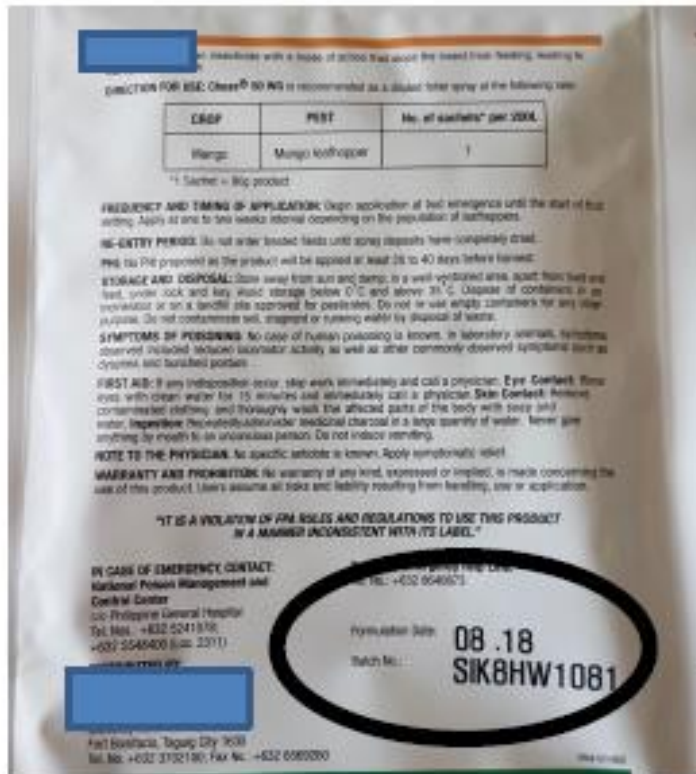


Session 8: Crop Protection

When buying agro-chemicals, take note of expiry date.

Expiry is 2 years after formulation date



Apply recommended dosage only to prevent exceeding Maximum Residue Limits.

- ✓ No underdosing
- ✓ No overdosing



Use only agri- chemicals registered for cultivation of the specific crop and bought at licensed suppliers.

The maximum residue limit (also maximum residue level, MRL), is the maximum amount of pesticide residue that is expected to remain on food products when a pesticide is used according to label directions, that will not be a concern to human health. https://en.wikipedia.org/wiki/Maximum_residue_limit



Produce shall be subjected to residue analysis to be conducted by an accredited laboratory.



If chemical residue in excess of MRL are detected in the country where produce is traded, marketing of the produce is ceased.

- Case is investigated
- Corrective actions taken
- Documented



may

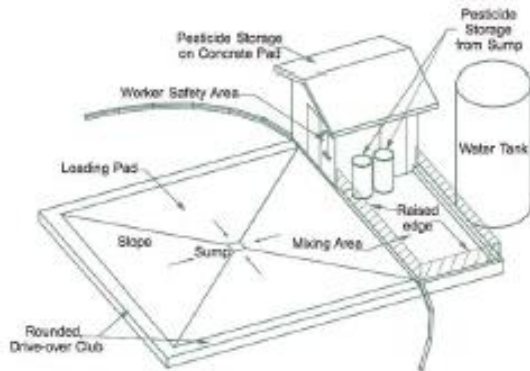


Sampling of Produce for
Microbial and Pesticide
Analysis

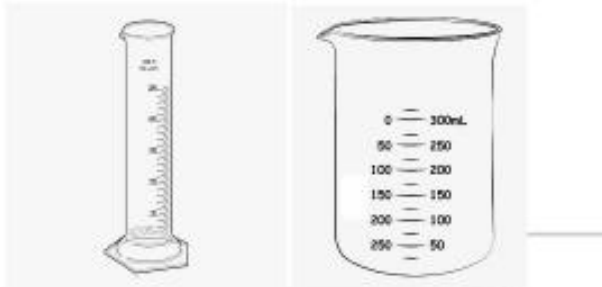


Source: de la Cruz, IQ. DA-BAFPS

Permanent Mixing area should be located in area with less chance of contaminating workers and environment.



