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Increasing agricultural productivity in a sustainable way is the challenge that the global agricultural sector will face over the next 40 years. How can enough food be produced for a population of over 9 billion people by 2050? And how to achieve that while protecting natural resources? These are questions that are being asked and must be answered through the implementation of Good Agricultural Practices (GAPs) and Integrated Pest Management (IPM).

Phytosanitary products are one of the pest control tools available in and it is therefore very important to implement good practices before, during and after the application of these products.

The first thing that the grower should know is that the correct use of a pesticide starts with its adequate acquisition, which must start in an authorized place. Next, it is important to carefully read the label before preparing the mix and applying the product. It is fundamental to respect the recommended dosage, as that will have the best effect. In fact, applying more can cause phytotoxicity in the crop and applying too little is less effective and can generate resistance among the pests.

In terms of the preparation of the mix, these are the following steps:

- Determine a specific place to carry out this task. It must be well ventilated, away from the phytosanitary product storage area and far from animals and people not involved in the task.
- Use personal protective equipment according to the label's instructions: an impermeable suit or apron, nitrile or neoprene gloves, protective breathing equipment and impermeable boots.
- Use the necessary utensils and only use them for the preparation of pesticides: scales, dispenser, cups, graduated jugs, bucket and mixer. These must be clean and in good condition.
- Never eat, drink, smoke or chew gum while preparing the mixture.

After that is complete, the next steps are:

- Fill the application tank halfway with clean water.
- Shake the container before opening, if it's a liquid.
- Weigh or measure the necessary quantity of the product as indicated on the label.
- If the product is in powder or granule form, the mix must be prepared in a separate bucket until it is completely dissolved.
- Pour it into the application tank through the filter.
- Clean the bucket and add the rinse water to the application tank.
- Fill the application tank with water to the desired level. Never fill it directly from watercourses.
- Seal the application tank.
- Wash the utensils and tools with clean water.

With the mix made correctly, now comes the pre-application stage during which it is important to check that the application equipment is clear, doesn't have anything missing, doesn't have any damage on the hosepipes, connections or tanks, and is correctly calibrated for the procedure.

In addition, if you have neighbors within 50 meters of the area in which you'll carry out the application, you should advise them with 24 hours anticipation through an informative leaflet or another evidential method. What's more, if there is wind in excess of 6-8km/h (4-5mp/h), the application should not be carried out in order to avoid drift. This is also the case if it is raining, as the product could be washed off.

If you have crops or fruit trees in an attractive flowering for pollenizers or contract pollination services, don't apply the pesticide at a time when the insects are active.

The precautions that must be taken during the application are:

- Keep animals and people away from the area.
- In high temperatures, apply early in the morning or late at night.
- Avoid contact with the application cloud.
- Never eat, drink smoke or chew gum.
- Don't remove nozzles with your mouth.
- Don't touch your face or any other area of the skin with gloves or dirty hands. If you want to take a break from the application process to eat, smoke or go to the bathroom, you must first remove the protective equipment and wash your hands with abundant water and soap.

The precautions to take once the application has finished are:

- Dilute the remnants of the liquid in the tank with ten-times the amount of water and sprinkle on fallow land that is far from watercourses and where people and animals don't pass, or on land that is used for this purpose.
- After that, the tank must be cleaned with water and detergent, or just water, three times. All this operation must be done with personal protective equipment.

As for personal care, after the application it is fundamental to wash yourself with abundant soap and water and put on new clothes. The protective equipment and contaminated clothing must also be washed, after each application. This must be done separately from the rest of the family's clothes.