

Pesticidal plants: -an alternative to synthetic chemical formulations

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Tagetes minuta



Azadirachta indica



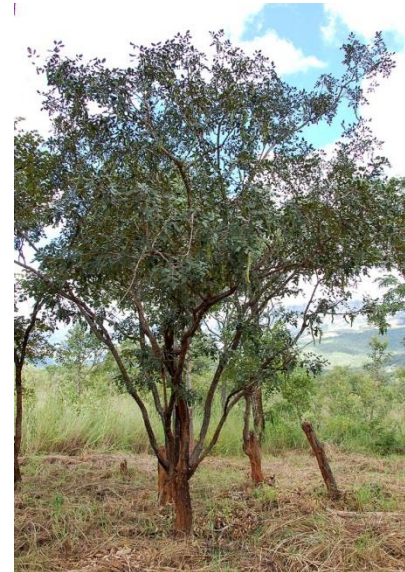
Lippia javanica



Tithonia diversifolia



Securidaca longipedunculata



Zanthoxylum holtzianum

What is a pest?

- A pest is an organism with characteristics that people see as damaging or unwanted, as it harms agriculture through feeding on crops or parasitizing livestock



Pest control

- Chemical control
- Integrated pest management where synthetic pesticides are only applied as a last resort
- Non-chemical alternatives include
 - cultural practices,
 - choice of resistant varieties,
 - Biological control - natural enemies of pests,
 - Use of biological products

Synthetic chemicals

- The use of synthetic pesticides in agriculture is the most widespread method for pest control.
- Farmers spend approximately \$4.1 billion on pesticides annually.
- They justify this high cost by a direct dollar return of from \$3 to \$5 for every \$1 spent on pesticides."

Risks of synthetic pesticides

- Environmental and human health problems
- Both short / long-term exposure can result in death.
- Persistent
- Harmful to both target and non target organisms (birds, fish, or other wildlife).
- The mishandling of pesticides in storage facilities and in mixing and loading areas can contribute to soil and water contamination.

Natural products or botanicals

- Naturally occurring chemicals extracted from plants
- Avoid the use on poisonous chemicals which kills both target and non target organisms
- Non persistent/ degrade quickly/ no toxic residues
- Derived from a combination of plants and less likely to build resistance
- Selective and have little destructive on natural enemies
- Cheap and easily available

Knowledge on pesticidal plants

- Baseline survey
- Group work

Thanks