Classification of Pesticides

Pesticides play a vital role in protecting crops, improving agricultural productivity, and ensuring global food security. However, understanding their classification, usage & safety measures is equally important. Pesticides are substances used to prevent, destroy, repel, or control pests such as insects, weeds, fungi, rodents, nematodes, mites, bacteria, and other harmful organisms affecting crops and stored products.

🔍 Major Classification of Pesticides

1. According to Target Pest

Insecticides – Control insects ✔ Herbicides – Control weeds ✔ Fungicides – Control fungal diseases ✔ Rodenticides – Control rats and mice ✔ Nematicides – Control nematodes ✔ Acaricides – Control mites and ticks ✔ Molluscicides – Control snails and slugs

2. According to Chemical Composition

Organophosphates – e.g., Malathion, Chlorpyrifos 🔹 Carbamates – e.g., Carbaryl, Carbofuran 🔹 Organochlorines – e.g., DDT 🔹 Pyrethroids – e.g., Cypermethrin, Permethrin 📌 Each group differs in persistence, toxicity and mode of action.

🎯 3. According to Mode of Action

✔ Contact pesticides ✔ Systemic pesticides ✔ Stomach poisons ✔ Fumigants These determine how pesticides affect the target organism and how they should be applied effectively.

4. According to Source

 Chemical pesticides – Synthetic compounds Biological pesticides (Biopesticides) – Derived from natural organisms such as bacteria, fungi, and plant extracts. 💡 Examples: ✔ Neem extract ✔ Bacillus thuringiensis (Bt)

⚠ 5. According to Toxicity

🔴 Danger – Extremely toxic Warning – Highly toxic Caution – Moderately toxic Careful Use – Slightly toxic Proper handling and application are essential to minimize risks to humans, animals, and the environment.

🌎 Importance of Responsible Pesticide Use

✅ Improves crop yield and quality ✅ Reduces pest-related economic losses ✅ Supports food security ✅ Protects stored agricultural products ✅ Helps control disease vectors such as mosquitoes However, excessive or improper use may lead to: ❌ Environmental pollution ❌ Pest resistance ❌ Residue accumulation in food ❌ Harm to beneficial organisms and human health Sustainable agriculture depends on balancing productivity with environmental protection and human safety.

Should you have any further questions, please contact Shire's Environmental Health Officer, via email health@coolgardie.wa.gov.au.

PO Box 138 Kambalda WA 6442 P: (08) 9080 2111 E: health@coolgardie.wa.gov.au

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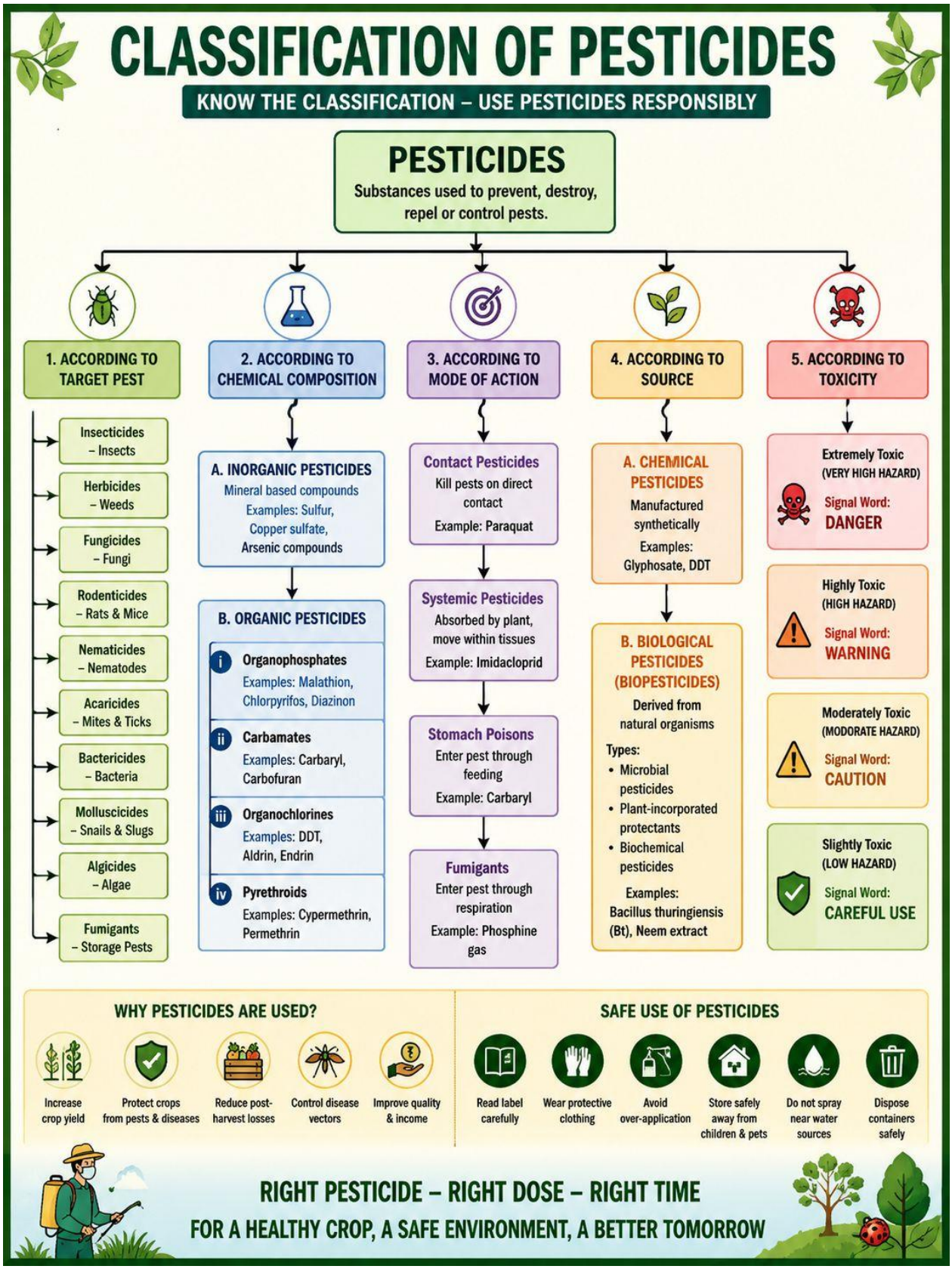

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