Agri-Pesticide Pocket Guide

A Guide for the Use of Pesticides on Local Crops

SCAN ME

Department of Agriculture
Cayman Islands Government

Contents

Before you apply ask these questions

- What pests or problems exist?
- What is the problem – disease, insect, weed etc?
- Is the problem serious enough to use a pesticide?
- Can the problem be fixed by cultural change or does it need corrected?
- What is the safest pesticide to use?
- When and how much pesticide should be applied?

How to Use This Guide

This pocket guide aims to assist growers in the selection and application of pesticides. The pesticides are grouped into three categories:

Fungicides

Herbicides

Insecticides

Each section is tabled separately with detailed descriptions to assist in choosing the most suitable pesticide. Follow the simple steps below, to ensure that you are making the right choice:

1. Identify the pest
2. Refer to the chart to determine the pesticide availability
3. Select the best product to match your operation

Make the application based on the label from the manufacturer that is affixed to the product package

Chemical Pest Control Summary

In the event a pesticide is chosen, ensure that the following are considered-:

1. Crop and pest stage of development
2. Cropping or harvest restrictions of product must be considered

Always use the least toxic suitable product to ensure human, environmental and food safety

Read the manufacturers label directions for:

- Rate of application for particular pest
- Method of application and restrictions
- Caution and antidote
- Special instructions

Personal Protective Equipment

Spray Tank and Application Equipment Maintenance

- Check equipment to ensure that it is in good working order
- Clean spray tank of residues to prevent crop damage or problems with equipment
- Clean and if necessary replace spray nozzles
- Monitor pump and pressure systems to ensure sprayer is working efficiently

Dealing With Spillage

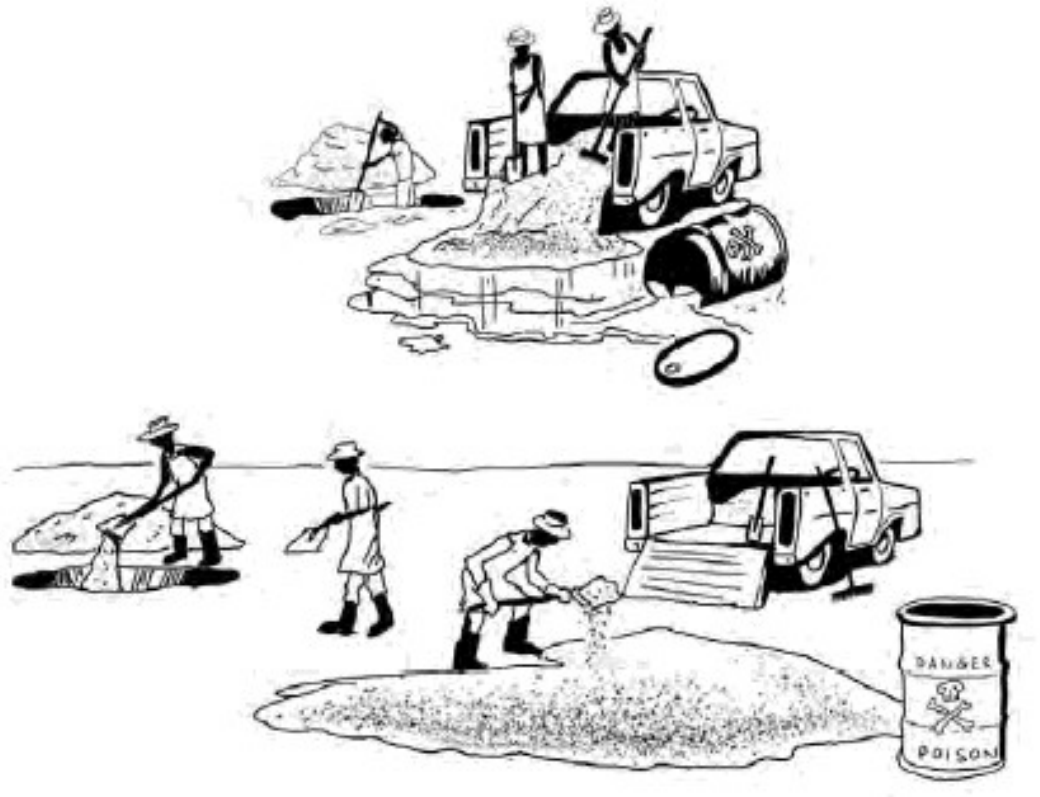
Accidents can and do happen, but good planning can reduce their frequency and ensure appropriate and rapid steps are taken to deal with any incident promptly and correctly. All staff should be familiar with the farm's emergency procedures and trained in how to handle the incident.

