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CONTRIBUTE

We are always looking for news, photographs or event updates from our members. Please forward your contributions to elriza@croplife.co.za

WELCOME

It is a privilege to introduce our brand-new Crop Circular newsletter to all our members and stakeholders. After more than 16 years in existence as CropLife, our organisation has undergone a transformation over the past few months, one that I'm proud to be part of.

As you know, in September of 2018, four new employees walked into the CropLife SA office with a clear mandate – to ensure the execution of the 2021 vision by focusing on the following key strategic areas of operation:

- Stewardship;
- Government liaison, legislation and compliance;
- Communication and brand building of the crop protection industry;
- Education, training and skills development.



Rod Bell
Chief Executive Officer
CropLife South Africa

While the new team members were finding their feet, the legacy employees embraced the change and together we managed to attend to some of the key issues raised by our members and stakeholders. Here are just some of the highlights:

- The successful launch of the new Agri-Intel website featuring a mobile and user-friendly interface, as well as real time data
- Establishing excellent relationships with the Registrar of Act No. 36 of 1947
- Launching the new Continuous Professional Development (CPD) system, enabling users to upload and access information with ease
- Establishing 13 new collection points for obsolete pesticide containers through our waste management programme
- A stewardship best practice manual has been compiled and distributed
- Our new mobile and user-friendly website was launched with phase two consisting of a member portal well underway
- Member emails are now sent via a system that allows for targeted communication to nominated representatives, thereby eliminating duplicate or irrelevant emails.

And this is just the start.

We will continue to identify what our members' needs are and how we can provide the solutions to those needs. Our focus remains on the value we can add to our members and our future initiatives will exude this. Afterall, we are *your* association.

I sincerely hope you are as enthusiastic as we are about the year ahead and we look forward to being of service to you.

Regards
Rod

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The Changing Face of our Industry



Marius Boshoff
President
CropLife South Africa

This year will mark the 61st year of our industry body. The Association of Veterinary and Crop Associations of South Africa (AVCASA) was established as an industry organisation in 1958. Initially it was called the South African Agricultural Chemical Association and later in 1960's, 70's and early 80's, the Agricultural and Veterinary Chemicals Association of South Africa (AVCA). During these years the office was affiliated to the then Northern Transvaal Chamber of Industries.

Only in 1987 did it become the AVCASA secretariat which was initially based from a home in Pretoria, before moving into premises in Midrand where it remained until 2016. In 1999, the Agrochemical Distributor Association of South Africa (ACDASA) was created, but later incorporated under the Crop Protection umbrella and we officially adopted CropLife SA as we are a member organisation of CropLife International (previously known as Global Crop Protection Federation, but became CropLife International in 2001).

Many veteran industry leaders will tell you about the days when access to crop protection in South Africa was limited to a few major companies and distribution channels.

Today, that picture has changed dramatically with a membership of 45 supplier, 32 distributor and 27 associate member companies being part of CropLife SA, giving a total of 104 paid-up member companies. In addition, we have in the region of 850 distributor company sales agents enrolled in the CropLife Continuous Professional Development programme.

From a technology point of view, the number and variety of crop protection products have increased dramatically. At the same time, products have become much more effective, less acutely toxic and more environmentally compatible. Many new biological products are being introduced and will be a major growth area in the years to come.

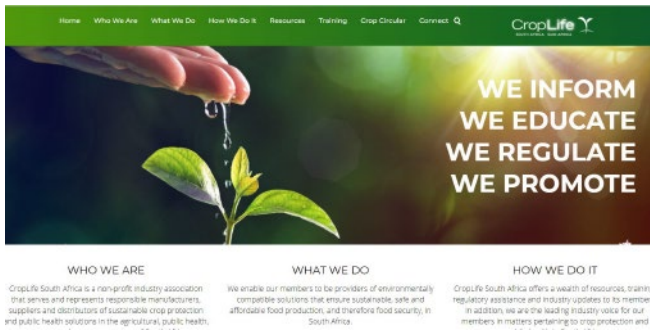
Our industry has undeniably contributed to a major increase in crop yields, which have met the food security needs in our country. As we look into the future, many businesses will quote the number of people agriculture will need to feed by 2050 and it is staggering at an estimated 9 billion. Yet, on the other side of this equation, implementation of the technologies available today still lags in developing economies of Africa. Approximately 800 million people in the world still face absolute poverty and spend all their time trying to secure one meal a day, if any. Locally, we have seen many years of significant drought or variable climatic conditions compounded by low commodity prices that affect the profitability of farms.

In order to address the challenges and growth opportunities in South Africa, CropLife SA's ExCo has embarked on a renewal programme aimed at giving strategic vision to the industry. Our association is now, more than ever, committed to serving our members and consumers to ensure sustainable, safe food production and food security, whilst maintaining high levels of environmental compliance. We champion the role of agricultural solutions in crop protection to support and advance sustainable agriculture in South Africa. With this in mind, the key strategic areas of operation were identified as being: stewardship; government liaison, legislation and compliance; communication and brand building of the crop protection industry; and education, training and skills development.

Following this strategic initiative, a supporting organisational structure was created and as we continue to evolve, we need our members to actively participate in, and contribute to, establishing CropLife SA as a responsible member of the business community in South Africa.

Best regards and I hope 2019 will be a great one.

Noticed Something Different?



We are extremely proud to announce the launch of our new website. The aim of developing a new site was to uplift the image of the organisation, as well as to create a more user-friendly platform.

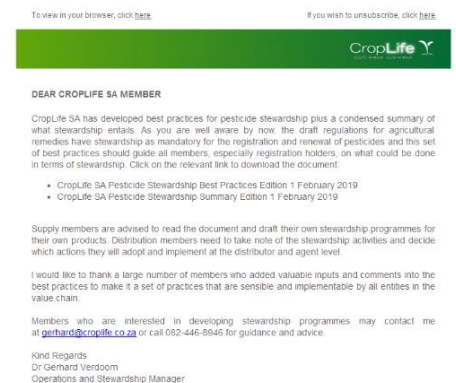
Phase two consists of a member portal where members will be able to access all the resources that CropLife SA has to offer in one place, including dossier checklists, training presentations, meeting minutes and much more.

