvested 10 tons/ha on her commercial scale operation. Wow!

We are sad to have lost two previous winners of our Farmer of the Year Competition – Mr Steven Matshididi from Thaba Nchu and Mr Lepati Macaphasa from Kestell. We mourn their loss with their families and wish them eternal rest. They were an inspiration to us with their farming operations.

Partnership to promote commercial grain production

– starting at 1 ha...

The agricultural sector in South Africa is faced with a vast number of different scenarios – on the one hand there are excellent large-scale, commercial farmers who compare with the best in the world, and on the other hand there are subsistence farmers who are struggling to feed their families.

The former homeland areas cover 13% of South Africa which is in the region of 18 million ha (only a portion of this is arable land however), and in the Grain SA Grain Farmer Development Programme, we have more than 3 500 subsistence farmer members (those currently farming on less than 3 ha of land). In order to achieve household food security with regard to staple food, each of these households needs 1 ton of maize per year. Currently these farmers are producing less than 1 ton per ha, despite many of them being in the high potential areas of the Eastern Cape, Mpumalanga and KwaZulu-Natal.

The reason for these poor yields relates directly to production practices – open pollinated seed, soil acid saturation, inadequate use of fertiliser and poor weed control. This can all be changed however.

Over the past number of years, Grain SA has been fortunate to have a Grain Farmer Development Programme which is funded by the Maize Trust, Winter Cereal Trust, Oil and Protein Seeds Development Trust, Sorghum Trust, the ARC and the AgriSETA.

The mission of this programme is: "To develop capacitated black commercial farmers and to contribute to household and national food security through the optimal use of the natural resources available to each farmer".

The farmers who are members of the programme receive training and skills development through study group meetings, demonstration trials that are planted near their lands, farmers days where they receive information from industry, a Farmer of the Year competition to encourage them, individual on farm support for the larger farmers, training courses on all aspects of grain, oil seeds and cereal production, and a monthly newsletter which gives time specific, relevant information.

There are thousands of small farmers who have been exposed to the correct practices, but unfortunately many of them are not able to access the correct production inputs, and are not supported in their fields during the critical months of summer crop production.

The concept of "commercial farming" is difficult to contextualise in the deep rural areas. The realities of the communal land tenure system do not always allow for "economies of scale". In our Grain Farmer Development Programme we have started to use the term "economies of efficiency" – you may therefore not have land of a commercial size, but you can attain a commercial yield on the land that is available.

A project is born

During 2014, the ARC indicated that they would be willing to sponsor the costs of mentorship for a number of farmers so that they adopt modern methods of production, and at the same time Monsanto made an offer to assist farmers to access very good Roundup Ready hybrid maize seed (treated) with the Roundup for 1 ha. This was the start of the project.

The success of any development programme is directly linked to the involvement and ownership of the project by the beneficiaries (farmers). Each farmer who wanted to be part of the project had to contribute R1 500 per ha which they paid into a special bank account created for this purpose (a Standard Bank Third Party Fund Administration Account managed by Grain SA). Time was running out and by 10 October 2014, 855 farmers had deposited their money.

The criteria for participation in the project were:

- Contribute R1 500 toward the costs of inputs.
- Access to a knapsack sprayer and handheld planter.
- Be a member of a study group.
- Have attended an *Introduction to Maize Production* course.
- Possession of a soil sample not older than three years.

Figure 1 indicates the location of the farmers – 1/3 in Mpumalanga, 1/3 in KwaZulu-Natal and 1/3 in the Eastern Cape.

In order to make the project a success, additional partners had to be sought. The response

Figure 1: The location of the farmers.

Photo 1: Maize under no-till.
Photo 2: Beautiful maize that was sprayed once needs one last final spray.

was very positive. As mentioned, the ARC and Monsanto were already fully committed and the following partners also came on board:

- Omnia with a discounted price on fertiliser.
- Sasol Nitro with a donation of top dressing.
- Bayer with insecticide.
- TWK with discounted prices on the additional knapsack sprayers that were required.
- Grain SA with project management and additional funding for fertiliser.

The process

It is important to be able to trace the progress of any project and fortunately Grain SA has a comprehensive data base of all the members of the development programme. Each participating farmer's information is captured on the system with the GPS points of the land (so that donors can visit the actual sites and meet the farmers).

> *"The success of any development programme is directly linked to the involvement and ownership of the project by the beneficiaries.*

After depositing their contribution, the farmers had to indicate whether they wanted yellow or white maize seed. The fertiliser order for each farmer was processed (grouping the farmers into clusters for ease of delivery). A few additional handheld planters and knapsack sprayers were bought to ensure that there was enough equipment to plant the crop at the correct time.

The provincial coordinators of Grain SA (Messrs Naas Gouws, Jerry Mthombothi, Jurie Mentz, Ian Househam, Vusi Ngesi and Lawrence Luthango) were assisted by additional mentors to ensure that the farmers were adequately trained and supported.

Training was given to the farmers on the following topics:

- Measurements and calculations
- Climatic requirements for maize production
- Soil and soil moisture retention
- Soil sampling
- Soil acidity
- Principles of conservation agriculture
- Plant growth
- Cultivar selection

Partnership to promote commercial grain production – starting at 1 ha…

Lijahasisu study group members who had attended the meeting before visiting the arable lands at Hereford.

The Ndunge study group: Thembalihle Hopewell Tobo, Mambenya Ndenza, Nomvuyo Patricia Ndenza, Nolundi Tobo, Victress Memani, Nomacabe Maguqa and Sizani Mqhutywa.

The Siyaphambili Eastern Cape study group: Sindie Nzimande (Ixopo district extension officer), Chief Msekeli Zulu (also study group member), Richard Gilson (Grain SA), Leonard Gamede, Brenda Gamede, Silindile Gebashe, Lungisa Tenza, Siyeni Nzimande, Nosipho Gebashe, Willington Nkontwna, Mandla Mkhize and Dingizwe Nombika.

- Plant population
- Planting depth
- Row width and spacing in the row
- Fertilisation and topdressing
- Weed control
- Control of yellow nut sedge (*uintjies*); and
- Correct use of the handheld equipment and calibration of the knapsack sprayer

Progress to date

All the farmers in the project have been able to plant their maize crop and the results are overwhelming – a high population of good maize plants that have been properly fertilised and received effective chemical weed control.

The farmers in the project are delighted with the results and want to continue next year. A large number of other farmers who were not involved in the initial project have also requested to be included for next year.

Proposed expansion of the project (primary production)

The Jobs Fund (a project of the National Treasury) is paying attention to the agricultural sector. Their focus is on job creation, income generation and poverty alleviation.

As Grain SA we have submitted an application to the Jobs Fund for the expansion of this project. The following is proposed:

- An individual farmer is part of the project for four years and thereafter he/she should continue on his/her own.
- The number of farmers increases by 850 per year to a maximum of 3 400 farmers (in the last year 10 200 ha will be in production).
- Each farmer starts with 1 ha and they may increase the area by 0,5 ha to a maximum of 3 ha each (in this project it must however be remembered that some farmers will use this opportunity to start real commercial farming on a large-scale as this has been done by other similar farmers already).
- The farmer contribution to the cost of the inputs will increase each year – year 1 = 25%, 2 = 40%, 3 = 60%, 4 = 80% and from year 5 onwards the farmer will carry the full cost of production.
- The contribution by industry will diminish each year – year 1 = 30%, 2 = 20%,3 = 10% and 4 = 5% – thereafter the farmers will pay the full price for the correct inputs as used in the project (they have seen the benefits of buying the correct inputs).
- The mentoring to farmers will be reduced by 25% per year so that the farmer gradually leans to do all activities on this own, under-

Samuel Ngobe at Salubindza near Hazyview, Mpumalanga.

Remo Bartels, Vincent Mdluli, Jerry Mthombothi (Grain SA) and Sophie Mlombo.

Shaka Nkosi, Simon Maseko, Simeon Mazibuko and Jerry Mthombothi.

standing the impact of his/her actions.

- The Jobs Fund will bear the cost of the mentoring, as well as the shortfall in the production input costs (this contribution decreases as the farmer's contribution increases).
- The Jobs Fund works on a basis of 1:1 funding – they will match the funding from the other partners. In the application to the Jobs Fund, we have estimated the value of the farmer's cash contribution plus the value of the discounts given by industry as the "own contribution".

