Global Science Research Journals

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www.globalscienceresearchjournals.org/

International Review of The Agricultural World

Perspective Open Access

ISSN:2705-1447 Vol. 1 (2), pp. 3, August, 2022

Crop protection techniques for increased yield and reduced resource consumption

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Received: 25-Jul-2022, Manuscript No. IRAW-22-73170; **Editor assigned:** 27-Jul-2022, Pre QC No. IRAW-22-73170(PQ); **Reviewed:** 11-Aug-2022, QC No. IRAW-22-73170; **Revised:** 18-Aug-2022, Manuscript No. IRAW-22-73170(R); **Published:** 25-Aug-2022, DOI: 10.15651/2705-1447.22.1.008.

DESCRIPTION

Crop protection is the general method or practice of protecting crop yields from various agents such as pests, weeds, plant diseases and other organisms that cause crop damage. Weeds, small animals such as rats, mites, insects, pests, disease-causing pathogens and birds would coexist in agricultural fields with the crops. The crop production increased due to proper crop protection results in less use of resources such as land, water, and labor. Biodiversity is preserved by using less land. This allows more farm crops and produce to reach markets, keeping prices low. Parasites, predators, diseases, protozoa and nematodes are among the control agents that attack insect pests. Because nature provides for the survival of both beneficial and destructive insect's biological controls cannot completely replace insecticides. Before a parasite or predator's population can grow, there must be a large population of the host species. Many organisms in the agricultural ecosystem can be harmful to plants. They slow plant development, reduce plant thickness and generally reduce yields. Preventive measures taken on time reduce the risks.

Furthermore, crop protection in agriculture is important for conserving biodiversity and nutrients in the earth, optimizing the resources used such as water, land and labor. Thus, increasing food quality and lowering food costs. Pesticides and biocontrol agents may be used to protect crops from these diseases. These are crop protection management practices that should be followed prior to and during cultivation. All of these factors are primarily to blame for crop loss or damage in order to maximize crop yield, farmers must protect the crop from pests. As a result, crop protection management is critical before, during and after cultivation. Harvesting also includes immediate post-harvest practices such as threshing and winnowing. Threshing is the process of separating grains from chaff or pods. We must separate the grains from the chaff after threshing. The process of separating grains is known as winnowing.

Before harvesting crops, there are several factors to consider. A close inspection of the crops is required to ensure that harvesting is not premature. This results in seed shedding and crop loss. If the crops are overripe, they may lose market value or become unfit for consumption. Harvesting is typically done by hand in India. This method is laborious and time-consuming and it is only appropriate for small farms. On larger farms a harvester is used to combine harvesting, threshing and winnowing. Weeds are well-known carriers of pests and diseases that can harm crops and reduce productivity. They also deprive plants of oxygen and nutrients, which can reduce productivity significantly. Various studies show that a lack of effective crop protection methods contributes to harvest losses ranging from 10% to 50%. Chemical, biological and agrotechnical measures are among the preventive measures available. A combination of these methods can help protect crops from invasive weeds. Disease management is also critical in crop protection. Farmers can take a variety of measures to protect their crops from disease. Crop rotation planting disease-resistant crops, quarantining affected plants and deep ploughing should be done.

CONCLUSION

To avoid product loss, cultivated grains should be stored in a secure location. Grain loss is much more likely at this point than before cultivation. As a result, protection methods must improve. Common pests and rodents as well as a few environmental conditions such as humidity and temperature are to blame for the loss. Certain precautions assist us in halting this loss. Before storing the grains they should be thoroughly cleaned and dried in the sun. This helps to protect the crops from fungal growth which is caused by the presence of moisture. Fumigation is a technique that can kill pests.