As always, any comments or suggestions are appreciated. Please forward them to elriza@croplife.co.za.

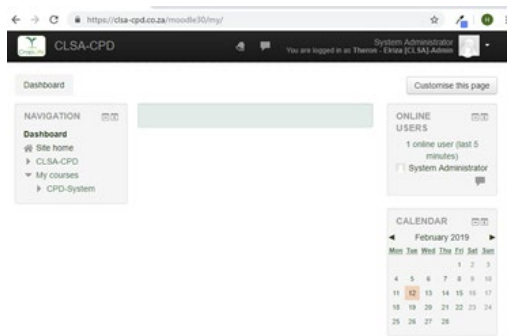
We Promise Not to Spam You

CropLife SA embarked on an initiative to improve our communication to our members by updating our databases. The objective was to send the right messages to the correct recipients and eliminating email overload.

Thank you to all our members who have submitted their representative contact details. The new email system is now fully functional and we hope you will notice the difference. Please make sure to add us to your address book to prevent our emails ending up in your junk mail folder.



The New CPD Platform is Here



As many of you know, CropLife SA was tasked to find an improved CPD platform as the previous system was not fit for the purpose and members experienced a lot of frustration when uploading data.

After a challenging implementation period, we are pleased to announce that the new platform has officially been launched.

In addition, new modules have been loaded for the month of March to assist agents in obtaining additional points required for accreditation.

Payment Made Easy

As part of our drive to offer value added services to our members, we created the option of paying for your training or publications online or with a credit card at our head office in Centurion. If you would like to make use of these payment options, please contact Nadia van Niekerk at nadia@croplife.co.za.

New CropLife Accreditation Cards



The 2018 CPD cycle is coming to an end, which means we will soon be issuing new CropLife SA accreditation cards to all qualifying agents. Please ensure that your details are correct on the CPD system. If you are unsure, contact your company's Skills Development Facilitator to verify your details.

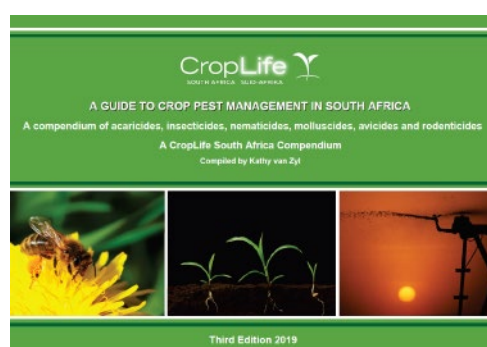
Triple-Rinse Collateral

We have redesigned the triple-rinse posters and brochures. The A3 posters are available to purchase from CropLife SA at R15 (gloss) or R25 (laminated) each. Please contact Susan Ramaila at susan@croplife.co.za to place an order.

The brochures can be downloaded from the CropLife SA website (www.croplife.co.za) or you can request printed copies from Elriza Theron at elriza@croplife.co.za. Please note that maximum unit limits per member apply.



2019 Compendium Edition



The third edition of *A Guide to Crop Pest Management in South Africa* is available to purchase from CropLife SA for R275 per copy. It includes a compendium of acaricides, insecticides, nematocides, molluscicides, avicides and rodenticides in print and CD-ROM.

Please contact Susan Ramaila at susan@croplife.co.za to place your order.

Highlights from the 2019 AGM

CropLife SA held its Annual General Meeting on 12 March 2019 in Centurion. Marius Boshoff (President) presented his report and opened with a summary of how the association has evolved since its inception in 1958.

He continued by highlighting some of the successful 2018 initiatives, including the launch of the new Agri-Intel platform, a Stewardship Best Practice programme, a new CropLife SA website as well as the progress made with the Department of Agriculture, Forestry and Fisheries. Furthermore, the achievements of the various working groups and forums, including the Pollinator Health, Resistance Management, Seed Treatment and Application Technology forums, were commended.

The meeting concluded by unveiling the newly elected Executive Council:

- Abraham Vermeulen (Syngenta)
- Gerrit Badenhorst (Rolfes Agri)
- Jacques du Preez (NexusAg)
- Dr Klaus Eckstein (Bayer Crop Science)
- Marius Boshoff (Villa Crop Protection)
- Quintin Cross (Nulandis)
- Rod Bell (CropLife South Africa)
- Chris Thompson (Laeveld Agrochem)
- Henk van der Westhuizen (Philagro)
- Jan Botha (Arysta)
- Kobus Meintjes (Corteva Agriscience)
- Niel Kruger (InteliGro)
- Roy Cackett (Farmers Agri-Care)

Subsequently, the new council re-elected Marius Boshoff as President, and Kobus Meintjes as first time Vice President of CropLife South Africa. Together they will form the directorship of the association, along with CropLife SA Chief Executive Officer, Rod Bell.



Front ltr: Gerrit Badenhorst, Jan Botha, Marius Boshoff and Jacques du Preez
Back ltr: Quintin Cross, Abraham Vermeulen, Kobus Meintjes, Rod Bell and Niel Kruger

CropLife South Africa would like to thank all the outgoing council members for their dedication to the industry and the association over the past year. The strides by CropLife SA could not have been made without your leadership.

Congratulations to the newly elected members and best of luck as we work together to take the association and the industry forward.

Pesticide Containers - From Farm to Flat

The quality of pesticide containers

Most pesticide containers used in South Africa are packaged in plastic drums varying from 100 millilitres to 20 litres. Those used in agriculture are mostly 1 litre or more. These containers need to be sturdy and the manufacturers use high-density polyethylene for the production of these containers. Act No. 36 of 1947, which governs all pesticides, pre-

scribes that these containers need to be sturdy and may not leak during transfer. If you take a good look at a 20-litre container, the quality will blow you away. Most of the plastic containers are fluorinated, in other words the inner surface is covered with a layer of fluorine, making the plastic inactive and ensuring that the pesticide molecules do not penetrate the plastic.