Use appropriate tools for precise measurements and calibrations.



Prepare only the required spray volume for the day to avoid surplus.

The following materials should be placed in a fixed location to be used in case of spillage of pesticides.

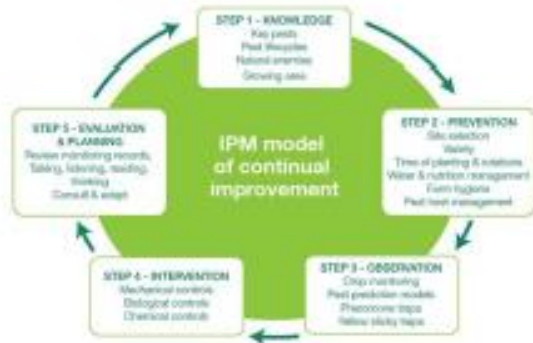
- Floor brush (walis)
- Dustpan
- Plastic bags
- Adsorbent material
 - Sand, sawdust



Applicators should have relevant trainings preferably by FPA.



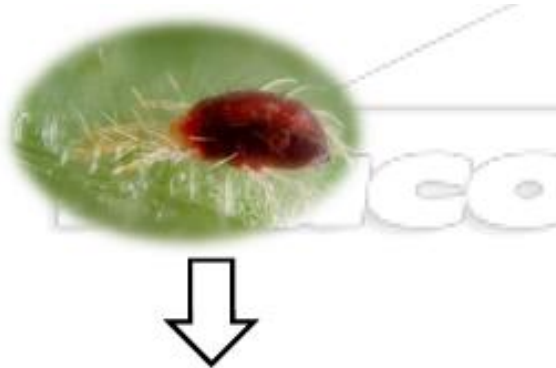
Implement IPM to minimize pesticide use.
What is IPM?



Tank mixing of 2 chemicals must be avoided unless recommended by EPA or the label.



Example: Use of predator mites in eliminating spider mites that destroys strawberry flowers and leaves.



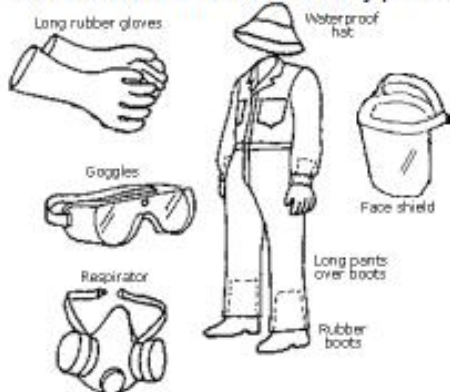
Observe Pre-harvest Interval (PHI)
Minimum amount of time between application and harvest.

Pre-harvest Intervals for Insecticides	
The PHI is the required time between spraying and cutting (either swathing or straight combining)	
A week or so:	
Decis SEC	7 days
Malathion 500/85E	7 days
Matador/Glencor	7 days
Lansate	8 days
Longer:	
Monitor	10 days
Lagon/Cygon 480-AG/Cygon 480 EC	21 days
Lorsban/Citadel/Pyrethex/Nulos	21 days
Ripcord	30 days
UP-Cyde	30 days
Furadan	60 days

Install warning signs on newly applied areas



Wear PPEs and observe re-entry periods.



What is re-entry period/Re-entry interval (REI)?

- The amount of time required to stay out of a treated area following pesticide application.

Examples:

- ✓ Agrimycin - 12 hours REI
- ✓ Daconil - 48 hours REI
- ✓ Malathion - 12 hours REI

Safety & Welfare of Farm workers

Farm workers should be trained on proper handling of crop protection products.



MSDS (Material Safety Data Sheet) or safety instructions from approved labels should be made readily available for reference.

