Integrated Pest Management (IPM): Mechanical (Physical) Control (published 2024-08-10)
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This is part three of a multi-part series on Integrated Pest Management (IPM).

On a sweltering June day about 50 years ago, I sat in my grandmother's kitchen and watched her prepare her signature dish for the church picnic. While she was meticulously assembling her secret recipe, a fly began to buzz around the counter drawing her attention. Without losing sight of the filth-spreading intruder, she said in a directive voice, "Go fetch me the flyswatter and check to see that the back screen door is shut." While I didn't realize it at the time, I had just experienced my first IPM lesson in mechanical control.

Mechanical control is an important part of IPM, focusing on physical strategies to manage pest populations while minimizing environmental impact. Unlike chemical or biological methods, mechanical control uses physical barriers, traps, and removal techniques to solve pest issues.

One of the most straightforward mechanical control methods is the use of physical barriers. Barriers are designed to prevent pests from accessing plants where they do their damage. Row covers are a popular choice among gardeners. These lightweight fabrics are placed over plants to create a barrier against insects. They allow sunlight and rain to nourish the plants while keeping pests out. They are particularly effective during the early growing season when pest populations are on the rise. Similarly, netting can be employed to protect crops from larger pests. Bird netting, for example, can safeguard berries like strawberries and blueberries from being pecked at by birds, while mesh netting can keep insects like cucumber beetles away from vegetable plants.

Traps are another valuable tool in mechanical pest control. They not only showwhich pests are visiting your garden, but they can also capture or kill these pests. There are several types of traps suited to different pest problems. Sticky traps are coated with a glue-like substance that captures insects. Placing these traps around your plants can help monitor pest activity and catch them before they cause significant damage. Another type of trap is the pheromone trap, which uses chemicals that mimic insect mating signals to attract specific pests. By capturing these destructive insects, you can help reduce the population of future generations. Bait traps are also useful for targeting specific pests. These traps use attractants such as food or pheromones to lure pests like slugs and rodents, which are then captured or killed. This method is particularly effective for managing pests that are hard to control with other means.

Manual removal is a direct and effective mechanical control method that involves physically removing pests from plants or garden areas. While this technique can be labor-intensive, it can be very effective for smaller-scale infestations or specific pest issues. Hand-picking is one common method where gardeners manually remove pests such as tomato hornworms or beetles from plants.

Combining mechanical control methods often yields the best results. You might use row covers to protect seedlings from early-season insects, deploy sticky traps to monitor and capture flying pests, and hand-pick larger pests that are easy to spot. By integrating these methods, you create a

comprehensive pest management strategy that addresses different aspects of pest control and enhances overall effectiveness. This combined approach not only helps manage pests more efficiently but also reduces the need for chemical interventions.

The benefits of mechanical control are numerous for home gardeners. It reduces reliance on chemical pesticides, making it a safer option for families, pets, and the environment. These methods are often cost-effective and easy to implement, with many solutions available as DIY projects. Additionally, these methods help maintain a balanced garden ecosystem by targeting pests without disrupting beneficial insects or wildlife. By focusing on mechanical control, gardeners can create a healthier garden environment and promote sustainable practices.

So that's an overview of Mechanical Control methods for the home gardener. Until next time, keep workin' th' dirt!

"Using IPM- Five thoughts on Mechanical and Physical Controls,"
https://extension.oregonstate.edu/sites/default/files/documents/54611/using-ipm-mech-phys.pdf

"Landscape IPM: Integrated Pest Management for Today's Landscapes,"
https://landscapeipm.tamu.edu/what-is-ipm/ipm-practices/

"Integrated Pest Management (IPM) – Mechanical Management,"
https://content.ces.ncsu.edu/extension-gardener-handbook/8-integrated-pest-management-ipm#section_heading_5177

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