

**CropLife South Africa and CropLife Africa Middle East  
Sustainability in Agriculture and Food Security Workshop  
9 – 11 May 2023**

### **Executive Summary**

Agriculture is a major sector in South Africa, that also relies heavily on the exports of agricultural commodities, particularly to the European Union (EU). Yet, food insecurity is a key issue, largely attributed to unpredictable weather and geographic conditions, as well as increased pressure from pests and diseases. These have been exacerbated by climate change, Covid-19, the war in the Ukraine as well as legislative developments in the EU, with the continent and its farmers now facing increased challenges to feed its growing population, both directly in terms of local food production, but also in terms of running viable agricultural businesses for local job creation and economic stimulation of the continent's relatively poor economy. It is therefore essential to get the sustainable growth agenda right in agriculture, while ensuring food security remains a priority. This is why CropLife South Africa (SA) and CropLife Africa Middle East (AME) hosted different workshops with various stakeholders, including grower groups, government representatives and the media, to discuss the need to bring the African narrative more firmly into relevant policy discussions, notably at EU level.

1. **Addressing misconceptions by providing context:** Agriculture as a science, especially crop protection, is largely misunderstood and because of this, it's often the target for activism or emotion-based, anti-science lobbying. This becomes problematic when it places food security or effective, sustainable food production at risk, which is why the discourse between the various stakeholders is of utmost importance. Issues such as toxicity, residues, pesticide regulation and substances of concern must be placed in the appropriate context and within a hazard/risk framework to ensure policy discussions are objective and based in science.
2. **Risks to South African agriculture:** Some of the policies proposed by the EU in their various strategies relating to the EU Green Deal, pose a very real threat to South African agriculture, which cannot be ignored. The need for food systems to be transformed and for growers to produce safe and nutritious food in an environmentally compatible manner is undeniable, however, any change must be sustainable, and policies must consider the local production conditions as these are not one-size-fits-all, and the realities of EU farming is not the same as those for South African farmers. South African regulators should be cognisant of the possible unintended consequences of these EU policies and how they will impact not only food security in South Africa, but also jobs, livelihoods and opportunities for economic growth, to name a few. The enforcement of these policies on South African agriculture, when they were not made with South Africans in mind, is a threat to the government's right to make decisions for its people based on the local conditions and requirements.
3. **Requirements from stakeholders:** It is of the utmost importance that all stakeholders, including government, industry and growers, give this matter the necessary attention, because food security affects every single South African. The livelihoods of the people of South Africa must be protected at all costs, and stakeholders need to work together so that conversations can continue at EU level, where it matters. We therefore urge government and other stakeholders to participate in the necessary discussions and engage with us to ensure that the country's right to produce safe and affordable food in sustainable manner within local conditions, is not challenged.

The workshops focused on the following themes:

### **1. Addressing misconceptions by providing context**

Many of the topics discussed were aimed at providing context for some of the often-misunderstood issues in plant protection, including the regulatory environment for agricultural remedies and the scientific arguments for and against some of these technologies.

#### Activism

Of course, one cannot ignore how activists often use the exact opposite of context to mobilise the public and government to prioritise certain issues, even if the arguments are not based on scientific data or sound research. These strategies usually follow the same steps by creating a problem, making it a health issue, providing selective “evidence”, and focusing on children, followed by blaming and subsequently excluding the industry, ultimately creating laws based on emotion as opposed to science and discussion. The problem with activist campaigns is that it’s rarely based on dialogue or outreach, meaning the aim is not to educate, but rather to mobilise or activate their intended audience. To further complicate the matter, industry is usually focused on the facts, thinking the science will speak for itself, and while this might be true, it does not have the same desired outcomes as following a campaign model. This does not mean that the industry should sit back and do nothing, and striving for objective dialogue and proactive discussions should remain a key priority. This was one of the reasons for hosting these workshops.