Dr Gerhard Verdoorn
Afrikaans version
published in AgriAbout
January 2019

Re-use of pesticide containers

The phenomenal quality of pesticide containers gives the impression that it may be used for another purpose once it is empty, but globally it is maintained that this practice should not be supported. There are various reasons for this:

1. If any pesticide is left in the container, it could contaminate whatever is added, which may have serious repercussions for human health or the environment.
2. If other pesticides are added to the container, it becomes contaminated, which could damage the crop. For instance, if a container containing 2,4-D is re-used for an insecticide, the resulting damage will be catastrophic.

The only acceptable use for empty pesticide containers is to recycle it into other products that are not used as containers, for instance pallets, garden furniture, crates or irrigation pipes.

The cleaning and recycling process

An empty pesticide container can easily be cleaned on the farm, preferably at the same place where the pesticide is mixed into the spray tank. The following steps are recommended to completely clean the container:

1. Once the last remaining pesticide is transferred to the spray tank, keep the mouth of the container over the spray tank's opening and rotate the container for 30 seconds in order to get rid of the remaining pesticide.
2. Add one quarter of the total container volume fresh water, shake for 30 seconds and transfer the rinse water to the spray tank.
3. Repeat this rinse process twice. The plastic container is now triple-rinsed and if any pesticide residue remained, it will be less than 0.0003% of the original volume.
4. Puncture or cut the container and leave it to dry.
5. Contact a CropLife SA approved collector or recycler to dispose of the containers. A list of approved collectors and recyclers is available on www.croplife.co.za. These service providers issue certificates of sufficient disposal to producers who need it for audits such as GlobalGAP.

Beware of the prowlers

Unfortunately, there are some individuals who enter the market with ulterior motives.

They remove the containers from the producer under false pretences and then resell them. This is not only unethical, but extremely dangerous as explained already.

Producers are urged to insist that their service providers produce a CropLife SA certificate of approval. Every approved recycler has a registration number clearly displayed on the certificate as well as an expiry date. If a service provider does not have this certificate, then it's best to steer clear of handing over the containers.

Outdated practices

In the old days it was standard practice to bury or burn the empty containers. Burning such empty containers is pointless as valuable material is being destroyed, creating an undesired carbon footprint. In addition, due to the low temperatures of such fires, the plastic doesn't burn entirely and emits dangerous poisons. These toxic fumes can pose a serious risk to cattle and other animals, therefore combining fire and pesticide containers is taboo.

On the other hand, if plastic containers are buried, those containers continue to "live" in the soil for years before slowly breaking down and contaminating the environment with micro-plastic. Again, this is a senseless practice as valuable materials are being wasted. Our days of pollution are numbered; there are just too many people on earth with too little arable land to waste what we have.

If you are unsure of which service provider to use, contact CropLife SA for clarity or visit www.croplife.co.za.

Quality Control in the Production of Agrochemicals

Grain producers spend approximately 10% of their production costs on agrochemicals, or rather, pesticides and related products such as adjuvants, adhesives, buffers etcetera. Any of the inputs such as seed, fertiliser and agrochemicals are extremely important as quality inputs along with favourable weather conditions are sure to deliver a profitable harvest.

Dr Gerhard Verdoorn
Published in SA Grain
January 2019

There is, however, a certain level of mistrust among producers about the quality of agrochemicals, which is often fuelled by reports of poor efficacy or even crop damage.

CropLife South Africa wants to assure producers that there is very little reason if any, to doubt the quality of agrochemicals. This statement, however, can only be qualified by the assumption that the agrochemicals are registered and satisfy all the requirements.

Requirements in terms of Act No. 36 of 1947

The Fertilisers, Farm Feeds, Agrochemicals and Stock Remedies Act (Act No. 36 of 1947) requires that all agrochemicals, or rather, pesticides, be registered. In addition, all products must be packaged in approved, clean containers that do not spill when pouring the product. The container must display an approved label.

The product's composition and physical properties must also satisfy the requirements as was submitted upon registration and the product's efficacy must match that of the registration application.

These requirements are set in Article 7 (1) of the Act and are further supported by the fact that the Registrar of the Act may set any other conditions before approving an application for registration. All this speaks to the original reason for the formulation of Act No. 36 of 1947, namely, to ensure that the pesticides being manufactured and distributed, have the necessary efficacy to manage pests, plant diseases and weeds.

Developing an agrochemical

When a company develops an agrochemical, there's a broad spectrum of required research needed for the composition of the dossier to apply for registration.

1. First, the source of the active ingredient must be found and the source's analysis of the active ingredient for five batches must be acquired. Subsequently, the acceptable standard of the active ingredient needs to be ensured. If there are any impurities or contaminants in the active ingredient, it must be declared in the analytical report. Such a source is then approved by the Registrar and recorded as the only supplier of the active ingredient that the company may use.
2. The active ingredient must be formulated in a suitable combination with other co-formulants, and the formulation plant must be approved by the Registrar. Co-formulants are items such as solvents, adjuvants, stabilisers, colourants, emulgents and adhesives. Only certain products are approved, while substances such as diazo-pigments, have been banned for a long time.
3. A shelf life must be established, and the company must expose the formulated agrochemical to accelerated shelf life tests, where all the physical and chemical properties are established. If the product passes all the tests, a two-year shelf life is awarded in terms of the regulations. However, if the product does not pass the tests, a shorter shelf life will be awarded.
4. Field trials over at least two growth seasons and in at least two different climatological regions must be done in order to prove that the product can manage at least 80% of the pest, disease or weed.
5. Residue trials are done with the correct dosage as well as twice the dosage in order to ascertain what the acceptable residue would be after the pre-harvest interval, in other words, how long the producer needs to wait after the last application to ensure that the residue is below the acceptable residue level.
6. An important requirement is to prove that there was zero crop damage when the agrochemical was applied with the correct applicator and in the right dosage.

All these requirements aim to ensure that the planned product will do its job.

Toxicology studies

All agrochemicals, whether chemical or biological in nature, pose a possible risk to human health and the environment. That is why it's required to undertake a full toxicological evaluation of the product, which is usually intensively done in the Northern hemisphere. The report will identify any risks as well as specify what the maximum allowable human consumption is.

Registration process

The application for registration of a new agrochemical is a comprehensive process that can

take up to two years. Various technical specialists evaluate the presented data and often the Registrar will request additional data before the dossier is approved and registration granted.