The aspect of "life after the project" is an important one if this project could be replicated in other areas. Past experience has shown that the farmers must be assisted for a limited period of time, and their contribution should increase each year until they are funding the planting themselves – if this is not the case, the farmers tend to participate while they get grants and when the grants stop, the whole effort stops. We do not want this to happen.

Initially the farmers will only contribute 25% of the production costs, and industry will contribute 30% (in the form of discount) – the balance for the inputs will be carried by the Jobs Fund. However, the support will only continue (on the decreasing) basis for four years – in year five, the farmer will carry all the costs.

The improved yields take some time to be realised, although in year one there is already a dramatic improvement. In some areas there is a very bad infestation of all types of weeds and particularly yellow nut sedge, which is more difficult to control.

As the farmers become more comfortable with the principles of minimum till and chemical weed control (timing of operation), the yields improve to reach commercial levels for each area.

Aspects still to be finalised

As the project is in its first year, we have not been able to explore the marketing challenges (if there are any). In most areas of South Africa there is an existing market for grain (nationally and locally in most areas). It is envisaged that farmers will sell to the local markets until the supply exceeds the demand and at that stage, we will involve the larger grain traders and agribusinesses to become involved in the project.

> *"The agricultural sector in South Africa is faced with a vast number of different scenarios – on the one hand there are excellent large-scale, commercial farmers who compare with the best in the world, and on the other hand there are subsistence farmers who are struggling to feed their families.*

There are a large number of tractors in these areas and as the production increases, it is envisaged that tractor drawn harvesters will be required to assist with the process so that the grain can be collected centrally and marketed more efficiently. It is our belief however that what is slowing down the agricultural development in these rural areas, is the lack of good commercial level production and not the access to the markets – once the supply is there, then the infrastructure (silo dams and bags) will follow as it will have a cost benefit effect for industry.

Other possible spin-offs

As the production increases, the following opportunities will present themselves:

- Contract harvesting.
- Transport of the grain.
- Storage of grain.
- Milling (for human and animal consumption).
- Input supply depots.
- Improved and larger equipment (tractors, no-till planters and boom sprayers for those who are expanding beyond the subsistence level).

Article submitted by Jane McPherson, Programme Manager of the Grain SA Farmer Development Programme, for SA Graan/Grain May 2015. For more information, send an email to jane@grainsa.co.za.

Follow these TANK MIXTURE GUIDELINES

Pesticides (herbicides, insecticides and fungicides) are tank-mixed for various reasons including cost saving and time management. While it is common practice to tank-mix products, it is important to note that pesticides are chemicals that can react with one another to create both biological and physical interactions.

Physical interactions are more noticeable because they cause a visible reaction in the spray tank. Biological interactions are more difficult to detect as products may mix well, but the efficacy of one or more of the tank-mix pesticides may be affected. Pesticide companies can only guarantee the efficacy of tank-mixtures that have been tested and are stipulated on the label.

Biological interactions

- **Synergism** (the efficacy of the combination is more than the sum total of the individual components.) This may have the advantage of increased pest control, but it also has the potential disadvantage of crop damage.
- **Antagonism** (the efficacy of the combination is less than the sum total of the individual com-

Step 1

Fill the spray tank at least half full.

Step 2

Add any water conditioners like buffers and salt adjuvants that contain ammonium sulphate.

Step 3

Add products that are contained in water-soluble sachets.

> *Pesticides may interact physically with one another to create spray mixtures that may induce a heat reaction, flocculate, precipitate or form clumps that will block nozzles and reduce the efficacy of one or more of the tank-mix components.*

Step 4a

Step 4b

Premix water dispersible granules (WG) or wettable powders (WP) with a small amount of water.

Step 4c

Add the pre-mix in 4B to the spray tank.

Step 5

Ensure that these products are thoroughly dispersed in the spray solution before the other products are added.

Step 6

Add suspension type products (SC & SE).

Step 7

Add emulsion type products (EW; ME; EC).

Step 8a

Add water soluble products (SL; SG; SP).

> *Refer to the pesticide label for primary guidelines to effective spray mixtures.*

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Step 8b

Please ensure that powders and granules are pre-solubilised in water before addition to the spray tank. Failure to do so may cause unwanted physical interactions.

Step 8c

Step 9

Wetter/spreader and sticker adjuvants are normally added last.

Step 10

Fill the tank to the desired volume.

Guidelines have been formulated to ensure optimal efficiency of spray solutions, and cater for most conditions. However, the authors do not presume responsibility for effectiveness under all conditions. Incompatible spray mixtures could render the product ineffective. Refer to the pesticide label for primary guidelines to effective spray mixtures.

ponents.) This will reduce the risk of crop damage, but may result in inadequate pest control.
- **Additive effect** (the efficacy of the combination is equal to the sum total of the individual components.)

Physical interactions

Pesticides may interact physically with one another to create spray mixtures that may induce a heat reaction, flocculate, precipitate or form clumps that will block nozzles and reduce the efficacy of one or more of the tank-mix components. This could result in having to discard the entire tank contents.

General rules when tank-mixing pesticides

- Always follow label recommendations and do not make unregistered tank mixtures.
- Ensure that the water quality is adequate for the tank-mix components. Many pesticide labels have specifications regarding electrical conductivity or pH of spray water.
- If a product label states that one pesticide is compatible with another, this normally does not mean that this is true for all of the trade names for those active ingredients. Remember that different formulations of a particular active ingredient may not be exactly the same.
- The more pesticides that are tank-mixed, the greater the risk of an unwanted reaction.
- Tank mixtures in low water volumes are more conducive to physical incompatibility. The reason for this is that there may not be enough water to keep everything in solution/emulsion/suspension. Avoid too many tank-mix components or use higher water volumes in these cases.
- Low spray water temperature may contribute to an incompatible spray mixture.
- Mixtures of products with contrasting pH levels and requirements could cause incompatibility.
- Mixtures of products with high salt loadings (like foliar nutrients and certain herbicides) may influence the formulation of other pesticides and reduce their compatibility.
- Never mix neat, undiluted products unless stipulated on the label.
- Always use the label recommended adjuvant.
- Agitate tank mixtures as this is important to keep products in suspension and emulsion.
- Keep in mind that certain products must be pre-mixed with a small amount of water before they are added to the spray tank. This is particularly true for powder and granular formulations. Please follow label recommendations.
- The spray mixture must never be left un-agitated, therefore the spraying proses must be completed with continual agitation.

Tank mixing procedure

This is a general procedure and must be followed when in doubt. The pesticide label must be followed as a primary guideline.

What does B-W-W-S-E-S-W mean

Remember to fill the spray tank at least half full.
- B – buffers
- W – water-soluble sachets
- W – WG/WDG (water dispersable granules)/ WP (wettable powders)
- S – SC/SE (suspension)
- E – EW/EC/ME (emulsion)
- S – SG/SP/SL (water soluble)
- W – Wetter

Fill the tank to the desired volume.

Article submitted by Gerbrandt Kriel and Lean Hanekom from Villa Crop Protection. For more information, send an email to lean.hanekom@wenkem.co.za.

Improve your WHEAT YIELD with CROP ROTATION

Wheat production in the Western Cape, especially in the Swartland, was previously based on monoculture production. Before 1994, when wheat prices were governed by a Wheat Board, wheat was planted on nearly every open field a farmer had available.

With the onset of our free-market economy the area planted to wheat diminished dramatically and thus the production of wheat on marginal soils did not make sense any longer.

One would be excused to assume that this hampered the supply of wheat produced in the Western Cape, but with the introduction of no-till seeding methods, combined with crop rotation, the Western Cape is currently producing nearly double the amount of wheat on less than half of the area previously planted to wheat. Results from the Langgewens long-term crop rotation trial speaks directly to the increase of wheat production within crop rotation systems.

The long-term average wheat yields, from 2002 until 2014, are shown in **Table 1**. These averages include data from 2003, where wheat yields were obtained only in the crop/pasture systems due to a drought. The 2004 yields were also low due to another poor production season with low rainfall.