#### Toxicity

A frequently misunderstood concept is that of toxicity. It is often assumed that “natural” products are safer than synthetic products, but as Paracelsus, the father of toxicology stated: “All things are poison, and nothing is without poison; the dosage alone makes it so a thing is not a poison”. This applies to all chemicals, including medicines, natural remedies, beauty products, household cleaning products and so forth. To illustrate, paracetamol which is sold over the counter at nearly any outlet in South Africa, has an acute mammal oral toxicity on par with some of the pyrethroids, which are used in many household insecticides. That does not mean it cannot be taken safely when the label instructions for dosage are followed.

#### Residues

When it comes to pesticides specifically, some people are concerned about the pesticide residue traces that may sometimes be found in or on certain foodstuffs. However, when placed in context again, these residues are negligible when a person understands the science behind how the allowable residues are calculated. In toxicology there are certain safety parameters for all substances, most important of which is the ADI or acceptable daily intake. Toxicologists do meticulous calculations of the substance’s toxicology, the food basket (meaning looking at the average food consumption of a person in a certain country) and the maximum residue limits (MRLs) of the substance, and then they produce an acceptable daily intake of the substance for human beings.

That figure is universally accepted as the daily dosage of a substance that a person may ingest without it having any health effects on the person. For instance, the ADI of glyphosate, is between 0.1 and 2 mg/kg body mass per day, meaning an 80-kilogram adult can safely consume 80 mg to 160 mg

glyphosate per day without any adverse effects. It is alleged that bread in South Africa contains 2 mg to 4 mg glyphosate per loaf, therefore a person would need to eat 20 to 40 loaves of bread per day before the trace amounts of glyphosate would have any impact. Linked to the ADI is the MRL (as mentioned above), which is the upper limit of a pesticide concentration in consumable material that poses no appreciable risk to the sensitive individuals in a population. MRLs are a trading standard used to ensure that food is safe for human consumption and to facilitate international trade, and each country (and sometimes even retailers) specifies its own MRLs based on the typical food basket of the country. Note that MRLs are usually set well below the levels which would pose consumer safety concerns, with additional safety parameters included when calculating the acceptable limits.

### Regulation of pesticides

All pesticides should have sets of acceptable residues and exposure levels that are determined internationally by the Joint Meeting of the FAO Panel of Experts on Pesticide Residues and the Environment (JMPR) and the WHO Expert Group on Pesticide Residues. These parameters are factored in when an applicant applies for pesticide registration in South Africa, a time-consuming process that is regulated by Act No. 36 of 1947. The Department of Health then sets the appropriate MRL for the product based on the data submitted to Act No. 36 of 1947. Before an agricultural remedy, which includes pheromone traps, mating disruption devices, biological products (basically any product that makes a claim of control, destruction, repelling, attracting or prevention of a pest), can be registered, a dossier needs to be compiled along with the application. This dossier includes an immense amount of data, including efficacy data, residue data, phytotoxicity and yield data as well as in-depth information about the active ingredient (identity, purity within specifications, declaration of impurities, toxicology, environmental impact, manufacturing process, etc.) and formulation (full disclosure of active ingredient content and co-formulants, physical and chemical properties, storage stability, toxicity, etc.), to name a few.

In other words, products cannot just be “dumped” in South Africa as some activists claim, they must go through a rigorous registration process that considers the local production conditions and environmental impact. A registered product will be accompanied by a product label and safety data sheet (SDS) that, as from September 2022, must comply with the Globally Harmonized System of Classification and Labelling (GHS). The product label is a legal document that gets approved under Act No. 36 of 1947 and reflects the claims for which the registration data has been submitted (efficacy, pre-harvest interval, re-entry interval, re-cropping interval etc.). Note that it is illegal to apply any crop protection product contrary to the product label instructions as per Regulation No. R1716 of 26 July 1991, which includes wearing of appropriate personal protective equipment (PPE), pollinator safety instructions, pre-harvest intervals and so forth. If the product label instructions are followed, the risk to the user is mitigated and the product, no matter how hazardous, can be applied safely.

