

FARM-FRIENDLY INSECTS AND ANIMALS:

HOW YOU CAN SUPPORT THEM ON YOUR FARM



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INTRODUCTION

Malawi is a place with many different kinds of birds, plants, and insects that are not found anywhere else in the world. The variety of species is known as biodiversity and it's super helpful to the ecosystem because it provides pollination and pest control. However, there are two agricultural practices that harm biodiversity. Firstly, when woodlands get turned into farms, these species lose their usual homes. Secondly, when farmers use pesticides, it puts poisons in water and soil, which hurts animals, birds and insects.

RESULTS



Figure 1: Shown here is a pigeon pea flower which is a plant that blooms during dry seasons which makes them valuable for producing nectar and pollen for bees. The helpful bee drinks the nectar and carries the pollen from one flower to another, which allows for fruit and seed production.

How pollinators help farmers:

A pollinator moves pollen from the male flowers to the female flowers. Examples of pollinators includes bees, butterflies, bats, birds and some flies. They are necessary for crops such as legumes and vegetables. They are very important to farmers as plants with no contact with pollinators will never produce fruit. In our study, a farm with many species of pollinator produced more pumpkins than other farms.

How farmers can help pollinators:

Farms that have more shrubs create a great environment for more species of pollinators. This means having shrublands near farmlands is important for pollinators. Farmers can do this by growing flowering plants on their farms as well as using different agroecological soil management practices.



Figure 2: Friendly ants working together to hunt the nasty pest that eats maize plants. Keeping a healthy population of these ants can effectively control pests in crop fields.

How natural enemies help farmers:

Natural enemies are species that eat pests that kill crops. Some examples are birds, ants, beetles, and wasps. In our study, we found that fields with high number of natural enemies had less crop damage compared to other fields which means a higher yield for the farm.

How farmers can help natural enemies:

Farmers can plant legumes such as beans to encourage natural enemies to live on their farms. Farmers can also diversify the number of soil practices such as adding compost, manure or legume residue on their farms to promote both pollinators and natural enemies. In our study, we found that methods such as manually removing pests sometimes harm beneficial insects such as pollinator.

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RECOMMENDATIONS

Keep and let regrow shrubland in Malawian agricultural landscapes.



Encourage the growing of legumes--especially in areas low in surrounding shrublands.



Share with farmers about the benefits of farm-friendly insects and other animals like birds and bats to farmers about beneficial insects.



Encourage the diversification of soil practices such as adding compost, manure or legume residue to promote pollinators and natural enemies of pests.



Increase the diversity of flowering plants (both crops and non-crops) to encourage pollinators.



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