Systems A to D are classified as pure cropping systems, while systems E to H are crop/pasture systems. Looking at the average wheat yields for the different production systems (Table 1); the wheat monoculture (system A) has the lowest long-term average. Including only one different cash crop type in the system, like canola in system B, the average wheat yield increases by 12,27% compared to the monoculture. By including two different cash crops, as in systems C and D, the average wheat yield increases by 27,72%, when compared to the monoculture. Includes a pasture crop in the system (E to H), increases the average yield of wheat in those systems by 37,64%, compared to the monoculture.

Although the average wheat yields in system B and D is (Table 1) better than monoculture if one looks more closely at where wheat is produced within the crop sequence, of the system, the picture changes again. In system B you have four different crop sequences namely CWWW, WCWW, WWCW and WWWC. The sequences represent third year wheat production following a single canola year (CWW**W**), second year wheat production following canola (WCW**W**) and first year wheat following canola (WWC**W**). Similarly system D has (Table 1) first year wheat (WLC**W**) and second year wheat (LCW**W**) following two broadleaf crops. In **Table 2** the effect of producing the same crop for a second or third consecutive year is shown and it is clear that the wheat yield declines for every consecutive year it is produced before rotating with another crop.

Table 1: Average wheat yields in different production systems (W = wheat, C = canola, L = lupin, M = medic pasture and Mc = medic/clover pasture).

System	Crop sequence	Yield (kg/ha)
A	WWWW	2 715
B	CWWW	3 048
C	CWLW	3 518
D	LCWW	3 417
E	MWMW	3 735
F	McWMcW	3 504
G	MCMW	3 876
H	McWMcW	3 833

1

2

Table 2: Wheat yields in different crop sequences within two crop systems.

Crop sequence	Yield (kg/ha)	Explanation
WWCW	3 271	1st year wheat
WCWW	3 013	2nd year wheat
CWWW	2 860	3rd year wheat
WLCW	3 582	1st year wheat
LCWW	3 218	2nd year wheat

The differences between the wheat yields in Table 2 are connected with increases in weed pressure, as well as increases in soil bourne diseases, which cause the drop in yield for every consecutive year where the same crop was planted.

If the 2003 data is excluded, the averages from system G and H increased to just over 4 000 kg/ha. Wheat following an annual legume pasture, as in the case in systems E to H, not only increases your average yield of wheat, but also opens the possibility of a livestock factor for a farmer. It will depend on the farmer and the area where he or she is farming, which system might be better suited. It is important to realize the value of crop rotation in improving not only the yields on farm, but also the gross margins of the systems.

3

Photo 1: A sound crop rotation system builds the soil and promotes good root development.

Photo 2: Burning crop residue affects your soil structure and microbial activity in the soil.

Photo 3: Residue left on the land after harvesting protects the soil and increases soil fertility.

Photo 4: Incorporate canola in your rotation system to promote Nitrogen fixation and to build the soil. It will also assist to control weeds.

> *"The Western Cape is currently producing nearly double the amount of wheat on less than half of the area previously planted to wheat.*

4

Let us look at some examples of short and long rotation systems currently used in the province.

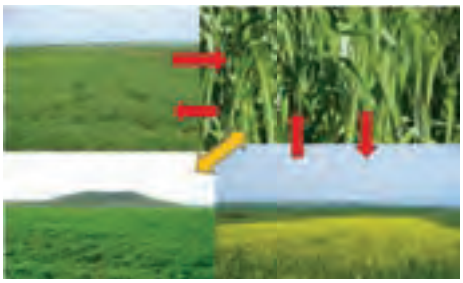
Swartland

Cash crop systems:

- Wheat – canola – wheat – lupin; and
- Wheat – canola – wheat – wheat.

Cash crop/legume pasture systems:

- Wheat – medics/clover – wheat – medics/clover; and
- Wheat – medics/clover – canola – medics/clover.



Two examples of a short crop rotation system. The red arrows represent the sequence for a cash crop system (wheat – canola – wheat – lupin) and the yellow arrows indicate a crop/pasture system (medics/clover – wheat – medics/clover – wheat).

Southern Cape

Short rotation

Cash crop systems:

- Wheat – canola – wheat – lupin; and
- Wheat – barley – canola – wheat – barley – lupin.

Crop/legume pasture:

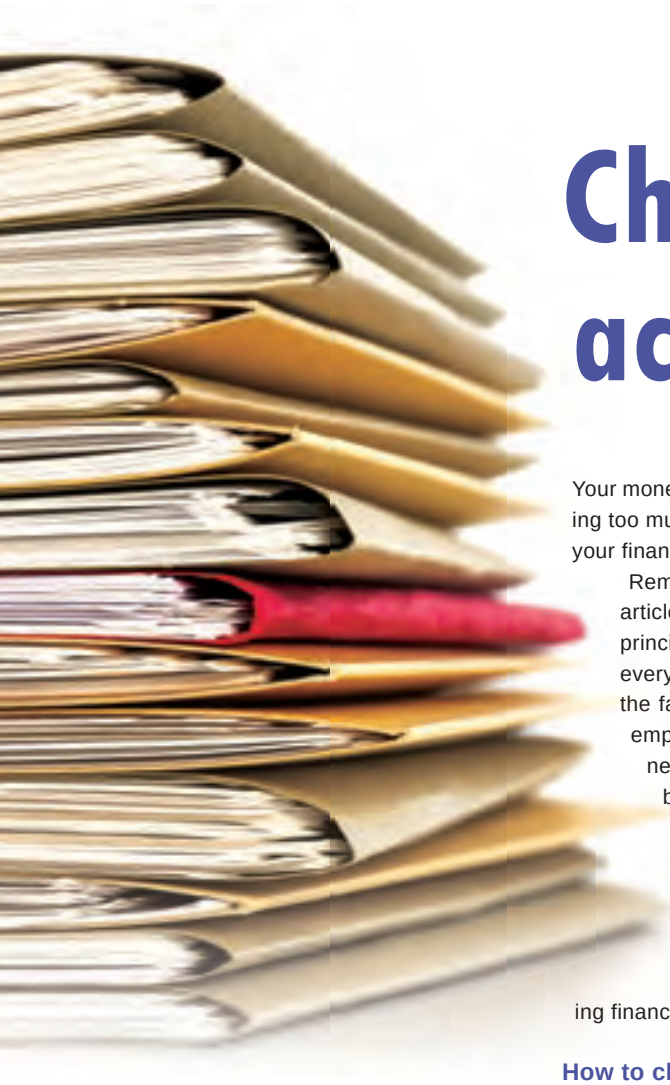
- Medics/clover – medics/clover – wheat;
- Wheat – medics/clover – wheat – medics/clover; and
- Medics/clover – medics/clover – wheat – barley.

Long rotation

Five to six years of lucerne – wheat – barley – canola – wheat – barley.

The long rotation crop/pasture rotation system starts from top left lucerne – wheat – barley – lupin – wheat – barley – canola – lucerne again.

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.



Check monthly account statements

In this article we would like to emphasise the importance to check (control) all the monthly account statements you receive.

Let us first of all clarify the term statements. Unfortunately the term "statements" could be a bit confusing. In a previous article we used the term in relation to financial statements being balance sheets, income statement and a cash-flow statement. In this article we are also using the term "statements" but now in relation to monthly statements being for example, bank statements, account statements from other service providers (agricultural companies), cell phone contract statements, Eskom statements, Telkom statements, perhaps statements from a municipality, or from your medical aid scheme, and so forth. Should you do business with these service providers and pay them on a monthly basis or even over a longer period these service providers must provide you with an account statement at the end of each month.

The question arises what to do with these statements? Throw them in "File 13" as we say or throw them away? No, you must use them – check them regularly that they are correct. Please note mistakes do occur occasionally. Your money is involved and you could be paying too much which will then negatively affect your finances.

Remember throughout our series of articles on management one of the principles we have emphasised is that everything and everybody involved with the farming, be it the owner/manager or employees, does or do not do when necessary, affects the profit/loss of the business. And we have also emphasised if you cannot do something yourself you must get someone to do it for you. Maybe someone in the family or somebody from outside such as your bookkeeper – refer to a previous article regarding financial statements.