General

- Explain the plan and procedures to your staff. Use training and rehearsals to ensure staff understand and to check that the procedures work.
- Use the Emergency Information Sheet in this guide to keep an up-to-date list of addresses and telephone numbers of key emergency contacts (e.g. doctor, vet, local environment agency office, police etc);
- Keep copies of the Emergency Information Sheet and associated plans at key locations: e.g. spray store, filling area, tractor cab, farm office. Make sure your staff know where this information is kept;
- Review plans regularly and especially after any emergency or incident;
- Keep a detailed written record of every incident and identify and implement any necessary improvements to farm procedures;
- Clearly signpost your premises to assist emergency services;
- Ensure emergency and safety equipment is properly maintained and regularly checked.

Containing the Spill

- Keep a spillage kit to hand including absorbent material (cat litter or sand not saw-dust) brush, shovel, plastic bags and ties;
- Put on personal protective equipment (protective gloves, rubber boots, coverall and face shield as a minimum);
- Block drains if the spill might reach them;
- **Liquids**: firstly put absorbent material round the spill, and then on it;
- **Solids**: sweep up gently (do not raise dust), sprinkle absorbent material and sweep carefully again;
- Collect all sweepings and any other contaminated materials (e.g. brushes, clothes, towels) in a strong, impermeable, marked container and dispose of using a licensed waste disposal contractor;
- Have a copy of the product label to give to any emergency services.



Dealing With Suspected Poisoning

Stop work;

For Yourself

- Tell someone;
- Seek medical help immediately. Call the ambulance, or get someone to take you to the hospital;
- Take the product label(s) and any safety data sheet(s) with you;

Someone else

- Stop the casualty working and call for medical help immediately;
- If casualty is conscious and mobile, take them away from the work area into shelter and then keep them warm and at rest until help arrives;
- If casualty is unconscious or not mobile, take suitable precautions to prevent contaminating yourself and then move the casualty away to shelter. Check the breathing passages are clear and remove loose fitting, false teeth and any other obstructions in the mouth. Place casualty in the recovery position. DO NOT attempt to induce vomiting;
- While waiting for help, remove any contaminated clothing from the casualty without contaminating yourself. Make sure the casualty keeps warm;
- Put contaminated clothes aside (ideally in a plastic bag) for later disposal;
- Provide the doctor or the hospital with a copy of the product label(s). If you can’t do this, give them the name and/or the active ingredients of the product;

Fungicide Guide

This guide is not intended to take the place of the individual product labels which are the best resource concerning the use of any pesticide. Most, but likely not all, of the current brand names are listed here. Follow label recommendations for application rates, methods, and safety precautions when using all pesticides.