Post registration controls

Registration holders are subject to various other requirements once their agrochemical has been registered. Some products are imported where it has already been formulated and packaged with the necessary labels. Others are imported in bulk and repackaged and labelled locally. There are many products for which the active ingredients and co-formulants are imported and the product is then locally formulated, packaged and labelled. It is however possible that certain mistakes may sneak in during manufacturing that could affect the agrochemical's quality or composition.

In order ensure excellent quality and that product compositions always satisfy the specifications, all imported products must be analysed after import to ascertain the quality. Products that are manufactured locally are also subjected to these quality control tests. These tests are basically analyses to determine the chemical content and physical properties of the product. The most important analysis is the active ingredient one, namely, whether the correct active ingredient is present and if it's in the regulated concentration. Note that the regulations of Act No. 36 of 1947 do allow for certain deviations, for example if the active ingredient is more than 50% of the formulation, then the deviation may not be more than 2.5%, and if the active ingredient is between 25% and 50%, then the deviation may not be more than 5%.

Furthermore, it must be established if there are any contaminants or impurities in the formulation. Such elements are permissible, but only within the limits that are set when the product is registered. The tests also entail the physical properties such as viscosity, particle size (especially in suspension concentrations and emulsions in water formulations), density and stability. Granule size and solubility of water-soluble granular formulations are also aspects that need to be considered. It's a good idea to take a container of the manufactured batch, try it in practice and see whether it delivers the desired results.

There is also regulatory intervention in product quality, namely that the Registrar may at any time inspect the analytical data in order to determine if a specific product satisfies the particular quality requirements. He may even take samples and have them analysed for quality control. The Inspector of the Director General Agricultural Inputs Control frequently shows up at the storerooms of registration holders and collects sealed containers for analysis. In addition, all agrochemicals that are imported and even products that are formulated locally, are subject to record keeping. Samples need to be kept for reference as part of quality control in the event of any problems.

The onus for quality control is on the registration holder and the mandate resides with the Registrar. If the Registrar finds that a product's composition does not meet the specifications, he may suspend the product registration or even cancel it completely, depending on the nature of discrepancy.

Signs of possible poor quality

It is entirely possible that mistakes sneak in during the manufacturing of agrochemicals. A basic visual inspection of the product will usually show the first signs of an incorrect or poor-quality product.

Unknown colours, products where various components have been excreted, unknown odours and poor performance are all signs of possible problems. Contact the registration holder immediately in such instances.

Correct use of agrochemicals

Agrochemical labels reflect an enormous amount of complex research and trials aimed at ensuring the product performs as intended. Therefore, when the product is applied, it's the producer's legal responsibility to follow the label instructions to the letter. Over 95% of complaints about products that failed or damaged crops are a direct result of not following the label instructions. Every product has a disclaimer indicating that the registration holder does not take any responsibility for product performance if the label instructions were not followed. It goes without saying and is similar to a producer treating an ill animal with medicine, but not following the prescription – it will not yield the desired results. If a producer does not follow the instructions for use, they will not have a claim against the registration holder if something goes wrong.

Steps to take if there are clear problems with the quality of an agrochemical

If a producer has reason to suspect the quality of an agrochemical, they need to lock one sealed container away. Contact CropLife SA's head office on 087 980 5163 for instructions on how to have the product analysed in order to determine whether there was indeed a deviation from the specifications.

Be vigilant with your purchases

There are agrochemicals in circulation that are counterfeit and these products never have the correct quality. Be alert for containers with strange, unfamiliar labels or products that are peddled cheaply. Once again, CropLife SA is here to help. The AgriIntel database on www.agri-intel.com contains the label information of nearly all registered crop protection products in South Africa and together we can establish whether a product is legal or not.

When an agrochemical does not perform as desired, contact a CropLife SA accredited agent and discuss the situation. It's usually the tank mixtures that cause problems, or the calibration that was faulty, but if the product specifications were incorrect, the registration holder needs to take responsibility for it. Also look out for water quality, especially where the available water contains a lot of dissolved salts; it can easily impair product performance. The pH must also be buffered as this too may affect performance.

Summary

Generally, there is no reason to doubt pesticide quality, but be alert for the creepers who try to sell illegal and unregistered products. It is guaranteed trouble. Buy your agrochemicals from a trusted distributor and insist on trusted brands. For your own peace of mind, we recommend that you buy your agrochemicals from a CropLife SA accredited agent and/or distributor member.

Remember, if you have any reason to doubt the quality of your agrochemical product, contact CropLife South Africa on 087 980 5163

Use Pesticides Responsibly

Ten commandments for responsible pesticide use:

1. Plan your production season carefully and only buy the pesticides and volumes that you'll definitely need. Don't just buy products because it's offered at a low price, as it will likely accumulate only to have to be destroyed at a tremendous cost.
2. Only buy registered pesticides from recognised dealers, preferably agents that are affiliated with CropLife SA distributor companies, in order to ensure that you buy good quality, legal products. If a pesticide does not contain a registration number on the front panel of the label, then it is illegal in South Africa. These registration numbers start with a capital letter L, followed by four numbers, for example L1234, and after that "Act No. 36 of 1947".
3. Store your pesticides in a proper storeroom made from bricks or with concrete walls, a roof, sufficient ventilation, lighting and a lockable door. Many malicious poisonings happen with agrochemicals that have been stolen from farmers.
4. Study the label of every agrochemical carefully and only apply it according to the prescribed instructions. Regulation No. R1716 of 26 July 1992 warns that the use of an agrochemical for any other purpose or in any other manner than what is prescribed, is a punishable violation of Act No. 36 of 1947.
5. Provide your farmworkers with basic training about the safe and responsible use of pesticides.
6. Supply farmworkers who mix and apply pesticides with protective clothing such as a face mask, cloth hat, overall with long sleeves and long pants, rubber boots and rubber gloves. Ensure that they wear their protective clothing at all times, even the tractor operator. It's necessary to protect them from splashes, mists and oral ingestion of pesticides and spray mixtures.
7. Calibrate the spray equipment to apply the correct dosage of pesticides. This includes examining the spray heads to ensure it's not eroded or blocked. Consult your agrochemical agent for calibration advice.
8. Pesticides must only be applied if weather conditions are favourable. If the South Easter rears its head, or the Highveld thunderclouds are about to explode, or, if it's so hot that everything evaporates, then it's time to halt pesticide application for a while.
9. Once the pesticide containers are empty, they need to be triple-rinsed with one quarter volume fresh water and the rinse water must be decanted into the spray tank. Containers should be left to dry and afterward, pierced or cut into pieces before handing it over to a CropLife SA approved collector or recycler. A list of approved service providers is available on www.croplife.co.za as well as guidelines for the management of obsolete pesticide containers.
10. Avoid any malicious misuse of pesticides such as poisoning damage-causing animals. Not only is this illegal and inhumane, but it also poses a secondary poisoning risk to other animals. Some species, such as vultures, have already been dealt a huge blow through poisonings.

