



Importance of Plant Diversity and Structure for Pest Resistance in Urban Gardens

Sanyi Tang*

Department of Mathematics and Information Science, Shaanxi Normal University, China

INTRODUCTION

Pests have been a perennial challenge for farmers, gardeners, and urban dwellers, causing significant economic losses and environmental disturbances. However, recent research and innovative thinking have unveiled alternative ways to utilize pests for a range of purposes. This article aims to shed light on the diverse uses of pests, highlighting their potential contributions to agriculture, science, and technology. Insects have long been consumed in various cultures around the world, known as entomophagy. These creepy crawlers are packed with essential nutrients like protein, healthy fats, vitamins, and minerals, making them a sustainable and nutritious food source. Compared to traditional livestock, insect farming requires significantly less water, feed, and land while producing lower greenhouse gas emissions. As the global population grows and food resources become scarcer, entomophagy offers a sustainable solution to address food security and environmental concerns. Chefs and food enthusiasts have embraced the use of edible insects to create innovative and exotic dishes. Crickets, mealworms, and grasshoppers find their way into menus, providing unique flavours and textures to culinary experiences. Forensic entomologists use insects found on human remains to estimate the post-mortem interval, a crucial aspect of criminal investigations. By studying the development stages of insect larvae on the corpse, experts can reduce the time since death, helping law enforcement establish timelines and gather evidence. Insects attracted to human remains can inadvertently lead investigators to concealed or hard-to-find crime scenes [1,2]. By analysing the distribution and abundance of certain insect species, forensic entomologists can narrow down search areas. Insects like bees and wasps have shown promise in detecting illegal substances, such as narcotics and explosives.

DESCRIPTION

Trained bees can be deployed in airports and border crossings

to identify contraband materials. While silk is traditionally associated with silk worms, some insects produce unique silk variations. For instance, spiders create silk with exceptional strength and elasticity, holding promise for advanced materials. Researchers draw inspiration from the structure and properties of insect silk to develop innovative materials for various applications, such as biomedical devices, protective clothing, and even artificial muscles. Insects play a vital role in the natural decomposition of organic matter. From carrion-feeding beetles to detritivores, they aid in breaking down waste and returning nutrients to the soil. Earthworms are a type of beneficial pest used in vermiculture, a process where organic waste is recycled into nutrient-rich vermicomposting. This sustainable practice not only reduces waste but also improves soil health and fertility. The decline in natural pollinators, such as bees and butterflies, poses a significant threat to global food production. Pests like flies and beetles can step in to supplement the pollination process in certain crops. Some pests, like bumblebees, are managed and utilized for commercial greenhouse pollination, ensuring adequate fruit set and yield for crops like tomatoes and peppers. Venoms from insects and arachnids contain bioactive compounds with potential therapeutic applications [3-5].

CONCLUSION

Pests, often seen as a nuisance or threat, demonstrate remarkable versatility in their applications beyond causing harm. From promoting sustainable agriculture through pollination and waste management to inspiring cutting-edge technologies and medical advancements, harnessing the potential of pests opens up new avenues for innovation and environmental stewardship. As researchers and industries continue to explore these unconventional uses, pests may emerge as unlikely allies in our journey towards a more sustainable and technologically advanced future.

Received:	31-May-2023	Manuscript No:	EJBAU-23-17054
Editor assigned:	02-June-2023	PreQC No:	EJBAU-23-17054 (PQ)
Reviewed:	16-June-2023	QC No:	EJBAU-23-17054
Revised:	21-June-2023	Manuscript No:	EJBAU-23-17054 (R)
Published:	28-June-2023	DOI:	10.36648/2248-9215.13.2.14

Corresponding author Sanyi Tang, Department of Mathematics and Information Science, Shaanxi Normal University, China, E-mail: sanyi_tang219@hotmail.com

Citation Tang S (2023) Importance of Plant Diversity and Structure for Pest Resistance in Urban Gardens. Eur Exp Bio. 13:14.

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ACKNOWLEDGEMENT

None

CONFLICT OF INTEREST

The author's declared that they have no conflict of interest.

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