*Active Ingredient/ Brand Name	Pest/Disease Controlled	Mode of Action	Rate of Application Per Gallon of Water		Pre Harvest Interval
Amistar Azoxystrobin	**Fungus**-mildew, rust, purple blotch, cercospora and altenaria	Systemic (broad spectrum)	3 tsp	4 g	0 days
Bellis Pyraclostrobin	**Fungus**– broad spectrum	Systemic	1/2—1tsp	2.5-5g	0 days
Bravo Chlorothalonil	**Fungus-**black sigato-ka, yellow sigatoka, mildew, purple blotch and blight	Systemic	1tbsp	15ml	7 days
Champion Metallic Copper	**Fungus/Bacteria-** bacterial spot, anthracnose, mildew and blight	Contact	1tbsp	-	0 days
Dithane Mancozeb	**Fungus**-mildew, leafspot, rust, anthracnose and blight	Contact (broad spectrum)	1tbsp	-	7 days
Green Cure Potassium bicarbonate	**Fungus**-mildew and other fungus	Contact	½ tbsp	-	0 days
Liquid Copper Metallic copper 8%	**Fungus/Bacteria**-bacterial spot, anthracnose, mildew and blight	Contact	1 tbsp	15ml	0 days
Mancozeb 80 WP Mancozeb	**Fungus**– anthracnose, downy mildew, leafspot, early & late blight, sigatoka leaf spot, brown rust and fruit rot	Contact (broad spectrum)	1 tbsp	28 g	5-7 days
Phyton 27 Copper Sulphate	**Fungus/Bacteria-** bacterial spot, anthracnose, blight, rust and mildew	Contact	1 1/2-2 tbsp	22 ml-30ml	0 days
Ridomil Gold Mancozeb 64% Metalaxyl 4%	**Fungus-** anthracnose, downy mildew, leafspot, early & late blight, sigatoka leaf spot, brown rust and fruit rot	Systemic	1tbsp	-	Veg -14 days Tomato 3 days Cucurbits- 3 days
TopCop Copper and Sulphur	**Fungus/Insects/ Bacteria-** Control fungus and bacteria. Sulphur is the active ingredient to kill some insects and mites.	Contact	1-2 tbsp	15ml-30ml	1-2 days
Topsin *Thiophanate Methyl	**Fungus**- Late blight, early blight, powdery mildew, anthracnose, fusarium wilt, angular leaf spot	Systemic (broad spectrum)	1 tbsp		7 days

Additional Notes

*Active Ingredient/ Brand Name	Pest/Disease Controlled	Mode of Action	Rate of Application Per Gallon of Water		Pre Harvest Interval
Carbendazim *Carbendazim	**Fungus-**Septoria leaf, Anthracnose, Target spots, gummy Stem Blight, Powdery Mildew, Fusarium, Greasy Spot	Systemic	**Spray**– 1/2—1tsp **Drench**-1-2tsp.		3-8 days Dependent on crop
Diligent *Metalaxyl 4%	**Fungus-** anthracnose, downy mildew, leafspot, early & late blight, sigatoka leaf spot, brown rust and fruit rot	Systemic	**Spray** -1tbsp **Drench**–2tbsp	-	Veg -14 days Tomato 3 days Cucurbits- 3 days
Score 250EC *Difenoconazole	**Fungus**—Leaf Spot, Powdery mildews, rust & scab	Systemic	**Spray**—2 tsp **Drench**—4 tsp		3-7 days Dependent on crop

Insecticide Guide

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*Active Ingredient/ Brand Name	Pest/Disease Controlled	Mode of Action	Rate of Application Per Gallon of Water		Pre Harvest Interval
Actara Thiamethoxam	Broad Spectrum	Highly Systemic (Feeding Inhibitor)		**Spray**-13g/10 gal water **Drench-** 13g/5 gal water	1-2 days
Amtide *Imidachloprid	Broad Spectrum	Systemic	**Spray-** 1tsp **Drench-**2 tsp	**Spray**- 5ml **Drench**-10ml	**Spray**-5-7days **Drench-**14-21 days
Caprid 20SL Acetamiprid	Whiteflies, aphids, thrips, leafminers and scales	Double Systemic	1tsp	5ml	7 days
Caratrax Lambda Cyhalothrin 5%	Whiteflies, aphids, thrips, leafminers and scales	Contact	1tsp	5ml	2 days
Cure 1.8 EC *Abamectin	Cabbage looper, cabbage worm, diamondback moth, leaf miner	Contact / Translaminar	1/2 - 1 tsp	2.5ml-5ml	3 days
Lannate/Nudrin *225g/l Methomyl *(Restricted use pesticide)*	Broad spectrum	Contact	1 1/2 - 2 tsp	7.5-10 ml	Dependent on the crop
Liquid Sevin *Carbaryl	Leaf beetles, caterpillars, lace bugs	Contact	2tbsp	15ml-30ml	2-3 days
New Mectin *Abamectin	Caterpillars, whiteflies, aphids, leaf beetles, leaf miners	Contact / Translaminar	1 tsp	5ml	3 days
Rotaprid * Imidachloprid	Broad Spectrum	Systemic	**Spray**-1 tsp. **Drench**-2tsp.	**Spray-** 5ml **Drench**-10ml	**Spray**-5-7days **Drench**-14-21days
Talstar *Bifenthrin	Broad Spectrum	Systemic	1 tbsp.	5ml	14 days
Vertimec *Abamectin	Contact/ Translaminar	Contact/ Translaminar	1/2 - 1 tsp	2.5ml-5ml	3 days
Vydate-SL ***Oxamyl** *(Restricted use pesticide)*	Nematodes and all insects	Systemic	**Spray-**1tbsp **Drench-**2 tsp	**Spray–** 15ml **Drench**-30ml	14-21 days
Pegasus Diafenthiuron	Mites and all insects	Translaminar/ Contact	1 tsp	5ml	7 days