Dr Gerhard Verdoorn
Published in
Grain Guide 2019

Manage Gerbils Effectively

Gerbils are one of the grain producer's biggest enemies, but with the right methods they can be managed effectively without harming the environment. However, there are many ways in which legal rodenticides are abused and illegal pesticides harm the environment and its numerous gerbil predators.

Producers need to take note of the following:

- The scattering of zinc phosphide bait on the soil surface is ineffective and creates the risk of birds and other mammals picking up the bait and being poisoned.
- The scattering of wax-block bait or paste bait on the soil surface is also ineffective, as the sun can destroy it.
- It is illegal to mix bait yourself with carbofuran and grain, and it is also extremely dangerous.
- It is illegal to use rodenticides that are not registered for gerbils.
- Treating seed with carbofuran is illegal and it is also ineffective for controlling gerbils.
- It is illegal to treat seed with zinc phosphide and creates the risk that the seed will not germinate.

Rather do the following:

- Use only rodenticides registered for gerbils.
- Always place bait directly in the burrows and then seal the burrows, or place the bait in plastic pipes close to the nests.
- Use natural rodent control by encouraging owls and raptors with suitable poles and hatching boxes.

Contact CropLife South Africa for a complimentary, complete gerbil management programme at gerhard@croplife.co.za

Note from Grain SA

“Agrochemicals make up between 6% and 20% of grain and oilseed producers’ variable production costs. Whilst the cost is important, the quality, stewardship and safety of products are critical to produce enough and safe food for South Africa.

CropLife, as an industry organisation, plays a pivotal role to ensure a healthy agrochemical industry. It is therefore, with great excitement that Grain SA would like to wish Rodney and his team all the best in taking this industry forward.”



Corné Louw
Senior Economist

The Correct Procedure for the Disposal of Empty Pesticide Containers

CropLife South Africa, in co-operation with plastic processors, implemented a system to gather and process empty plastic pesticide containers in a legal and responsible way.

All the details are available on www.croplife.co.za in the Resources tab under the heading Waste Management:

- List of CropLife SA approved plastic collectors and recyclers
- Guidelines for cleansing and disposal of plastic containers
- Warnings about plastic containers
- Guidelines for plastic recyclers

If the pesticide container is empty, clean it as follows at the spray tank:

- Fill the container with clean water up to a quarter of the container's volume.
- Shake the container for thirty seconds.
- Pour the rinse water over into the spray tank.
- Repeat the rinse process twice.
- Cut the container in quarters and allow it to dry.

Dispose of the material in the following way:

- Contact a CropLife SA approved plastic processor closest to you.
- Arrange for the plastic container to be dropped off with them, or for it to be collected from the farm.
- Ensure that the plastic processor's valid CropLife SA certificate of approval is shown to you.
- Insist on a CropLife SA certificate of compliant destruction.

Do not under any circumstances do the following:

- Bury or burn the containers.
- Donate containers to anyone for re-use.
- Use the containers for lick or drinking containers for animals.

Do your part and do the right thing.

Can Canola Production and Bees Co-Exist?

Dr Gerhard Verdoorn
Afrikaans version
Published in SA Grain
February 2019

Barely 20 years ago, canola was a mere thought among grain experts, but the crop quickly found its roots in many places in South Africa where the yellow flower proudly boasts post-summer promises of healthy cooking oil and spreads for fresh bread. Such a canola field is picture perfect as well as a magnet for any six-legged creature looking for pollen and nectar.

The year 2018 was a tough one for some farmers, especially the ones who farm with bees and offer pollinator services to crop producers. Just as the canola came into bloom, the bees in the Western Cape perished one by one.

Upon closer inspection, it was found that the problem surfaced because profenophos was sprayed as a pesticide on the canola while in full bloom. Needless to say, it dealt a death blow to the bees and hundreds of colonies were destroyed. Understandably, it caused some bad blood between the bee farmers and canola producers, but thankfully the parties came together to resolve the matter.

The question is whether canola production is compatible with bees, especially given that insecticides are needed to protect the crop from harmful insects. In the last two years there have been massive plagues of African Bollworm and everyone is holding their breath for the destructive Fall Armyworm that thankfully hasn't affected canola yet this season. Canola will have a tough time without insecticides, fungicides and herbicides, but does the use of these products negatively affect bees?

According to CropLife SA's AgrilIntel, there are 67 pesticides registered for use on canola. Herbicides are generally not poisonous to bees, and the same goes for most fungicides. Insecticides, however, are mostly poisonous to bees regardless of the chemical class of the active ingredients. There are two ways in which bees can be poisoned by insecticides: firstly, through direct contact with the bee's body, for instance when a bee flies into a spray drift, or if it lands in an area where the spray mixture is still wet.



Secondly, bees can ingest the pesticide, for instance when it's drinking nectar or collecting pollen. Interestingly, direct contact with certain pesticides is often more dangerous to bees than oral ingestion. One needs to accept that all insecticides are poisonous to bees and that's why we need to be extremely cautious when bees are working nearby the crop, especially canola that's pollinated by bees.

All the insecticides that are registered for use on canola have special warnings to protect bees from being poisoned. The general precautions clearly specify that the insecticide may not be applied after flower bud formation, nor when bees are working nearby or in the crop. Technically, it is possible that insecticides can be applied without harming the bees if the label warnings are adhered to.