### Substances of concern

The definition of a substance of concern according to draft regulations that were circulated to industry, refers to any substance that has an inherent capacity to cause an adverse effect on humans, animals or the environment and is present or is produced in a plant protection product in sufficient concentration to present risks of such an effect. These substances are classified by their intrinsic

hazardous properties according to the GHS mentioned earlier, which was implemented through the Hazardous Substances Act by the Department of Labour.

According to the GHS, the nature of a hazard is assigned by a hazard class, of which there are currently 29. Seventeen (17) of these are physical hazard classes, 10 are health hazard classes, and two are environmental hazard classes. These classes belong to a hazard group or type, depicted by a pictogram that can be used for several different hazards. Within these classes, the severity of the hazard is then allocated in terms of a hazard category expressed as a number, for instance category 1 would be the most severe. Some of these categories are further sub-divided into divisions, which are expressed as a letter, i.e. A, B, C and so forth.

On 14 April 2022, the Registrar of Act No. 36 of 1947 sent out a notification to industry of his intention to phase out active ingredients and their formulations that meet the criteria of CMR 1A and 1B of the GHS by June 2024. CMR category 1A refers to active ingredients and/or co-formulants that meet the criteria of a **known** human carcinogen, mutagen or reproductive toxin, largely based on **human evidence** and category 1B refers to a **presumed** human carcinogen, mutagen or reproductive toxin, largely based on **animal studies**. It must be emphasised that these classifications refer to the intrinsic hazardous properties of the product and not the risk. But can we rely on a hazard classification to guide us on risks?

If we apply the same logic to all substances, then we will need to ban most oral contraceptives as well, because Estrogen is classified as category 1B reproductive toxin and carcinogen. Vitamin A is a 1B reproductive toxin, and so is tea tree oil. Note that the latter two products are not regulated, unlike pesticides, and often make claims of being "non-toxic" and safe. In addition, these are substances that we intentionally ingest or apply to our skin, and not, as in the case with pesticides, a product where the risks of contact are largely mitigated through appropriate safety measures.

### Hazard versus risk

The concepts of hazard and risk are largely misunderstood, especially when it comes to pesticides. The difference between hazard and risk is that hazard refers to the ability of something to cause harm while risk is the probability of harm occurring. The issue of pesticides in the South African context, as well as the regulation thereof, should be based on a risk approach, and not a hazard approach.

Activists usually call for the banning of products based on their hazardous properties, but this argument does not hold up to logic as explained earlier. A car is a hazard if you consider the number of accidents on the road, but that does not mean that we ban vehicles altogether. Rather, we mitigate the risk by wearing a safety belt, adhering to the speed limit, and following other road safety regulations. Although some pesticides may be hazardous, it does not mean its use should necessarily be banned. If it's been proven safe in local assessments and does not pose a non-manageable risk to human health and the environment, farmers should be able to use the products to effectively manage pests and thereby ensuring food security in South Africa.

This is why context matters, and as will be illustrated further in this document, can pose a risk to South African agriculture and food production if the context is ignored.

## 2. Risks to South African agriculture

### The EU Green Deal

The European Union Green Deal (EUGD) has been dominating several discussions in the agricultural community since its presentation in 2020, mostly because its objectives, although commendable, are considered by many to be unattainable in practical terms and somewhat arbitrary. In addition, the knock-on effect of some of the proposed policies could have a severely negative impact on agriculture and trade in developing countries, who are most at risk when it comes to food security and socio-economic impacts. There are two strategies of concern for the agricultural industry in South Africa. The first is the Farm to Fork (F2F) strategy and the second is the Chemical Strategy for Sustainability.

### *F2F strategy*

Some of the key aims of the F2F strategy are to make 25% of EU agriculture organic, reduce the use of pesticides by 50%, reduce the use of fertilisers by 20% and to reduce the use of antimicrobials in agriculture by 50% by 2030. The EU's objective is to support the global transition to sustainable agri-food systems, which in itself is not a problem, however, the way in which this is being executed will pose significant risks for South African agriculture.