How to check the account statements you receive

First of all you need all the so-called source documents for all transactions related to your business where money is involved (directly or indirectly). In all instances a source document will be a piece of paper, such as bank statements, bank- and deposit slips, purchase invoices (including till slips, cash slips, petrol slips), sales invoices and delivery documents and so forth. By now you should realise that these source documents are very, very important to the management of your business.

Secondly, it is very helpful to set up your own accounts in your own record system either manually or by computer. Then use the source documents to keep the account of each service provider up to date.

Thirdly, on receipt of the official account statements compare the statements with your own records with reference to:

- Have all purchases been recorded correctly in terms of the product, item, service and especially the amount? Should you find a discrepancy refer back to your source documents (helpful if you have filed all source documents in orderly manner).
- Have all payments been recorded correctly?
- Have all sales (deliveries) been recorded correctly?
- Have all returns been recorded correctly?

Then reconcile the account statements with your own records. Should there be a difference follow it up with the specific service provider as soon as possible to rectify. You will notice that many service providers indicate on these statements a time frame for you to follow up on differences. If you do not follow up any discrepancy within the time frame, it will be assumed that the statement is correct.

You will realise by now that to do this properly you will have to record other information such as the usage of electricity, deliveries made for instance of your diesel and other items. Admittedly to record some information such as phone calls is more difficult, but with a little bit of extra effort information can be acquired.

As already indicated discrepancies may occur even with our technically advanced systems of today. Fortunately it does not normally occur each and every month but it does occur occasionally. Be on the lookout especially when a service provider "improves" their systems or changes to a new system. Systems are developed and implemented and maintained by people who can make mistakes, it is not the system as such.

An example from personal experience – at the end of January 2015 on receipt of the monthly account statement from our medical scheme it was determined that a claim for medicines acquired during January 2015 to the amount of R463,36 was duplicated. If this was not followed up it would have been our loss.

However, despite the importance of the control of monthly account statements it is actually amazing to experience that not many people do it. In conclusion, the principle of checking all monthly account statements is just as applicable for your business as for your private accounts. It can only be to your advantage.

Article submitted by Marius Greyling, Pula Imvula contributor. For more information, send an email to mariusg@mcgacc.co.za.

MADE POSSIBLE BY THE WINTER CEREAL TRUST

Good root development of a young barley plant.

How BARLEY production contributes to food security

In terms of the world's most essential crops by production quantity, barley is ranked fourth amongst the cereals after maize, rice and wheat, although eleventh overall, and is widely grown across the world. Barley grain is used mostly as feed for animals, malt, and food for human consumption, malt being the second largest use. Farmers also use barley straw as animal feed in west Asia, north Africa, Ethiopia, Eritrea, Yemen, the Andes region and east Asia (*Akar et al. 1999*).

There is a misconception that barley production does not contribute to food security. The importance of barley production as part of a crop rotation system should not be overlooked. In fact, in the Southern Cape, barley production goes hand in hand with the production of other grain crops such as wheat, canola, oats as well as feed crops for animals like medics and lupins. It therefore directly contributes to the sustainability of our commercial and New Era farmers. In addition, the malting industry also creates thousands of job opportunities throughout South Africa which contributes to local economic development as well as household food security.

Barley is a crop that is cultivated in both highly productive agricultural systems but also in marginal and subsistence environments. Its distribution is worldwide and is of significant economic importance for animal feed and beer production. The overall importance of barley as a human food is still minor but there is much potential for new uses. Barley's ability to adapt to multiple biotic and abiotic stresses will be crucial to its future development and increased emphasis on these traits is needed to equip the crop for environmental change. Clearly barley is a resilient crop with much potential which can be realised in the future (*Newton et al. 2011*).

A healthy young barley crop.

It is clear that barley production does in fact contribute greatly to food security. It is imperative that we promote this very important industry and assist role-players to realise the importance of this commodity.

Article submitted by Liana Stroebel, Provincial Co-ordinator, (Western Cape) of the Grain SA Farmer Development Programme. For more information, send an email to liana@grainsa.co.za.

Pula Imvula's Quote of the Month

"I may not be there yet,
but I'm closer than I was yesterday".

~ Author Unknown

Are leaf-mining flies a hazard to wheat and barley under irrigation?

Are leaf-mining flies a hazard to wheat and barley under irrigation? Well if you enter a field where leaf-mining flies are obviously present (**Photo 1**), your response to this question would immediately be 'yes'. But is this really the case?

1

Leaf-mining flies have been present in wheat in the Northern Cape since 2000. Since 2006 they have occurred on wheat in this area too. They initially appeared between Prieska and Douglas, and have since then spread to most fields along the river up to Bloemhof. Sporadic occurrence was also recorded at Frankfort in the Free State under extremely wet conditions over the past two years. The most recent reports are that leaf-mining flies have appeared in the Brits area.

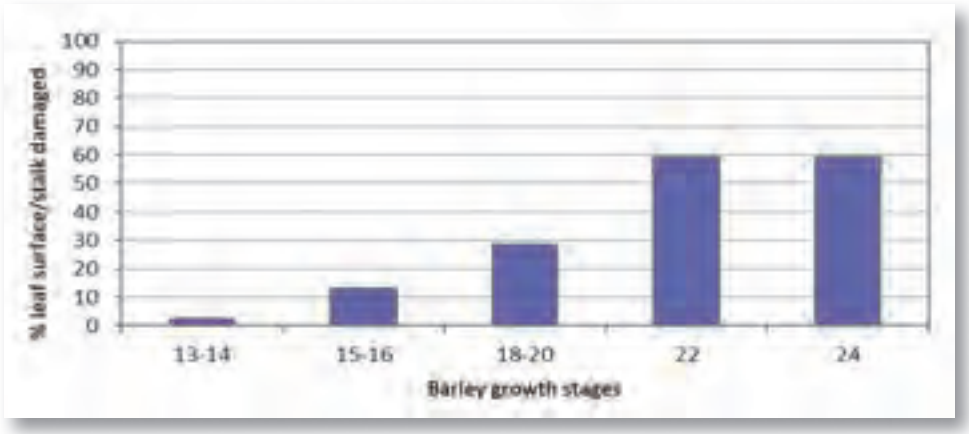
Most producers are very familiar with this insect. The adult is a small black fly (**Photo 2**) approximately 2 mm big. The female presses holes into the leaves with the aid of her laying borer and sometimes lays eggs in these, while others are used only for feeding. Larvae tunnel into the leaf from the holes and destroy the chlorophyll as far as they go (**Photo 3**). The larvae leave the leaf after a certain period and form a pupa in the soil.

How much damage does the larva cause?

In the first place we must look at the type of damage that is caused. The chlorophyll is destroyed completely where the larva mines and the leaf is therefore dead in that area. Insecticides that kill the larvae prevent further loss of leaf surface, but cannot repair the damage that has been done.

The ARC-Small Grain Institute (ARC-SGI) conducted experiments to check the amount of damage that is caused. During these experiments certain sites were sprayed and others were not. Measurements of the amount of leaf surface that is destroyed were taken at different times and the crop yield was determined in the end.

During 2011 large-scale contamination occurred at an early stage in the Douglas area. During GS 13, 30% of the barley stalks in the experiment were already contaminated, while 96,7% of the wheat stalks contained mined leaves by GS 15 (flagleaf). At first glance this is very bad, but we decided to analyse the contamination further to determine what extent of the leaf surface had been damaged.



Graph 1: Average percentage of leaf surface per barley stalk damaged.

Damage on barley

On the barley stalks the number of leaves per stalk that were damaged increased to 92% by the end of the season, while the percentage of leaf surface per leaf increased to 64% (**Table 1**). It was also found that the lower leaves were always mined first and that the upper leaves were attacked as the stalk grew. It should also be kept in mind that the lower leaves are abscised first as the plant grows.

To get an idea of the totality of what happens to a stalk, the average percentage of leaf surface damaged per stalk was calculated from these results and it was then found that by GS 22, 59% of the leaf surface per stalk had been damaged (**Graph 1**). At this stage contamination was also present on the flagleaf and leaf below the flagleaf.