Canola, like any other crop, will be the target of harmful insects at some stage. There are plenty six- and eight-legged creatures that want to partake in the meal that is the producer's yield and the producer needs to outsmart them with pesticides. How on earth will the producer be able to tackle pests without harming the bees? The answer lies in precision farming, in other words, there needs to be a paradigm shift in crop production, especially high value crops like canola.

Any canola producer should know what plant pests, diseases and weeds can do to his crop in the coming season. It is therefore necessary to plan ahead for any possible pests and decide which pesticides will be needed. Note that only pesticides registered for canola and the anticipated pests should be applied. An important aspect of pest control is regular monitoring.

Unfortunately, this is not done often enough, and before the producer can wipe his eyes his canola fields are filled with caterpillars ploughing through it like pack trains. Prior knowledge is a formidable weapon against pests, for instance if swarms of moths are spotted late afternoon then alarm bells should go off as a Lepidoptera infestation is likely on its way.

Such pests usually appear early in the production season and can be managed with pesticides without affecting bees as there aren't any flowers to collect nectar and pollen yet. If monitoring isn't done, the pests are discovered too late to manage it in an environmentally sustainable manner and it will be catastrophic for bees who are exposed to these insecticides during pest control attempts.

The producer must also familiarise himself with the available pesticides. AgriIntel (www.agri-intel.com) lists virtually all pesticides that are registered in South Africa on all crops. By utilising the search engine, a producer can determine exactly which pesticide is needed. Unfortunately, agents do sometimes make incorrect recommendations, therefore producers should look at the label and verify if the product is registered for canola. The fiasco early in 2018 was caused because agents recommended profenophos, which isn't registered for canola, to be applied in full bloom. Responsibility for the correct and responsible use of pesticides reside with the agents as well as the producers.

When it's necessary in a crisis to manage pests in canola, then the producer needs to ensure that there aren't any bee hives in sight. CropLife SA supports the rollout of a new app named BeeMap Africa, that serves as a link between bee farmers and crop producers. Both parties register and enter their hives or crops on the app. When the crop producer needs to apply pesticides, he makes a note on the app and the bee farmer will be notified automatically so that the hives can be removed from the danger zone. The app is still in the development phase and can be tested by contacting Oscar Mandleier on 082 388 0170.



One of the most important aspects is to always follow the label instructions. Every pesticide is developed for a specific purpose, in other words, to address a specific problem on a specific crop. If the pesticide is applied for a problem or crop other than that for which it was developed, then negative consequences are unavoidable.

CropLife South Africa promotes the responsible use of pesticides by encouraging an easy saying: Just follow the label.

This means that regardless of what anyone recommends, the label must remain the guideline according to which the pesticide is used.

Bees are inextricably part of agriculture and are critically important as pollinators for many of the world's crops and flowers. If canola producers and bee farmers can work together to share information about spray programmes and hive locations, then both parties will reach their goal of sustainable agricultural production.

Seed Treatment: Facts and Guidelines

Seed is the one element without which a grain farmer can't even call himself a farmer. Other inputs such as fertiliser and pesticides, merely play a supportive role to seed, but can transform a harvest from valuable to highly profitable. As technology changes, crop production potential increases and pesticides or crop protection products are some of the tools that make crops highly productive.

Dr Gerhard Verdoorn
Afrikaans version
Published in SA Grain
March 2019

In the old days, crop protection products were added in the furrows, but in modern agriculture seed protection is more targeted against diseases, insects and nematodes by applying pesticides directly to the seed.

Seed coating with crop protection products isn't just a matter of "pour and blend". It requires knowledge and focused equipment to effectively treat the seed with the prescribed products. Furthermore, it's important that the seed treatment products effectively bind to the seed to ensure that chemicals do not pollute the environment during planting, thereby posing a possible risk to valuable organisms such as honey bees.

Some seed treatment products are extremely poisonous to bees, such as neonicotinoids and pyrethroids, but if they are applied correctly and in the right conditions, the risk to bees is completely eliminated.

The big question concerning seed treatment is who may do it? Is it only the seed breeders such as the well-known seed companies, the agrochemical agent or the operative? Or may producers do it themselves? This is a difficult question with an equally complex answer as it depends on various sets of legislation. It's also a matter of how effectively seed treatment can be done by various role-players.

Technically, any person who buys an agrochemical may legally only apply it according to the label instructions. Therefore, no one can prevent a producer from buying a pesticide and treating his seeds with it. Act No. 36 of 1947, which governs all agrochemicals, only requires the producer to adhere to the label instructions.

However, sometimes a producer needs to make use of other entities to perform certain tasks, and that is where Act No. 36 of 1947 comes in with restrictions. As soon as a person or company applies a pesticide on behalf of someone else (the Act calls it "in the course of business"), then that person must be registered as a pest control operator in terms of the Act. This is necessary because the service providers offer a specialised service that requires training and specific knowledge, as well as experience.

The seed industry association, SANSOR, and CropLife South Africa, are of the opinion that seed treatment should not be taken lightly and that it needs to be done with equipment of specific standards if it is to be successful. It's also important to understand that some products are not compatible with others.

From the perspective of Act No. 36 of 1947, the producer needs to ensure that whoever treats the seed on his behalf, fulfils the following requirements:

- Only agrochemicals that are registered as seed treatment products may be used.
- The products must strictly be blended according to the prescription in order to provide sufficient seed protection. Take special note of the dosage, which is indicated in grams or millilitre per mass of seed or number of seed kernels, on the label.
- The person or company should be registered as a pest control operator with the Registrar of Act No. 36 of 1947 and must possess a card with a P-number.
- The seed treatment must be done with the correct equipment indoors where wind won't generate dust.
- A polymer that binds the product to the seed must be used
- The seed must be dried sufficiently after the treatment to prevent fungal infections.

Other legislation that plays a role in seed treatment is the Plant Improvement Act No. 53 of 1976. This Act, along with its regulations, prescribe that the premises where the seed is treated must be registered in terms of the Act. Interestingly, the Act uses the term "cleaning" and defines it as depuration or any other treatment with the goal of applying the plant material (including seed) for reproduction. The regulations also require certain record keeping after treating the seeds in order to ensure the correct seeds were treated with the correct products. Luckily the Act determines that someone who treats his own seed does not need to have his premises registered.

