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Diversity of Spiders in the Agricultural Fields of Tahsil Patur, District Akola. (M. S.)

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ABSTRACT

Spiders are widespread and diverse predators that are part of terrestrial Arthropod assemblages. Spiders play an important role as stabilizing agents or regulators of insect populations in agro and other terrestrial ecosystems. Thus, their presence in an ecosystem may well influence the population dynamics of other arthropods present. Spiders play an important role in insect pest control without any harm to agricultural fields. Recently in agricultural fields reduced pesticide use and ecological sustainability have led to increased interest in spiders as potential natural biological pest control agents.

Spider species abundance in agricultural fields can be high as undisturbed natural ecosystem. Spiders are beneficial bio-control agent of insect pest in agro-ecosystem. A survey of Spiders was carried out in Agricultural Fields of Patur, Akola District during March 2026 – July 2026. During the present study we have reported 43 species of Spiders belonging to 05 Families and 12 genera. Spiders of Families Araneidae, Lycosidae, Oxyopidae, Saltisidae and Thomisidae were recorded during the investigation.

Keywords: Diversity, Agricultural Fields, Spiders, Patur.

Introduction:

Spiders are among the most abundant insectivorous predators of Terrestrial ecosystem. Spiders are one of the most diverse animal groups in the World. Spiders are carnivorous creature. Spider plays an important role in regulating insect pests in the Agricultural Ecosystem. They mostly feed on insects, even though they may also feed on various other kinds of prey. There are 43,437 spider's species are found all over the world in almost every kind of habitat. Spiders are beneficial to human beings in the sense that they feed not only on the pests of agro ecosystem but also the pest of man such as cockroaches, flies, Mosquitoes. In households, a particular spider as the giant crab spider has been known as an effective in controlling cockroaches and other insect pests found in the domestic environment.

They have usually been treated as an important biological control agent, because there is ecological role of spiders in pest control. Use of chemical pesticides has killed natural predators in the agricultural fields and also disturbing the natural fauna. Several toxic insecticides and pesticides

are recommended to control pests in Cotton field. These chemicals insecticides and pesticides are destroying the vegetation.

The constant use of a wide range of pesticides has caused many side effects, like loss of biodiversity, the problem of secondary pests, insecticide resistance, residual toxicity, the recovery of insect pests and Environmental Pollution. Spiders consume a large number of small creatures and do not injure vegetation.

Material and Method:

A survey of Spiders was carried out in Agricultural Fields of Patur Tahsil, District Akola during March 2026 to July 2026. Spiders were collected from different areas of Agricultural Fields. For collection and studying of spiders direct searching, collected by Insect nets, Pit fall trapping, beating steak and umbrellas were used. The Spiders Specimens were identified according to Kaston spider book. The photographs were taken in different views, to get the clear eye position, pattern and shades of cephalothorax and abdomen, spines and hairs pattern.

Observation and Result:

During the present study we have reported **43 Species** belonging to **05 Families** and **12 Genera of Spiders in Agricultural fields of Patur Tahsil, District Akola, Maharashtra State.** Spiders of Families Araneidae, Lycosidae, Oxyopidae, Salticidae and Thomisidae were recorded during the investigation. For details we have arranging the data in a Table Format of systematic way.

In my investigation I have seen that the abundance of Five Family Spiders species was more. The Orb waver spiders of Family Araneidae and Jumping spiders of Family Salticidae are widely distributed. The Orb waver spiders of Family Araneidae form web and the insect pest entangled in web spiders feeds on them. The Members of Salticidae directly feeds on insect Pest.

Conclusion:

Spider's predatory capacity can have an effect in decreasing densities of insect pests, when they are used to balance the effect of insecticides and Pesticides. Some spiders are among the most effective predators of leafhoppers, caterpillars, and other pests. Most spider's feeds on insects that's why productivity of crop gets increased, hence spiders are important Pests control agents. The present work includes the Taxonomic position and list of diversified species of spiders. The major families abundant in these agricultural fields are **ARANEIDAE, SALTICIDAE, LYCOSIDAE, OXYOPIIDAE and THOMISIDAE.**

References:

1. **Bhattacharya, G. C. (1941b)** The food and habitats of the horse spider *Heteropoda venatoria*. *Jour. Bombay nat. Hist. Soc.* (42), 821.
2. **Jeyapavathi S., Baskaran S. and Bakavathiappan G. (2013)** Biological control potential of spiders on the selected cotton pests *Int. J. of Pharm. & Life Sci. (IJPLS)*, Vol. 4, Issue 4: April: 2013, 2568-2572.
3. **Kaston, B. J. (1970)** How to know Spiders. *M. W. C. Brown Company publishers, U. S. A.* 212 pp
4. **Matthew H. Greenstone (1999)** Spider Predation: How and why we Study it, *The Journal of Arachnology* 27:333–342.
5. **Platnick, N. I. (1993)** Advances in spider taxonomy 1988-1991, with synonymies and transfers 1940-1980. *New York.* 846 pp.

6. **Platnick, N. I. (2009)** The world spider catalog, version 9.5. American Museum of Natural History.
7. **Selvamurugan S., Balasubramanian U. and Vasanthi K. 2022.** Diversity and distribution of spiders from Tenkasi district, India. International Journal of Agricultural and Applied Sciences, December 2022, 3(2): 131-134 ISSN: 2582-8053.
8. **Sunderland K. and Samu F. 2000.** effects of agricultural diversification on the abundance, distribution and pest control potential of spiders: A Review, Entomologia Experimentalist et Applicata, 95(1), pp 1-13.



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