Damage on wheat

Although all the stalks in the wheat experiment had damaged leaves by the end of the season

Photo 1: A field where leaf-mining flies are obviously present.

Photo 2: Larvae tunnel into the leaf from the holes and destroy the chlorophyll as far as they go.

Photo 3: The adult is a small black fly approximately 2 mm big.

and approximately 90% of the leaves on every stalk were damaged, on average only 45% of the leaf surface per leaf had been damaged (**Table 2**). However, the calculated damage to the leaf surface per leaf was approximately 39% at the end of the season (**Graph 2**). Approximately 60% of green leaf surface per stalk was therefore still available for photosynthesis.

Crop yield

The above data represents the unsprayed control. When the spray treatments were compared to the untreated stalks there were significant reductions in the amount of leaf surface per stalk affected, but when the crop yield was determined, there was no difference between the crop yield of the treated and untreated sites. These results corresponded to those of experiments in 2010 and 2012.

Why?

The major question that causes the most frustration is therefore why the crop yield differences are not more significant between the treated and untreated sites, despite the fact that such a large number of stalks were contaminated.

To simulate damage the experiments were done in the glasshouse, where two treatments were applied during the blossom stage, namely cutting the flagleaf and then cutting the flagleaf and the second leaf. Yield was determined per stalk, and in three experiments with different

Table 1: Average percentage of leaf surface of barley stalks damaged during the 2011 experiment.

Date	Growth stages	% leaves/stalks mined	% surface/leaf destroyed
14 September 2011	13 - 14	10	16,4
28 September 2011	15 - 16	40,4	32,4
10 October 2011	18 - 20	61,1	46,7
25 October 2011	22	92,3	64,5
8 November 2011	24	92,1	64,1

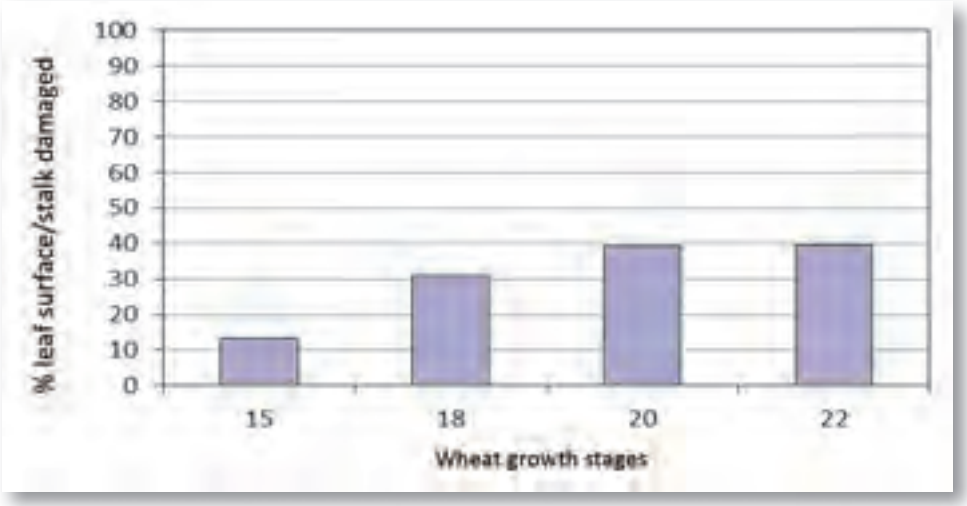
Table 2: Average percentage of leaf surface of wheat stalks damaged during the 2011 experiment.

Date	Growth stages	% leaves/stalks mined	% surface/leaf destroyed
28 September 2011	15	37,4	33,5
10 October 2011	18	68,8	44,7
25 October 2011	20	91,5	42,6
8 November 2011	22	88,2	45,1

Are leaf-mining flies a hazard to wheat and barley under irrigation?

Table 3: Estimated crop loss of wheat as a product of the percentage of leaf surface of the top two leaves damaged, with the percentage of stalks per field damaged.

% contaminated stalks/field	Percentage loss of leaf surface									
	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
10	0,34	0,68	1,02	1,36	1,70	2,03	2,37	2,71	3,05	3,39
20	0,68	1,36	2,03	2,71	3,39	4,07	4,75	5,42	6,10	6,78
30	1,02	2,03	3,05	4,07	5,09	6,10	7,12	8,14	9,15	10,17
40	1,36	2,71	4,07	5,42	6,78	8,14	9,49	10,85	12,20	13,56
50	1,70	3,39	5,09	6,78	8,48	10,17	11,87	13,56	15,26	16,95
60	2,03	4,07	6,10	8,14	10,17	12,20	14,24	16,27	18,31	20,34
70	2,37	4,75	7,12	9,49	11,87	14,24	16,61	18,98	21,36	23,73
80	2,71	5,42	8,14	10,85	13,56	16,27	18,98	21,70	24,41	27,12
90	3,05	6,10	9,15	12,20	15,26	18,31	21,36	24,41	27,46	30,51
100	3,39	6,78	10,17	13,56	16,95	20,34	23,73	27,12	30,51	33,90



Graph 2: Average percentage of leaf surface per wheat stalk damaged.

> *Barley has large leaf sheaths, which can make a significant contribution to photosynthesis.*

wheat cultivars it was found that 16,4% and 33,9% crop loss can occur if these leaves were to be lost during the blossom stage.

Two experiments with barley respectively revealed a loss of 7,7% and 12% when the flagleaf and then the flagleaf and the second leaf were cut. Barley has large leaf sheaths, which can make a significant contribution to photosynthesis. The presence of leaf-mining flies in the top leaves at the end of the season can therefore definitely lead to significant crop losses in wheat in particular. Why can this not be measured in the field?

If we want to achieve these crop yield losses in the field, literally every stalk in a given wheat field will have to lose its two top leaves. Although we can achieve up to 100% contaminated stalks, the percentage of leaf surface that is damaged is not nearly as great on the two top leaves. The tendency is also to mine the lower leaves first. The immediate conclusion is that the damage that can be caused, should then be considerably less.

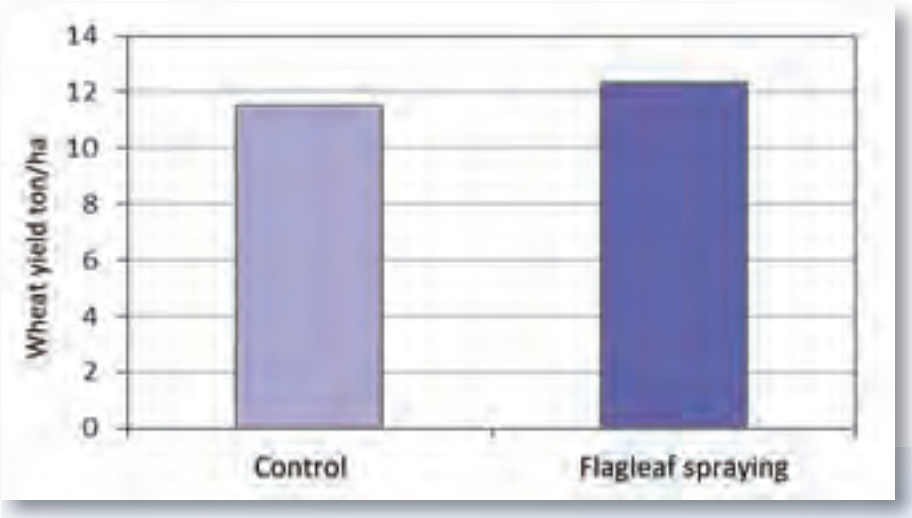
This glasshouse data was used to make estimated calculations for the total loss of the two top leaves on certain percentages of stalks (**Graph 4**). The estimated values demonstrate that, should this amount of damage occur on 10% of the stalks, the damage would be lower than 5%, while a 10% crop loss can occur on 30% of the stalks.

If we look at the damage in the field, we see that the stalks had lost only approximately 40% of their leaf surface by the end of the season (**Graph 2**). That is why it was decided to take the percentage of leaf surface into account as well (**Table 3**).

From this table it is clear that when 50% of the stalks per field have lost 50% of their leaf surface on each of the two top leaves, the crop loss can be an estimated 8,48%.

Is the leaf-mining fly therefore harmful?