Sample MSDS

MATERIAL SAFETY DATA SHEET	
In Case of Emergency, Call 1-800-455-6710	
1. PRODUCT IDENTIFICATION	
Product Name	MAINTENANCE FLUID
Other Names	None
Manufacturer	MAINTENANCE FLUID CO.
Address	12345 Main Street, Suite 100, New York, NY 10001
Phone	(212) 555-1234
2. HAZARD IDENTIFICATION	
This material is not flammable, non-toxic, and non-corrosive. It is a mild irritant to the eyes and skin. It is not a health hazard.	
3. COMPOSITION/INFORMATION ON INGREDIENTS	
Ingredient	Concentration
MAINTENANCE FLUID	100%

MSDS-MATERIAL SAFETY DATA SHEET or SAFETY DATA SHEET



- A **Material Safety Data Sheet (MSDS)** is a document that contains information on the potential health effects of exposure to chemicals, or other potentially dangerous substances, and on **safe working procedures** when handling chemical products.

First Aid Kits should be available to treat minor cuts and bruises and those that have been accidentally contaminated with chemicals before treatment in a hospital.

First Aid/Emergency instructions should be documented and displayed.





Workers handling chemicals should undergo pre-employment and regular check up to ensure health and welfare.



STORAGE

Non-absorbent shelves such as metal or rigid plastic material to minimize contamination due to spillage.

Observe proper segregation.

Separate dry from liquid formulations.

A stock inventory should be kept and should be done every cropping season.



Structure should be:

- well lighted
- Sound and secure
- Limited access only (hindi lahat makakapasok)



Source: de la Cruz, IQ. DA-BAFPS





Products stored in original container with legible labels.



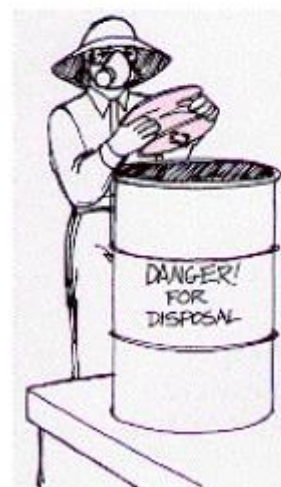
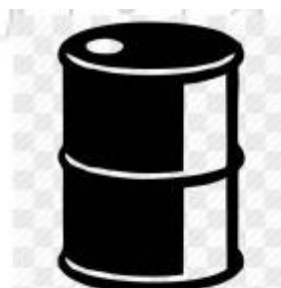
Mixing containers, sprayers and other tools used for chemical applications must be properly washed **EVERY** after use.



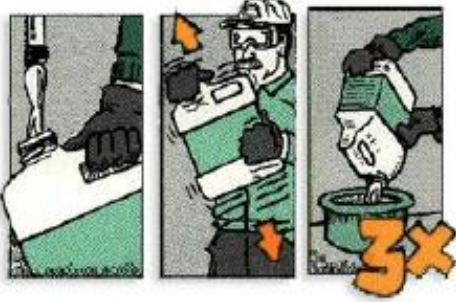
Protective clothing should be washed separately from other clothing and stored properly for future use.



Empty chemical containers must not be re-used. Store and secure until disposal.



Crop protection products must be triple rinsed before disposal.



Measures are used to control feral animals and environmental pests.

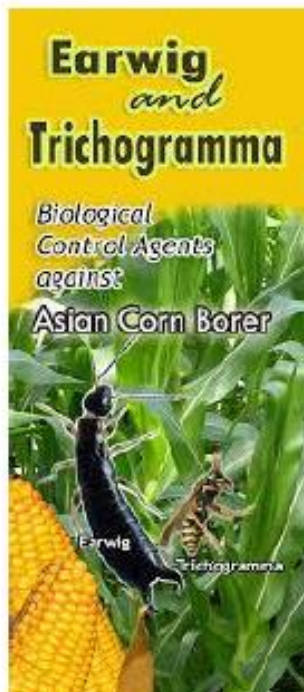


Expired and banned chemicals must never be used.



Use biological control that are authorized for the cultivation of a specific crop and used in accordance to instructions.

- To prevent ecological imbalance



Manage generation of foul odours, smoke, dust and noise to minimize impact on neighboring properties.