One such risk is the so-called 'mirror clause' that was introduced as a form of reciprocity with the aim of creating a level playing field for EU farmers. In other words, any constraints on EU farmers must be equally applied to farmers in countries from where agricultural produce is imported into the EU, while also encouraging sustainable food production methods in other parts of the world. However, this level playing field is not level at all because EU farmers are heavily subsidised with an approximate €387 Billion committed for this purpose.

These mirror clauses will mean that farmers exporting to the EU will no longer be able to use some of the tools available to them, even if it is registered in South Africa, due to those import tolerances (allowable residues of pesticides) likely being revoked. South Africa has a different climate to much of the EU, it has agricultural production that is not always possible in the EU (sub-tropical fruits for example) and South African farmers must fight pests that are not present in the EU. This will also have an impact on integrated pest management and managing resistance. In the citrus industry, for instance, the loss of certain products will have severe phytosanitary implications, such as for Citrus Black Spot (CBS), and because there aren't many options for control of CBS, the overuse of other products will lead to resistance development.

A further example of an industry that will be negatively affected by the anticipated loss of products is the macadamia industry. South Africa is the largest producer of macadamias in the world, but if certain active ingredients were to be banned as per the EU, then it would be nearly impossible to control the stink bug complex, which already accounts for approximately R120 million worth of damage per annum. Of the 48 products currently registered for this purpose, 46 would no longer be available if these mirror clauses were implemented, meaning there would be no options for resistance management either.



Another area of concern is the way in which the EU is now approaching the setting of MRLs and the subsequent import tolerances for products not approved in the EU. As mentioned, MRLs are meant to facilitate trade and protect consumer health and should be science and evidence based. However, the EU is moving away from internationally agreed practices by taking environmental aspects into account when assessing requests for these import tolerances. Environmental impacts are already considered when the product is registered in South Africa, where it is analysed by the competent authorities that understand local agricultural conditions. This change in approach is setting a precedent going forward, while compromising South Africa's right in making its own decisions regarding safe and effective agricultural practices that comply with environmental and human health standards within the country. It also undermines the regulatory framework and associated departments that are executing this mandate in South Africa.

### *Chemical Strategy for Sustainability*

The proposal for this strategy is to set up a ban on the production and export of substances that are not approved in the EU under the guise of protecting third countries. However, it completely disregards the various agronomic needs of these regions and can lead to serious difficulties in sourcing high quality products, as well as leading to a shortage of essential solutions to control key pests. The proposal is open for public consultation at present.

In the grain industry, one of the biggest concerns is the ability of South African farmers to remain competitive. The loss of certain products will inevitably have a further impact on input costs, an additional pressure on an already very slim profit margin. To put this into perspective, if South African farmers were unable to produce yellow maize profitably and we had to import the same volume from the US, it would cost us R44 Billion more. Yellow maize is not only used for human consumption but also animal feed, so one can imagine the cost implications on the average South African food basket, bearing in mind that this is not the only crop that will be affected by these policies. And the risks are not just to food security and affordability, but if South African farmers are not able to remain competitive, job losses will be inevitable.

### The regulatory situation in South Africa

South Africa's regulatory framework for agricultural remedies is a robust one and even though the original Act dates back to 1947, six amendments have been made to the Act: 1950, 1970, 1972, 1977, 1980, 1996. One of the major challenges facing the crop protection industry is the time it takes to get a new remedy registered, which is due to a combination of reasons and industry is working with government to address these. But at present, there is still an immense backlog of product registrations, meaning new technologies are not entering the market as fast as they should. This means South African farmers have a void in their crop protection toolbox that is exacerbated by the abovementioned policies, because we are running out of suitable active ingredients faster than they are being replaced.