Visually, the damage to the leaves by leaf-mining flies will immediately make you reach for your pesticide spray. However, from the above data and estimates it seems that it is less serious than we perceive with the naked eye. That



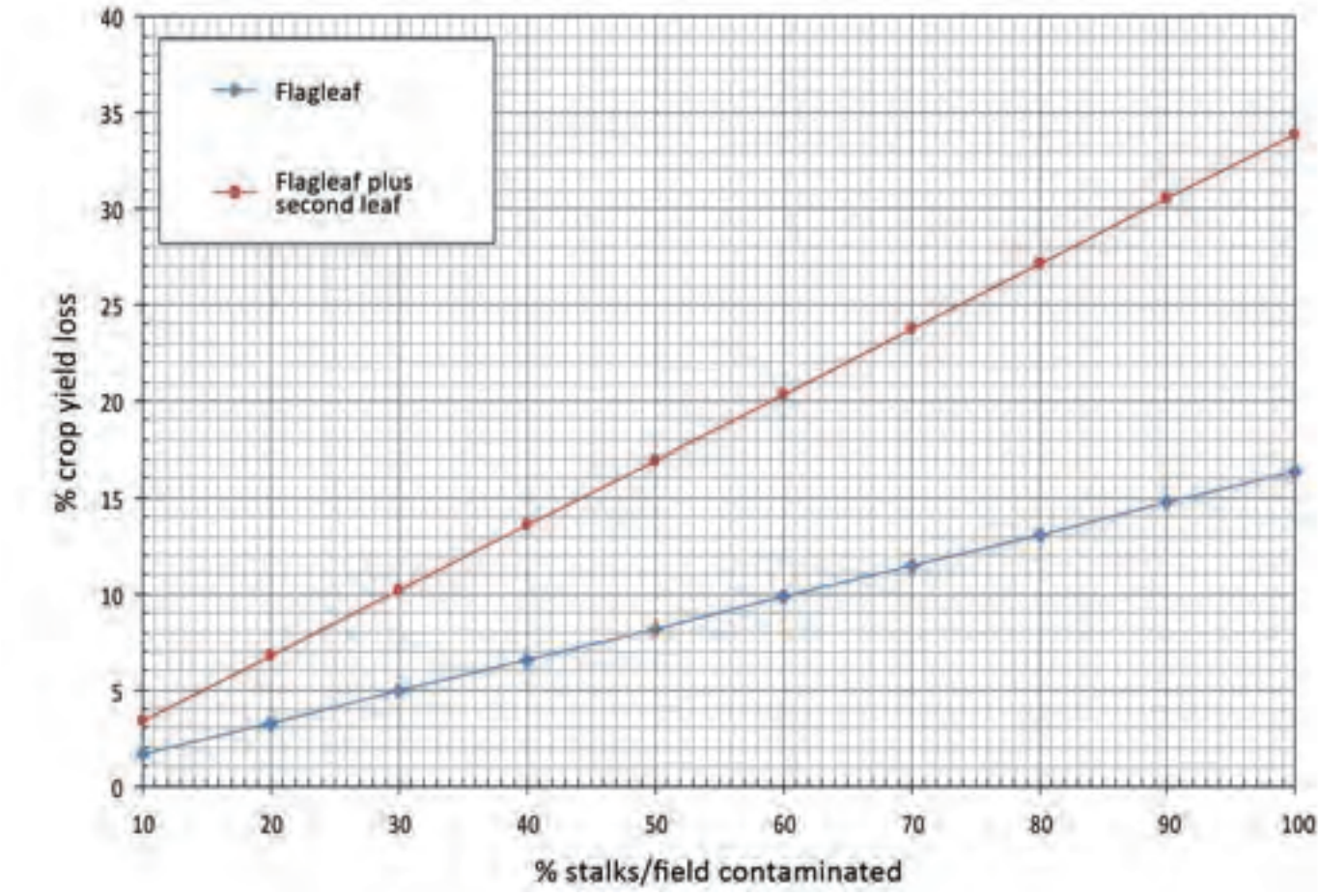
Graph 3: Average crop yield during the 2011 wheat experiment.

is why field experiments cannot identify actual crop yield losses. A few points regarding the control of the leaf-mining fly that emerge are:

Do not get caught up in the contaminated section of the field, but gain the total picture of what is happening in the field. A section can be 100% contaminated and all the leaves can be dead, but this section might constitute only 10% of the area of your field. According to Table 3, this could mean a crop loss of 3,4%. The producer has to decide for themselves whether it will be worth the effort and costs to spray an entire field in order to prevent a crop loss of only 3,4%.

- If you know there are leaf-mining flies in the area, search your fields, particularly at flagleaf stage, and remember that the lower leaves are mined first.
- Remember that spraying cannot reverse the damage.
- Search the entire field – not just a small patch. It might be worthwhile.
- Make certain that your insecticide is applied effectively.

Article submitted by Dr Goddy J Prinsloo, ARC-Small Grain Institute LNR, Bethlehem, for SA Graan/Grain July 2014. For more information, send an email to prinsloogj@arc.agric.za.



Graph 4: Estimated crop yield loss if stalks lose the total flagleaf and second leaf.

WILD OATS
in the winter rainfall area

WILD OATS	
Scientific name:	*Avena-species (Avena barbata, A. fatua, A. sterilis)*
Afrikaans name:	Wildehawer (wildebaardhawer [*A. barbata*], gewone wildehawer [*A. fatua*], groot wildehawer [*A. sterilis*])
English name:	*Wild oats (slender wild oats [A. barbata], common wild oats [A. fatua], tall wild oats [A. sterilis])*

Next to rye grass, wild oats (*Avena* species) is surely the most significant grass weed in crops in the winter rainfall area. There are mainly three species that occur, namely *Avena fatua* (common wild oats), A. barbata (slender wild oats) and *A. sterilis* (tall wild oats) The later species has two subspecies, namely: *A. sterilis* ssp. *sterilis* and *A. sterilis* ssp. *ludoviciana*.

Slender wild oats is not really a factor in fields because it mainly occurs in disturbed areas like road reserves, and competes poorly with crops. Common wild oats is probably the species that occur the most in fields and can therefore possible be regarded as the most significant of the species.

Tall wild oats is not so common, although sources in Europe regard it as a much more aggressive competitor (wheat losses of up to 70 kg/ha for every panicle of wild oats per m^2).

For the purposes of this article common wild oats will therefore be used as the standard and we assume that chemical and non-chemical control methods that are effective against this will be effective against the other species too. The three species do not differ much as far as the appearance of the plants themselves are concerned. All three are annual, tussock-forming grasses that can become between 80 cm (slender wild oats) and 1,2 m (tall wild oats) tall.

Stalks and leaf blades are usually smooth, while the leaf sheaths of slender wild oats and tall wild oats are often hairy, especially on the lower leaves, but the leaf sheaths of common wild oats are smooth. The ligule is membrane-like, large, blunt and between 4 mm and 8 mm long. Inflorescence is an open, loose panicle, with the spikelets in the case of slender wild oats in particular hanging to one side, while those of the other two species are arranged evenly around the rachis.

The seeds look like a type of oats seed, are hairy and rounded on the one side, with a slit on the other side. The colours vary from white to straw coloured to dark brown. Seeds of tall wild oats can easily be distinguished from the other two species because the seeds do not break loose from each other before falling from the spikelet and therefore mostly occur in twos, while the seeds of the other two species usually break loose from each other before falling from the spikelet, and therefore mostly occur singly. The sizes of the seeds vary from 7 mm in length and 1,8 mm wide (slender wild oats) to 1 cm long and 2 mm wide (tall wild oats).

Occurrence and distribution

Slender wild oats occurs widely in South Africa, common wild oats usually in the southern Cape and grain-producing areas of the Free State, and tall wild oats occurs widely in the winter rainfall area. All the species are winter weeds that occur in disturbed areas and along roads, and common and tall wild oats are also major weeds in fields, particularly wheat fields.

Wild oats used to be the major grass weed in the winter rainfall area, but with the increase in minimum and no-till, rye grass has become more prevalent and wild oats has in most cases been replaced as the most common weed.