Additional Notes

*Active Ingredient/ Brand Name	Pest/Disease Controlled	Mode of Action	Rate of Application Per Gallon of Water		Pre Harvest Interval
Codigo *Thiamethoxam	Broad Spectrum- White flies, stink bugs, Aphids	Systemic	**Spray**—1 tsp **Drench**—2 tsp	**Spray**-5g **Drench–** 10g	5 days
Tracer *Spinosad	Leaf Miner, Sprout Worm, Diamond backmoth, Armyworm, leaf roller	Systemic	**Spray** –1/2 - 1 tsp		1-7 days
Obulus *Lambda Cyhalothrin 5%	Whiteflies, aphids, thrips, leafminers and scales	Contact	1tsp	5ml	2-5 days
Match *Lufenuron	Caterpillars	Growth Regulator	1 tsp		7-20 days
Trigard *Cyromazine 75% *Triamine 25%	Leaf miners	Systemic	1 packet to at least 10 gals water		7 days

Herbicide Guide

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Active Ingredient/ Brand Name	Target Weeds	Mode of Action	Rate of Application Per Gallon of Water		Pre Harvest Interval
Crossbow *2,4 Dichlorophenoxya-cetic acid	Broadleaf plants in rangeland or along roadways	Selective Systemic	2 tbsp	30ml	30 days
2-4-D Amine *2,4 Dichlorophenoxyacetic acid	Broad leaf weeds	Selective Systemic	2 tbsp	30ml	7 days
Grass and Weed Killer *Glyphosate	All weed types including grasses and broadleaf	Non- selective systemic	2 tbsp	30ml	7 days
Basagran Bentazon	Broadleaf and nutsedge	Selective Systemic	2-3tsp	10ml-15ml	10- 14 days
Zipper 20SL *Glufosinate ammonia	Broadleaf, weeds, grasses and sadges	Non selective contact translaminar	2 tbsp.	30 ml	7 days

Nematicide Guide

This guide is not intended to take the place of the individual product labels which are the best resource concerning the use of any pesticide. Most, but likely not all, of the current brand names are listed here. Follow label recommendations for application rates, methods, and safety precautions when using all pesticides.

*Active Ingredient/ Brand Name	Target Weeds	Mode of Action	Rate of Application Per Gallon of Water		Pre Harvest Interval
Vydate-SL ***Oxamyl** *(Restricted use pesticide)*	Nematodes and all insects	Systemic	**Spray-**1tbsp **Spray–** 15ml **Drench-**2 tsp **Drench-**30ml	**Spray-**1tbsp **Spray–** 15ml **Drench-**2 tsp **Drench-**30ml	14-21 days
D'nemo *Azadirachtin and Allyl Isothiocyanate	Nematodes	Systemic			

Measurements for Pesticide Application

The following is a compilation of equivalent, conversion and other data that will help in the mixing and application of pesticides in small amounts. Always follow the label directions and precautions of the material being used.

Table 1 - Equivalents

1 teaspoon	$^1/_3$ tablespoon
3 teaspoons	1 tablespoon
1 tablespoon	3 teaspoons
2 tablespoons	1 fluid ounce
1 pint (liquid)	16 fluid ounces
1 Quart (liquid)	2 pints or 4 cups
1 gallon (liquid)	4 quarts

Table 2 - When recommendations are made on a “per volume” basis

Liquid Pesticides		**Wettable Powders**	
Rate per 100 gals of water per gallon		Rate per 100 gals of water per gallon	
1 pint	1 teaspoon	1 pound	1 tablespoon
1 quart	2 teaspoons	2 pounds	2 tablespoons
1 Gallon	$1^1/_2$ fluid	3 pounds	3 tablespoons
		4 pounds	4 tablespoons

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