All these requirements sound like a witch hunt but think about it: seed is the most precious part of the agricultural inputs and if something goes wrong with the seed, it's not even worth planting the season. This is why the Acts make such strong statements, in order to ensure that the producer's asset, namely the seed, is sufficiently protected.

Seed purchased from SANSOR member companies are already treated with insecticides and fungicides, therefore, there's no need to apply other pesticides. It does happen, however, that biological products such as inoculants are applied to promote growth. The disadvantage of this practice is that the seeds need to be planted immediately after treatment. Again, it's worthwhile to ensure that the process is conducted properly so as to ensure seed integrity.

CropLife SA recommends that producers purchase seed that is already treated by the seed manufacturer. They use specialised equipment and polymers, which make the seed treatment utterly effective and professional. In addition, audit processes are also involved such as testing the seed after treatment for chemical charge and germination. The products bought from a reputable seed company are guaranteed products that will ensure a good yield. If untreated seed is purchased and someone offers to treat it, first ensure that the offered service is registered and satisfies the requirements. Seed that's compromised because of poor seed treatment can cost a producer the entire production season.

It's also necessary to determine whether the prescribed product is actually registered for seed treatment or not. This information can be obtained from CropLife SA's powerful search engine, AgriIntel. For peace of mind about your choice of seed treatment products visit www.agri-intel.com to see if it's registered for the purpose.

New Guidelines on Contamination Prevention in the Manufacture of Pesticides

CropLife International has published the fourth edition of “Contamination Prevention in the Manufacture of Crop Protection Products” available for download on www.croplife.org in the *Resources* tab. The document is for CropLife International members, their external manufacturers, non-members, and other relevant stakeholders in the manufacture process.

New topics in the fourth edition include expanded chapters on warehousing, recommendations on how to run a Risk Assessment process, improved labeling guidelines, and a section addressing calculation of Acceptable Contamination Limits (ACLs) that ensure the residue level of non-listed active ingredients will be below the maximum residue limit (MRL). For more information, contact will.surman@croplife.org

New Guidelines on Handling Treated Seeds

New guidelines on seed treatment and handling of treated seed are available for download on www.croplife.org in the *Crop Protection>Stewardship>Stewardship Training Materials* tab. The document, written by CropLife International in partnership with the International Seed Federation (ISF), promotes the safe handling and management of treated seed, while protecting farmer health and the environment.

The guide is targeted at customers who have purchased treated seed and are looking for information on best practices about planting, handling, and disposal of any surplus seed. The guide is also useful for applicators of seed treatment as well as seed companies to guide their management and handling of treated seed according to label, regulations and best practice. For more information, contact andrew.ward@croplife.org

Note from CropLife Africa Middle East



Les Hillowitz
Stewardship Director

Within the Africa Middle East region, South Africa is the largest pesticide market and CropLife South Africa the biggest of the 25+ national associations operating in the region.

The strategic initiatives outlined in their 3-year plan, starting with Stewardship, ties in perfectly with the direction of CropLife Africa Middle East, who will offer all the support necessary to enable the organization to meet its goals. Under the new structure, I foresee CropLife South Africa playing a bigger leadership role in the sub-region in many areas, and I look forward to being an active partner in achieving this.

Fall Armyworm Training in West Africa

From the time it was first confirmed in Africa in 2016, Fall Armyworm (*Spodoptera frugiperda*) has and continues to cause ongoing damage to a variety of crops, specifically maize. Annually it can destroy 20% to 50% of yields. The pest has now been confirmed in India and more recently in China and other parts of Asia.

Les Hillowitz
Published in CropLife
Africa Middle East
Newsletter Feb 2019

A strategic approach to FAW management includes expert trainer of trainers being established in the relevant core African countries. With the support of CropLife International, a pilot program was developed and the process kicked-off in West Africa the week of 11 February, covering the countries of Cote d'Ivoire, Ghana, Mali and Nigeria.

Based on the outcome of this intervention a second training is planned for later in the year to cover East and Southern Africa and to possibly include representatives from India and maybe even China. The training was based on an IPM approach and on proven technologies.

The three-day event included a field visit at which participants could see firsthand the devastation that this pest can cause. We were extremely fortunate in having Desiree van Heerden of Syngenta as the lead trainer who demonstrated the ability of preparing and coaching the trainers and moving them to a new level. Her efforts were ably supported by Victor Attuquaye Clotey of CABI, who focused on "ways of working".

The final session of the workshop was facilitated by Manon Dohmen, and covered the development of a Concept Note by the four countries in how they plan to rollout this training to CropLife members.

Emergency Registration of Pesticides in CropLife Africa Middle East Region

Kulani Machaba,
Corteva Agriscience &
Stella Simiyu Wafukho
Published in CropLife
Africa Middle East
Newsletter Feb 2019

Many countries in Africa and Middle East have established an emergency registration process for authorizing pesticides to control critical pest outbreaks, or sudden plant disease epidemics when registered products do not provide sufficient control. Implementation of emergency pesticide regulations vary from one country to another, however, there are some common factors across countries. These are highlighted in the foregoing.

Common factors across countries

A well defined plant health emergency situation

A pest outbreak is characterized under the emergency registration process if a new pest invades a new geographical area; if the existing pests pressure increases significantly and products with sufficient efficacy for pest control (e.g. due to resistance) are lacking; and/or different application methods should be used due to sudden changes in abiotic factors.

More generally, a plant health situation may require an emergency authorization if the threat/control balance breaks, food production is at an imminent risk and solutions exist, but they are not yet authorized. The dossier for such applications intended for the emergency situations usually includes documented evidence on why the situation should be classified as an emergency.

Stakeholder sponsorship and support

Stakeholders affected by the pest outbreak are sometimes expected to submit letters of support, confirming the urgent need for an emergency registration. This usually includes a rationale for classification as an emergency registration and may include supporting overseas efficacy data on the pest of concern.

Timelines

Due to the urgent need for efficacious pesticide products, applications are reviewed on a fast-track basis. The applicant is also granted a period of one to three years (depending on pest pressure/availability) to generate data that will support a full registration of the selected solution, while the plant threat is controlled under the emergency registration.