However, it seems as if certain conditions (perhaps very wet, cold winters) stimulate the germination and growth of wild oats, and in such years wild oats causes considerably more problems. As was mentioned above, wild oats competes very strongly with crops. These plants are also notorious for having extremely dormant seeds, depending on environmental conditions, remaining viable for a few months to as long as 14 years in the soil.

Observations in Australia have revealed that two subsequent fallow years reduced the wild-oats seed population in fields by 99%, however. The relatively large seeds that can settle from greater depths, as well as the longevity of the seed, mean that burial with, for example, a turn plough is not as effective with wild oats as with rye grass.

Control

Chemical control

The list of herbicides registered for wild oats that is published in *A guide for the chemical control of weeds in South Africa* is shown in **Table 1**. The great majority of these herbicides are registered for controlling common wild oats, but it is assumed that a herbicide that is effective against one species will also be effective against the other species, provided no resistance has developed against it.

A few herbicides and applications have been added that were registered after the guide was published, as have some non-selective herbicides that do not specify which weed species are controlled, but that are effective against wild oats if there is no resistance.

It is essential for producers and/or chemical manufacturing and marketing companies to try and determine what the resistance status of wild oats in a field is before applying herbicides. If there is no resistance against a specific weed, care should be taken that the herbicide is applied under good spraying conditions and that the correct dosage is applied to weeds not bigger than the four-leaf stage.

Too high and too low dosages cause high selection pressure for target site and non-target site resistance respectively. Alternate the use of an effective herbicide as regularly as possible with other herbicides with a different action (in other words in a different action group).

Table 1 indicates against which herbicides registered for controlling wild oats resistance has already been proven or suspected. Although resistance against herbicides in wild oats does not occur on such a large scale as in rye grass, many cases of resistance have been recorded and observed.

However, it is easier to control resistance in wild oats if it can be observed in the early stage. Because wild oats is self-pollinating, a resistant plant's resistance genes will be transferred only via seed and it would therefore appear in patches in the field where the resist-

Photo 1: Seeds of 1a slender wild oats (Avena barbata), 1b common wild oats (A. fatua), 1c and 1d tall wild oats (A. sterilis ssp. ludoviciana [1c] and A. sterilis ssp. sterilis [1d]).

Photo 2: Wild oats seedling.
Photograph supplied by Syngenta

Photo 3: Prominent membrane-like ligule of wild oats.

ant mother plant stood in the previous year. If the wild oats plants can be identified before the seed is ripe and is released, the patches of plants can easily be removed by hand or sprayed locally with a non-selective herbicide.

Alternative controls

It is vital that not only chemical methods be used to control wild oats. Tillage of fields to reduce wild oats seed populations is not as effective as for rye grass because of the large seeds that can settle from quite deep. Because the seeds have a relatively long life expectancy compared to rye grass, dormant seeds that were ploughed under in the past can be ploughed up again.

In a field that is heavily infested with resistant wild oats the populations can be reduced just as effectively by working in green or brown fertiliser during the season or making hay with tame oats or any other suitable hay crop. In a grazing rotation pasture topping can also be used. For more methods to manage resistance, refer to the pamphlet on sustainable crop pro-

Wild oats in the winter rainfall area

Table 1: Herbicides registered for controlling wild oats.

Active ingredient	Formulation	Crops for which registered	Time of application	Resistance status	Mechanism of action group
Clethodim1	120 grams per litre	Lucerne and seedbeds	Postemergence in lucerne, pre-sowing for clean seedbed	No	A
Clodinafop-propargyl	240 grams per litre	Wheat	Postemergence when grasses are at the two to four-leaf stage	Yes	A
Cycloxydim	100 grams per litre	Clovers, lupins, lucerne, legume pastures and medics	Postemergence when grass grows actively	Yes	A
Diclofop-methyl	378 grams per litre	Peas, barley, wheat and korog	Postemergence before grasses reach five-leaf stage	Yes	A
Fenoxaprop-p-ethyl/ mefenpyr-diethyl	120/33 grams per litre	Wheat	Postemergence when grass grows actively	Yes	A
Fluazifop-P-butyl	125 grams per litre	Clovers, lucerne, legume pastures and medics	Postemergence on actively growing grasses	Yes	A
	150 grams per litre	Lucerne and legume pastures			
Flucarbazone-sodium	700 grams per kilogram	Wheat	Postemergence at three to five-leaf stage of crop	Yes	B
Glufosinate-ammonium	200 grams per litre	All crops	Pre-sowing	Yes	H
Glyphosate	360/450/480/510 grams per litre	Most agricultural situations	Pre-sowing	Yes	G
	680/700/710 grams per kilogram				
Haloxyfop-R methyl ester	108 grams per litre	Canola, lupins, lucerne, legume pastures, medics, and seradella	Postemergence, when grass is between two- and six-leaf stage	Yes	A
Imazamox	40 grams per litre	Canola, clovers, lucerne, legume pastures and medics	Postemergence – apply before grasses are bigger than 100 mm to 200 mm. Only in Clearfield canola cultivars	Possibly[2]	B
Iodosulfuron-methyl-sodlum/ mefenpyr-diethyl	50/150 grams per kilogram	Barley and wheat	Postemergence when grasses are at the two to four-leaf stage	Yes	B
Ilodosulfuron-methyl-sodium/ mesosulfuron methyl/ mefenpyr-diethyl	30/30/90 grams per kilogram	Wheat	Postemergence when grasses are at the two to four-leaf stage	Yes	B
Paraquat	200 grams per litre	All crops	Pre-sowing	No	D
Paraquat/diquat	120/80 grams per litre	All crops	Pre-sowing	No	D
Pinoxaden	45 grams per litre	Wheat and barley	Postemergence on actively growing grasses	Yes	A
Propaquizafop	100 grams per litre	Canola, clovers, lupins, lucerne, legume pastures and medics	Postemergence on actively growing grasses	Possibly	A
Propyzamide	500 grams per kilogram	Canola, lucerne and legume pastures	Pre- to postemergence of grass. Apply at five-leaf stage of grass	No[3]	K1
Prosulfocarb	800 grams per litre	Wheat	Pre-emergence – suppression of wild oats when applied together with Trifluralin	No	N
Pyroxsulam	45 grams per litre	Wheat	Postemergence	Yes	B
Pyroxasulfone	850 grams per kilogram	Wheat	Pre-emergence	No	K3
Quizalofop-P-tefuryl	40 grams per litre	Canola, lucerne, legume pastures and medics	Postemergence only on actively growing grass at the two to four-leaf stage	Possibly	A

Table 1: Herbicides registered for controlling wild oats. ***(continued)***

Active ingredient	Formulation	Crops for which registered	Time of application	Resistance status	Mechanism of action group
Simazine	500 grams per litre	Canola and lupins	Pre-emergence of weeds. Apply directly to plant and only to triazine-resistant (TT) cultivars	No	C1
Simazine/ terbuthylazine	213/287 grams per litre	Canola	Pre-emergence in tank mixture with metazachlor – only to triazine-resistant (TT) canola cultivars	No	C1
Simazine/ terbuthylazine	450/450 grams per kilogram	Canola	Pre-emergence in tank mixture with metazachlor – only to triazine-resistant (TT) canola cultivars	No	C1
Sulfosulfuron	750 grams per kilogram	Wheat	Postemergence. Apply to actively growing grasses	Yes	B
Tepraloxydim	50 grams per litre	Canola	Postemergence. Apply to actively growing grasses	Yes	A
Tralkoxydim	100 grams per litre	Barley and wheat	Postemergence – apply at the two to four-leaf stage	Yes	A
Triallate	480 grams per litre	Wheat	Pre-emergence	No	N
Triasulfuron	750 grams per kilogram	Barley, oats and wheat	Pre-emergence – only suppression	Possibly	B

Photo 4: Slender wild oats plant (A. barbata) with unilateral panicle and 4b tall wild oats plant (A. sterilis ssp. sterilis) with more even panicle.

duction in the presence of herbicide resistance that should be available from any of the chemical manufacturing or marketing companies.

Acknowledgements and references

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The list of registered herbicides was obtained from the publication: A guide to the chemical control of weeds in South Africa: A CropLife South Africa Compendium. Order from info@cropsolutions.co.za or 011 079 4199.

