

GUIDELINES FOR THE CONSTRUCTION AND MANAGEMENT OF PESTICIDE STORES ON FARMS

Every farm in South Africa makes use of pesticides, whether synthetic, natural, biological or even organic. Such products, which are known as agricultural remedies in the Fertilizers, Farm Feeds, Seeds and Remedies Act 1947 (Act No. 36 of 1947), are products that may pose a risk to people and the environment.

It is, however, possible to manage the risk of pesticides by putting the necessary measures in place. Fruit and vegetable export producers are already subject to the certification agency GlobalGAP's requirements, not only for the responsible use of pesticides, but also for its safe storage on the farm. Although few grain producers export directly, it is sensible to follow the guidelines for the safe storage of pesticides as well, in order to reduce the risk.

Location

It's advisable to construct the pesticide store far away from any water sources such as streams, rivers, dams, pans and boreholes. It must also be far from any dwellings, dairy stalls, stockyards or cages. A good area is next to the store where implements and tractors are kept. Build the pesticide store on the east side of this area to avoid the afternoon sun. It will keep the store fairly cool.

Construction

The construction of the store should be sturdy and made of bricks or concrete with a dense roof that does not allow the store to overheat. Construction materials should preferably not be flammable. The building should be well ventilated – extraction fans are therefore important and should be mounted on the roof. Floors must be cast out of concrete (at least 75 millimetres thick), even and with a smooth finish so that spilled pesticide can't enter any slots or be absorbed by the concrete.

Doors and window frames must be made of steel and there should be a solid steel safety gate at the entrance, which will also curb theft. A concrete pathway, about five metres wide, will facilitate access. It is advisable to lay a concrete walkway of 500 millimetres wide around the store, with a two-brick high retaining wall. If there are large-scale spillages, it will be restricted to the wall.

Warnings

A board of at least 750 millimetres by 500 millimetres must be affixed to the storage door with the following items on it:

- Skull and crossbones in red along with the word *danger* in thick red letters.
- *Access only to authorised persons* in thick black letters.
- *Pesticide storage* in thick red letters.
- *Smoking, eating and drinking prohibited* in thick black letters.
- *Protective clothing* in thick black letters followed by the items to be worn such as rubber boots, rubber gloves, full overall, face mask and headgear.
- *Emergency numbers* in thick red letters followed by:
 - Farm owner's name plus phone number
 - Manager's name plus phone number
 - Fire brigade's phone number
 - Police's telephone number
 - Hospital's telephone number
 - Poison Information Centre's telephone number

Another board should be affixed on at least one other wall.

Emergency and cleaning equipment for spillages

Emergency equipment

Sufficient firefighting equipment, namely dry matter fire extinguishers and sand, must be available. A standard emergency aid kit should also be kept in an airtight plastic container so that it's not contaminated by pesticide vapours.

A basin with clean water for flushing one's eyes must be nearby. This can be a normal plastic container and a soft plastic bottle with which water can be sprayed as needed.

Cleaning equipment

For spillages, a 210 l wide-rimmed plastic container with a lid, large plastic bags, a plastic or stainless-steel shovel, dustpan, plastic broom, vermiculite and sawdust are needed to clean up spillages.

The vermiculite or sawdust should be scattered over the spilled material and left for half an hour to absorb it, after which it should be picked up with the broom, shovel and dustpan and thrown into a plastic bag. The bag must be sealed with strong adhesive tape and kept until it can be disposed of by a company specialising in the management of hazardous waste. The contact details of these companies can be found on www.croplife.co.za under *Container Management*.

Warning Signs

The following notice boards must be affixed in the store:

- Fire equipment
- Protective clothing to be worn
- Escape routes
- Eyewash basin
- Eating, drinking and smoking forbidden

These types of signs are available from cooperatives and hardware stores.



Safe storage and workplace

It is advisable to always store pesticides on non-absorbent racks or plastic pallets. If containers are stored on a concrete floor, water can accumulate and damage the labels. Herbicides with a purple square on the label must be stored at the bottom if chemicals are stored on different shelves. Insecticides and fungicides should be stored above the herbicides. All red band products must be locked away. Flammable agents must be separated from non-flammable substances and stored separately.

Make sure labels of containers are not damaged and always keep an up to date file with copies of each label. Clean water must be available at the store and a safety shower should preferably be erected outside. All protective clothing, including the respirators and filters used, must be stored in an airtight plastic container – it can also be the container in which the first aid kit is stored. The store must always be locked, and the key must be kept by only one responsible person.

Record keeping

A stock book must be kept in which all incoming stock is recorded, and the inventory used must be entered accordingly. Maintain the principle that the oldest chemicals are always used first and the new stock is only used once the old stock is finished.

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