



Stewardship of agrochemicals in the sugar industry

South African Sugarcane Research Institute (SASRI)

IN THE SUGAR INDUSTRY A NUMBER OF HERBICIDES, NEMATOCIDES, INSECTICIDES AND FUNGICIDES ARE USED IN CONTROL STRATEGIES AGAINST PESTS AND DISEASES OF SUGARCANE. GOOD STEWARDSHIP OF THESE PRODUCTS IS ESSENTIAL SO AS TO MAXIMISE EFFICACY WHILE MINIMISING ANY ADVERSE EFFECTS ARISING FROM THEIR USE. AGROCHEMICAL STEWARDSHIP HAS TWO MAJOR COMPONENTS – THE STEWARDSHIP OF PRODUCTS AND STEWARDSHIP OF THE ENVIRONMENT.

Product stewardship comprises a number of practices that together allow for the safe and effective use of pesticides. These can be broadly grouped into storage, use and disposal of agrochemicals.

Because of their potentially hazardous nature, it is important that pesticides are safely and properly stored, ideally in a secure purpose-built facility.

Products have been tested and registered for use against identified pests at a certain application rate and frequency. Read the product label and apply at registered rates only. Over or under-applying can lead to issues such as pest resistance or poor efficacy. Linked to this, is the effectiveness of application



Apply products at the registered rates to prevent pest resistance or poor efficacy.

equipment. Pesticides are expensive products that can be ineffective if application equipment is not correctly calibrated or maintained. Routinely calibrate application equipment and check nozzles and piping for wear or leaks.

Good stewardship also requires that you have an effective plan to dispose of any excess spray mix as well as empty containers. It is also good practice to keep an inventory of pesticides on your farm and records of use. This allows for more effective monitoring and control of pesticide usage.

Environmental stewardship is as important as product stewardship. There are a number of strategies that can be followed to reduce any impact pesticides may have on the environment. For example, in crop areas adjacent to dwellings or large bodies of water, one would avoid an application method where drift may be a concern (aerial application for example). Selection of product used, if an option, as well as rotation of products used within or between seasons can significantly reduce the development of resistance.

Increasingly, Integrated Pest Management strategies are being used, whereby different control options involving biological control agents, agronomic practices and pesticides are used in appropriate combinations against pests. Such an approach is not only more sustainable, but can also be more effective than following a single approach to pest control. ↻

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