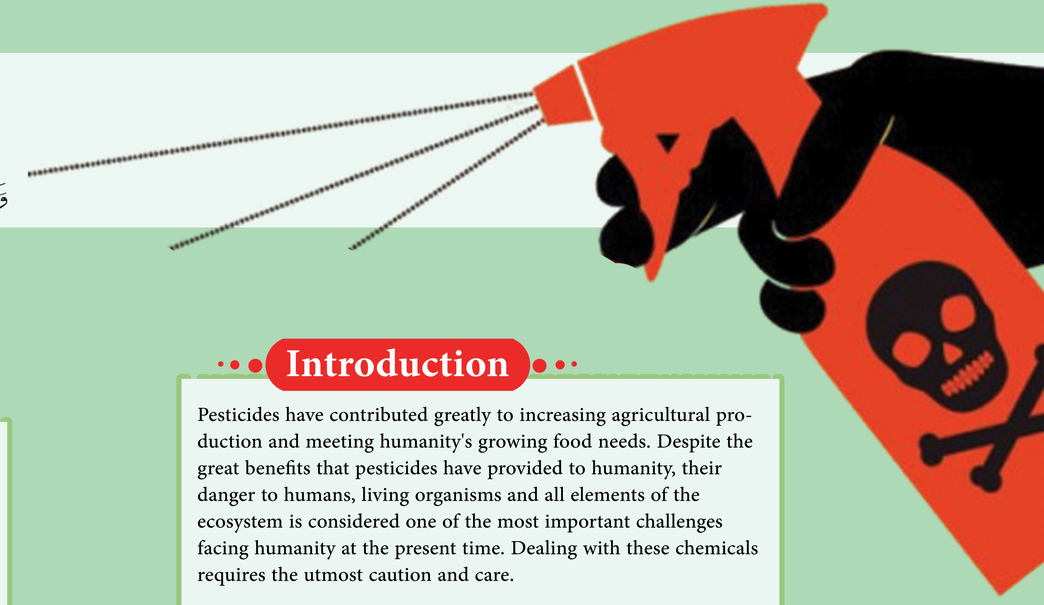
The effect of using (Deltarin) pesticide on plant growth and on agricultural soil properties

Prepared by: Aya Sultan Al Ghafri, Lian Salim Al Ghafri



Abstract

Our research aims to study the effect of pesticides (DalSoRain) DELTARIN on agricultural crops as well as its effect on soil and agricultural and whereas, by conducting some interviews on farms. We found out that farmers suffer from the problem of the spread of some plants in their farms, including the (Portulaca oleracea), as a result of using a type of pesticide. So, we decided to study the case and follow up on it.
After conducting a practical experiment by planting two fields with lettuce and soil and amount of water and sunlight. The independent variable was spraying the pesticide on one of the fields while monitoring the growth of the crops. We found that the lettuce plant grows normally at appropriate lengths, unlike the plant that was sprayed, which was shorter. The sprayed plant's green leaves have changed also; yellow spots have appeared on it, with a significant increase in the number of leaves on the plant. As for the intended plant, it did not grow due to the weather conditions. So, it has become clear to us that it grows faster in the summer, and we have noticed the growth of some unwanted plants in the study area. In addition to the weeds. Our study was in January and February, i.e. winter. And with the study of the soils, it was shown to us that the properties of soils and agriculture changed to the part that was sprayed with pesticide. Its acidity has .changed (decreased) and its salinity has increased significantly Therefore, we demand the Ministry of Agriculture and Fisheries to pay attention to the issue of pesticides, and putting explanatory brochures for the farmers to explain its impact over time and trying to replace them with other pesticides which are inspired from the environment.

Research methods

First: Research plan
-Identify the existing farms in the villages.
-Visit the specified sites.
-Collecting information about the research topic from various information sources.
-Setting a timetable for implementing the research plan.
-Distributing the roles to the research team.
-Using the soil protocol and vegetation cover to determine the extent of soil impact on agricultural crops.
-Cooperation with the Department of Agricultural Development in Yanqul.
-Reaching the result and make recommendations.