Overview of existing practices in AME

Country& specific registration pesticides	Region with emergency regime for	Common Data requirements of the local emergency authorization	*Typical validity of the authorization	Can emergency use of new actives not registered in the country previously be allowed?
Benin	Yes	Reasons for emergency authorization, and socio-economic impact of denial of the application	1 year	Yes, on condition of supporting data from OECD member countries
CILSS	Yes		1 year	Yes, on condition of supporting data from OECD member countries
Egypt	Yes	- How will the product be utilized {GAP}? - Other alternative products/ remedies (if applicable)	1 year	Yes, on condition of supporting data from OECD member countries
Ivory Coast	Yes		1 year	Yes, on condition of supporting data from OECD member countries
Kenya	Yes	- Sponsor/Letter of support - Proposed emergency use Label	3 years unless explicitly stated by PCPB to be temporal registration which is 1 year	NO, but the registration can be fast-tracked provided the actives are registered elsewhere for the same pest.
Nigeria	Yes		1 year	Yes, on condition of supporting data from OECD member countries
South Africa	Yes	Health/Environmental safety data from other countries	1-3 years	NO

*Average period the applicant is granted to generate efficacy/residue

Common challenges experienced in implementation of emergency uses

Regulatory authorities appropriately apply different criteria to ensure that emergency use registration procedures are not abused as means of getting pesticide products faster to the market without clearly identified emergency situations. Nevertheless, there are sometimes challenges encountered in the process of registration of pesticide products under emergency use guidelines. Some of the common challenges encountered include:

Unclear guidelines

Guidelines may not be clear, or up-to-date, and sometimes do not exist. When guidelines don't exist, rules may change according to various factors outside the control of the applicant, or even the regulator and this creates uncertainty in the entire registration process. The validity of emergency registration is not always clear, whether two or three years but this can be specified in the guidelines.

Effective management of pest resistance

Emergency situations may not develop over short periods of time. They may result from several years during which resistance develops and progressively erodes the efficacy of registered products to control the problem. Since assessing the socio-economic impact of resistance is a long process and may not be completed before an emergency decision is due, economic losses may result from the applicant's inability to document the situation in time. It is therefore ideal for authorities to carefully examine the evidence provided in letters of support, usually included in the dossier. Indeed, stakeholders that provide those letters have first-hand experience and suffer the most from the lack of effective control options.

Registration of new active substances

Sometimes authorities in AME require comprehensive toxicological reviews using local experts when new active substances are filed under the emergency registration process, and in some cases new molecules are not considered for emergency uses at all. This process usually takes a few years, irrespective of the fact that the concerned molecule may currently be widely used by many OECD member countries and may have been cleared for safety purposes by many toxicologists and regulatory authorities globally. Such situations should be reviewed on a case-by-case basis and merits of granting an emergency authorization to a new active substance that has not yet been fully evaluated locally, should be considered as appropriate solutions to emergency situations may lie in new molecules tested elsewhere.

Handling emergency pest situations such as the FAW requires pragmatism on the part of regulatory authorities and other stakeholders in developing guidelines/emergency use regulations where they do not exist. Successful handling of plant health emergency situations requires regular engagement on various regulatory policy matters related to emergency pest situations, looking at similar experiences in other parts of the world and updating of requirements.

Management of FAW: Emergency and long-term

The pest was first detected in West Africa in January 2016 and has quickly spread to 44 countries across sub-Saharan Africa. In 2018, the pest spread to India and the FAO₁ warned it could threaten the food security and livelihoods of millions of small-scale farmers in Asia as the pest is likely to spread further, with South East Asia and South China most at risk. It is thought the pest could also spread to Europe.

Based on data from Africa, CAB₂ estimates FAW will reduce annual maize production by 21%-53% in the absence of pest management.

Insecticides are one of the few proven and effective tools for the management of FAW and their deployment should be given balanced consideration – through both foliar applications and seed treatments. A practical approach for small-scale farmers would be the provision of guidance focused on:

- the use of in-country registered pesticides
- the avoidance of illegally traded pesticides and/or counterfeits
- the avoidance of WHO₃ class 1a acute toxic pesticide or only use them where farmers are trained and use respective precautions (or as a last resort);
- pesticide procurement that follows demand and requirement, and has appropriate measures in place to ensure obsolete stocks do not result;
- Establishment of guidance to avoid build-up of resistance. For instance, an Insect Resistance Management guide for FAW has been developed by the CropLife International Insect Resistance Action Committee
- Establishment of processes to enable emergency registrations to ensure modern and safer pesticides become available to farmers

1. United Nations Food and Agriculture Organization
2. Centre for Agriculture and Biosciences International
3. World Health Organization

Long Service Awards

Many of you know Hettie Dickenson as she has been the go-to contact person for CropLife SA and AVCASA since her appointment in 1990. After 29 years of service, Hettie is going on well-deserved retirement and she will be missed by many.

“I would like to thank everyone for their kindness and support throughout my tenure, especially those individuals who patiently assisted me when I didn’t have an answer to a query. I’ve seen many changes in the industry and I enjoyed every moment of it. My journey with CropLife over the last two years has been great. I wish the new team all the best in dealing with any challenges that may come their way.”



In February 2019, after 40 years of voluntary service as the Chairman of the Small Pack Forum, Bill Smit handed over the reins to Nomfundo Mfeka (Bayer Environmental Science). We would like to take this opportunity to thank Bill for his unwavering commitment and selfless dedication to the industry.



“I enjoyed what I was doing because to me it was always to get the companies in the small pack sector to toe the line and try to support them with the tools they needed in this highly competitive market. Also at the same time promoting the good work AVCASA, now CropLife SA, was doing for the industry.”

Remember to Make Use of our Services

Members are encouraged to participate in, and make use of the services that CropLife SA has to offer:

Ideal dossier checklists	Advertisement compliance verification	Guidelines for regulatory compliance
Waste management programmes	Agricultural remedies databases	Stewardship best practices

Participation in forums addressing key issues such as:

Pollinator health	Resistance management	Regulatory affairs
Stewardship	Application technology	Seed treatment

We're Here to Help

If you require assistance with any of the above services, would like to become a member, or if you have general feedback, we would love to hear from you. Please contact any member of our team or pop into our offices in Centurion:

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