Information was also obtained from the book Onkruide in gewasse en tuine in Suidelike Afrika, which can be obtained from the ARC-Grain Crops Institute, Private Bag X1251, Potchefstroom, 2520. Contact Mary James at 018 299 6253 or JamesM@arc.agric.za.

The book Probleemplante en indringeronkruide van Suid-Afrika by Clive Bromilow was also consulted and is available from most bookstores, or consult the publisher's website at www.briza.co.za.

The pamphlet Volhoubare gewasproduksie in die teenwoordigheid van onkruiddoderweerstand is obtainable in PDF format from the writer of this article at pjp@sun.ac.za. It is also available in English on the CropLife SA website (http://www.croplife.co.za/).

Article submitted by PJ Pieterse, Department of Agronomics, Stellenbosch University, for SA Graan/Grain July 2014. For more information, send an email to PJP@sun.ac.za.

Grain SA interviews...
William Matasane

After humble beginnings as a waiter, chef and later the manager of the restaurant at the Allemanskraal Dam, Holiday Resort in the Free State, William Matasane became a farmer in the Senekal district. He purchased the farm Verblyden with a grant from the DRDLR and a loan from the Land Bank. The farm is 253 ha of which 135 ha is medium potential arable soil.

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

I have since purchased two more farms with loans from the Land Bank. Leeukuil is 257 ha of which 100 ha is arable. Keerfontein is 460 ha of which 172 ha is arable. I also lease 226 ha of good arable soil in the Ventersburg district. In total I farm on 1 196 ha of which 733 ha is arable land and 463 ha is grazing.

I plants maize, sunflower and soybeans and I also have beef cattle and sheep.

What motivates/inspires you?

I was so stupid when I started farming. Then I became involved with Grain SA. I realised that without a solid support base from people I can trust, I will never make it. In 2010 I was voted the Grain SA Emerging Farmer of the Year winner. I was so humbled by this. Then I realised that I have to be a role-model for other new farmers now. This has made me work harder and smarter so that I can inspire other farmers and also make my family proud of their father.

Describe your strengths and weaknesses

I have good people skills. I have good relationships with my neighbours and with role-players in the agricultural industry. I hate debt and will not have it in my business. I have loyal workers who will work long hours to get the job done. I have a fantastic wife and children whom I love dearly. I get angry with dishonest, hidden agenda people. When I am angry I speak my mind.

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

My first sunflower crop was 0,2 t/ha, my first wheat crop I did not even harvest. My first maize crop was 1,2 t/ha. I am now harvesting 1,5 t/ha - 2,5 t/ha on sunflower and up to 5 t/ha on maize. I do not plant wheat anymore, with wheat in Senekal you will see your behind very quickly. Last year I produced nearly 2 000 tons of grain for the season. I am a member of 1 500 Ton Club of Grain SA.

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

Look and farm. Ask questions. Go to your commercial neighbour and learn from him. Then do the correct thing at the correct time. Attend training and Farmers Days and use the knowledge you get there. Be a farmer and live on the farm. Your footmarks have to be in the soil and the dust in your face. Get your hands dirty. Set the pace and the example on the farm.

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

I have done quite a lot of training with the Grain SA Farmer Development Programme. Courses in maize and sunflower production, resource planning and farm management, I have sent my workers on tractor and implement maintenance and workshop skills courses. I attend Study Group Meetings and Farmers Days and have received a lot of on-farm visits from Grain SA field personal. They have brought the knowledge to my farm and this has made me into a good farmer.

I would like to learn more about Safex and grain trading because I would like to have more control over the selling and marketing of my crop. I would also like to start a small feed-lot on my farm.

Where do you see yourself in five years? What would you like to achieve?

In five years I want to be financially secure. I want to be able to finance myself and not make use of production loans to put a crop in the soil. I would like my three farms to be developed and to produce food at the optimum level. In five years my son will be leaving school and I want to be sure that there is a place for him to become a part of our farming enterprise. I would also like to buy more land where I can expand my beef cattle herd. I do good business speculating with sheep and would like to expand my market share there. I would like to grow my business into a fine example of how food production in South Africa by a new farmer should and can be done.

What advice do you have for young aspiring farmers?

If you become a farmer because the state buys land for people – stay out of it. Farming is not for sissies. It is not a get rich quick scheme. It is a calling and it takes hard work, long hours, perseverance and a long time before you will start to have a little money.

You have to get training on financial management, risk management, new technology and much more. Decide what your goal is and go in that direction – cash crops, vegetables, cattle or whatever.

Be passionate, loyal and caring towards the soil, your livestock and the people that work for you. Learn to take pride and pleasure from a job well done, a good crop harvested or fat cattle. Take the knocks with dignity and be humble because you are working with Gods creation.

Article submitted by Johan Kriel, Development Co-ordinator of the Grain SA Farmer Development Programme. For more information, send an email to johank@grainsa.co.za.

The Corner Post

Ramodisa Monaisa believes farming is all about teamwork

Ramodisa Monaisa, a farmer from the North West Province, believes that a good farmer has to be a team player. This is why he is so involved in the organisational structures of agriculture. He has been a member of Grain SA for ten years and recommends the programmes and projects presented by this organisation.

"I joined Grain SA hoping to gain more knowledge on how to grow crops successfully," he mentions and adds that he has seen a big difference in his harvest due to their programmes and information days. He not only serves on the Grain SA executive committee, but is the vice-chairperson of the Farmer Development working group and represents Grain SA and developing farmers as a member of the OPOD Trust.

During 2014 he was one of 20 farmers who attended the Grain Academy, a partnership between the University of the Free State, Syngenta and Grain SA. As this programme dealt with the challenges emerging farmers face, it has also played a role in his development into the commercial farmer he dreams of being. He knows that the input and advice from this academic programme, experienced producers and organisations like Grain SA will ultimately help him realise this dream.

This father of three, who is married to Mmbakwena, is the fourth generation farmer on Gelukspan Farm in the Mafikeng area. His great grandfather was a farm worker and purchased the ground in 1923. His grandfather and father never considered other work opportunities as farming was in their blood. Ramodisa, who learned the trade of auto body repairs and welding at school, first tried his hand at repairing wheelchairs at a nearby hospital where he also worked as a driver. Within six months he realised that he was a farmer at heart. "I inherited the love of farming. As a young boy I was a shepherd after school and learned to drive from a young age. When I started driving a tractor, I really began to enjoy farm life," he shares his childhood farm memories. He believes that this is the best way for parents to get their children interested in farming. Involve them from a young age and let them experience all aspects of the farm – from the hard work in the field to the financial side.

Ramodisa is mainly a crop farmer and plants maize, sunflower and groundnuts on about 150 hectares of land. He is the proud owner of more than 100 sheep which graze on another 100 hectares of Gelukspan Farm. "The best thing about farming is when you can see that your planning and hard work is successful. It is wonderful to make a difference in the country by contributing to food security," he adds.

His advice to emerging farmers is to:

- Work with passion and love what you do;
- Make friends with successful neighbouring farmers and get advice from them;
- Attend the courses offered by Grain SA as this will teach you the correct way of farming;
- Be committed as commitment leads to success; and
- Dream big: See yourself as a commercial farmer with all the equipment producing food for all South Africans.

He encourages developing farmers not to think about money, but to work hard and to concentrate on producing a quality crop. "Make sure you are doing the right thing when you plant and when you plough. Take care of your crop and make sure you deal with the weeds. Money must be the last thing on your mind," he advices emerging farmers.

> *"Agriculture is agriculture, there is no colour involved. The people planting the seed may be different, but the seed is always the same colour.*

This passionate farmer feels strongly about politics in agriculture. He explains: "Agriculture is agriculture, there is no colour involved. The people planting the seed may be different, but the seed is always the same colour." To him these two areas cannot blend. "The two can't mix," he says and adds with a smile, "Farmers have to work. There is little talking and lots of working. In politics there is a lot of talking and little working." He would however like to see the country's agricultural industry growing to the level of Argentina and America where government is involved in growing and uplifting the industry.

This month's edition of The Corner Post was authored by Louise Kunz, Pula Imvula contributer. For more information, send an email to louise@infoworks.biz.

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