Second: Study location
The study was in January and February, in wilayat of Ibri, at ;DrizIn village in Al-Dhahirah Governorate. The weather was cold the temperature was 20 degrees Celsius.
The used Protocols: Soil protocol and Vegetation Protocol.
Coordinates:
Longitude: 23.31 Latitude: 56.32 Altitude: 499 m
The maps site explains:

Research questions

1. How much influence Deltarin pesticide on the growth of the legume plant and Portulaca oleracea?
2. How does the pesticide affect agricultural crops?
3. What is the effect of pesticide on soil and agricultural?

Results

twelfth	tenth	The eighth	Sixth	Fourth	The second	Today
11	9	8	7	5	3	Number of leaves of the plant that was sprayed with the pesticide
10	9	9	8	5	3	The plant that was not sprayed

Table (1)

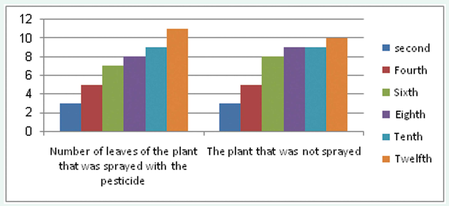


Chart (1)

ourteenth	twelfth	tenth	The eighth	Sixth	Fourth	the second	today
52	49	44	40	34	30	25	Length of plant sprayed with poison
77	68	56	49	41	35	27	The length of the plant that was not sprayed with the poison pesticide

Table (2)

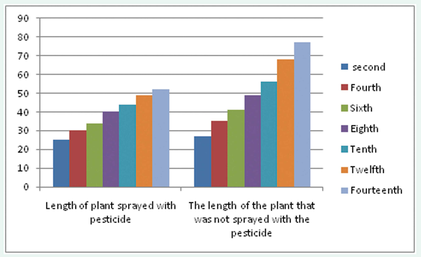


Chart (2)

Introduction

Pesticides have contributed greatly to increasing agricultural production and meeting humanity's growing food needs. Despite the great benefits that pesticides have provided to humanity, their danger to humans, living organisms and all elements of the ecosystem is considered one of the most important challenges facing humanity at the present time. Dealing with these chemicals requires the utmost caution and care.

From this standpoint, our research aims to address the problem of using some pesticides for agricultural pests, which led to the spread of unwanted plants. It's using affects some agricultural crops; which is the basis of any food chain. As it is the main product, we had to quickly search for a solution to this problem and fix it. Beneficiaries of studies conducted by Ibri School, which resulted in the effectiveness of using neem leaves (Azadirachta) as a pesticide. Hoping from God Almighty all the best.

Conclusion

Pesticides are chemical compounds. They used to kill harmful pests and insects. They are in the form of powder or granules or aqueous solution. Their use has spread among farmers because of their rapid effect in eliminating agricultural pests, and because of the simplicity of their use. Our team has conducting a study on the effect of a type of pesticide on soil and plants due to its great importance. We concluded that this type of pesticide is completely unsafe, because it has an effect on the acidity of the soil, as well as the leaves of the plant and its length. Therefore, we recommend the concerned authorities which represented in the Ministry of Agriculture and in cooperation with the Ministry of Information, to spread awareness of the dangers of pesticides and to exercise caution when dealing with them, with the necessity of providing a laboratory that measures the quality of some crops to ensure their suitability for human use and to move towards less pesticides and toxicity, like(ammoniaNH3) and (castor oil Ricinus communis) and (rice oil) and (lemon grass oil). Also, take into account the study that we presented in Ibri School on the use of neem leaves (Azadirachta) which shows that the leaves of this tree can be used as an organic pesticide. We hope to conduct more advanced studies on other pesticides using other protocols such as the atmospheric protocol. We thank God Almighty and praise Him for completing this research.

References

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