Another cause for concern is the perceived tendency to accept or match certain EU policies without any scientific basis. For instance, *Regulation (EU) No. 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products* clearly states in Article 5 that these active substances will not be approved in the EU if it

meets the criteria for CMR 1A or 1B. As mentioned, in South Africa, industry received notification of the Registrar's intention to phase out active ingredients and their formulations that meet the criteria of CMR 1A and 1B of the GHS by June 2024. It begs the question of why these restrictions are limited to agricultural remedies and not all chemicals, including those used in cosmetics, medicines and household products? If the scientific arguments, especially for the 1B classifications, are sound, then surely these restrictions should apply across all industries and not just agricultural remedies. In addition, when it comes to the classification criteria of these products, a mixture only needs to contain 0.1 % of a substance that is flagged as a CMR category 1A or 1B for the whole mixture to be classified as such. In other words, a mixture containing 90% of a substance classified as a CMR 1A or 1B has the same hazard classification in terms of the CMR characteristic as a mixture containing 0.1% of a substance classified as a CMR 1A or 1B, but does that pose the same risk to human health?

South African regulators should deliberate these arguments and establish regulations that fit the local agricultural landscape, are based on sound scientific research and aimed at ensuring food security and improved livelihoods for its people.

### **3. Requirements from stakeholders**

The first and most important requirement is for all stakeholders to give this matter the necessary attention, because food security affects every single South African, and if the external factors that might challenge this are ignored, then South Africa's ability to produce enough food for its people is at risk. Stakeholders need to work together so that conversations can continue at EU level, where it matters.

#### Government

South Africa's right in making its own decisions regarding safe and effective agricultural practices that comply with environmental and human health standards within the country must be protected at all costs. The country has its own regulatory framework and associated departments that are executing this mandate, and any approach that is a threat to that sovereignty must be challenged.

The livelihoods of the people who are producing South Africa's food and the communities they serve must be protected. These communities rely on agriculture to create job opportunities and to enhance their own livelihoods. The socio-economic aspect cannot be ignored and is under threat if our producers do not have the necessary tools to operate profitably. As mentioned, these are not factors that EU farmers need to deal with as they are heavily subsidised, whereas South African farmers are not, and must constantly deal with additional input costs and production challenges, such as infrastructure decline and load shedding.

South Africa's regulatory environment should be enabling to allow for the latest technologies and innovations to be brought to market so that its producers can continue to improve on their production practices. If our farmers are not allowed the necessary tools to protect their crops or have access to trade their goods in the EU, the snowball effect on the industry will be severe, including job losses and disinvestment, to name a few. These impacts will not only affect exports by commercial producers but will also have severe consequences for South Africa's smallholder farmers by denying them the opportunity to grow their economic development, agricultural outputs and access to export markets.

In all these efforts, safe and sustainable food production, while protecting human health and the environment, must remain a priority for South Africa. Therefore, a localised African Green Transition agenda that is uniquely tailored to, and supportive of, South African agriculture should be pursued. This must include setting South Africa's own sustainability targets and encouraging the same for our partners across Africa. Dialogue is needed at national level in African countries, who in turn need to be vocal about these challenges and proposed solutions at EU and WTO levels, especially in view of EU public consultations, where all stakeholders, including grower groups, have a voice.

And finally, regulators should strive to ensure that any change in the regulatory environment makes sense for the South African agricultural landscape and is based on sound science as opposed to pressure from abroad that is often based on emotion.

#### Growers, industry and other stakeholders

To support government and others who will be engaging with the EU on these topics, data about the possible impacts of these policies must be obtained. This data will be required across all sectors in agriculture and will need to include the social and economic impacts from the anticipated policy changes. Grower groups, academia and the scientific community are therefore urged to share the information that is already available and, if possible, initiate research to obtain any outstanding data to ensure that South Africa builds a solid picture of the potential impacts of policies, international events and environmental pressures on the agricultural sector (risks and opportunities).

#### **Conclusion**

It must be emphasised that the call is not to challenge the EU Green Deal in its entirety, as the sustainability agenda is one that must be pursued globally. However, policies are not one-size-fits-all, and the policies tailored to EU realities do not match those of South Africa. Therefore, the call to action is for collaboration across stakeholders and industries to ensure that the voice of South African agriculture is heard in the European Union, and for the implementation of a localised African Green Transition tailored to South African requirements.

#### ***References – Presentations: Working towards sustainable food production in South Africa (9 – 11 May 2023)***

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