

**TRANSFORMING AGRIFOOD SYSTEMS IN FACE OF
CLIMATE CHANGE AND ENERGY TRANSITIONS**

FORMAT – I – EXTENDED ABSTRACT

GUIDELINES

SECTION OF EXTENDED ABSTRACTS

1. Theme area

Check the conference theme areas and give the area which best describes the topic of your presentation

2. Title: Upper/lower case, genus and species in italics.

Example: Monitoring the American Bollworm (*Helicoverpa armigera*) in Bt cotton.

3. Author(s) name(s) and affiliation(s):

Authors name(s) bold and affiliations normal font in italics.

SAMPLE - EXTENDED ABSTRACT

Theme area: Regenerative Agriculture

Title: Impact of Adoption of IPM Technology against *Bemisia tabaci* (Gennadius) on Bt Cotton in Punjab

Authors: Vijay Kumar, Jagdish Arora¹ and Gurpreet Kaur
Department of Entomology, Punjab Agricultural University, Ludhiana-141 004, India
¹*Regional Research Station, Abohar*

TRANSFORMING AGRIFOOD SYSTEMS IN FACE OF CLIMATE CHANGE AND ENERGY TRANSITIONS

4. **Corresponding author's email address** it should be inserted in the footnote after affiliation

5. **Keywords:** 4-5 words alphabetically

6. **Background:** Maximum upto 100 words only

7. **Materials and methods:** 100-200 words

*Corresponding author's email: vijay_ento@pau.edu

Keywords: IPM, Whitefly, Cotton, Punjab, Impact

1. Background

Bt cotton provides protection against bollworms but it does not provide resistance against sucking insect pests. Among these sucking insect pests like whitefly, leafhopper, thrips, etc. cause economic damage to cotton. Whitefly, *Bemisia tabaci* (Gennadius) appeared in epidemic form in Punjab during *kharif* 2015. Consequently, the cotton productivity in the Punjab state fell substantially from 574 kg lint/ha in 2014-15 to only 197 kg lint/ha in 2015-16 (Kumar et al 2020). The indiscriminate use of insecticide, tank mixtures with synthetic pyrethroids has aggravated the problems of whitefly. Therefore, a special attention is required to promote the IPM technologies on Bt cotton. The focus of an IPM programme was on use of non-chemical and to promote the judicious use of insecticides based on economic threshold level (ETL) to reduce insecticide load in the cotton agroecosystem.

2. Material and methods

Under the project, Bathinda, Mansa, Sri Muktsar Sahib and Fazilka districts, covering 80 per cent of cotton growing areas were selected for dissemination of IPM technology during 2018-19. In all eight villages were adopted. The area under cotton in the IPM adopted farmers was 1625 acre. The numbers of farmers involved were 160. In each adopted villages, literature on cotton production and protection technology was distributed to the farmers at their doorstep. Farmers training programme were organized at regular interval.

INDIAN ECOLOGICAL SOCIETY INTERNATIONAL CONFERENCE 2024

TRANSFORMING AGRIFOOD SYSTEMS IN FACE OF CLIMATE CHANGE AND ENERGY TRANSITIONS

8. Results and conclusion with 1-2 tables/figures: 200-250 words (excluding tables/figures) – Total number of figures/tables should not exceed 2

The IPM strategy included regular surveillance of whitefly on alternate hosts, clean cultivation, timely sowing, use of non-chemical approaches like yellow sticky traps, neem based insecticides, use of insect growth regulators based on ETL, proper spray methodology etc. IPM farmers were compared with non-IPM farmers and impact of adoption of IPM on socio economic status of farmers was studied.

3. Results and conclusion

In Punjab, the average number of insecticide sprays for IPM adopted farmer was 5.51. However, it was 6.75 in non-IPM farmers (Table 1). There was 18.37 per cent reduction in number of sprays over non-IPM farmers. The mean cost of sprays was more in non-IPM farmers (Rs 3469) as compared to the adopted IPM farmers (Rs 3225). However, per cent reduction in cost of sprays was 7.03 per cent over non-IPM. In IPM project area, maximum numbers of sprays were for the control of whitefly and jassid. Seed cotton yield was higher (9.91 q/acre) in adopted IPM farmers as compared to non-IPM farmers (8.94 q/acre). The average net profit was more (Rs. 47283) in the IPM farmers as compared to non-IPM (Rs. 37777).

Table 1. Impact of cotton IPM technology on the economics and net returns in cotton belt of Punjab

District	Area under cotton	Number of insecticide sprays	Cost/acre (Rs)	Yield (q/acre)	Cost of input (Rs/acre)	Cost of farm operation (Rs/acre)	Cost of cultivation (Rs/acre)	Gross return (Rs)	Net return (Rs)
IPM adopted farmers									
Mansa	452	5.68	3150	10.52	6525	8250	14775	65750	50975
Muktsar	344	5.33	2960	9.56	6615	7250	13865	59750	45885
Bathinda	383	5.51	3295	9.82	6480	7150	13630	61375	47745
Fazilka	446	6.15	3493	9.72	6730	9620	16350	60750	44400
Mean/Total	1625	5.51	3225	9.91	6588	8068	14655	61938	47283
Non-IPM farmers									
Mansa	197	7.11	3365	9.20	6822	8850	15672	55200	39528
Muktsar	144	6.60	3415	9.12	7550	7560	15110	54720	39610
Bathinda	283	6.15	3450	8.54	7520	7490	15010	51240	36230
Fazilka	132	7.15	3644	8.90	7450	10210	17660	53400	35740
Mean/Total	756	6.75	3469	8.94	7336	8528	15863	53640	37777

INDIAN ECOLOGICAL SOCIETY INTERNATIONAL CONFERENCE 2024
TRANSFORMING AGRIFOOD SYSTEMS IN FACE OF
CLIMATE CHANGE AND ENERGY TRANSITIONS

9. References

Maximum 2 (For sample follow the style of the Indian Journal of Ecology for references <https://indianecologicalsociety.com/society/guidelines-for-authors/>).

10. Font Type & Size

- a. Whole abstract in **Times New Roman**
- b. **Text font size 11**
- c. **Double spacing** throughout the text except tables
- d. Theme area/Topic: **11 normal**.
- e. Title: **13 bold**
- f. Author name(s): **11 bold**
- g. Institution/ affiliation: **11 italics (Not bold)**
- h. Headings - **11 bold**.
- i. Use grammar and spell-check.

References

Kumar V, Kular JS, Kumar R, Sidhu SS and Chhuneja PK 2020. Integrated whitefly [*Bemisia tabaci* (Gennadius)] management in Bt cotton in north India: An agroecosystem-wide community based approach. *Current Science* **119**(4): 618-624.

TRANSFORMING AGRIFOOD SYSTEMS IN FACE OF CLIMATE CHANGE AND ENERGY TRANSITIONS

Word Limit for complete abstract - Not more than 500-650 words, including references

How to submit the Abstract

1. Before submission of abstract, Register yourself, make an account OR log in if already signed up.
2. Submit the abstract on link <http://iesconf.in/submit-paper/>.
3. If you have any questions or problems related to the submission process don't hesitate to get in touch at: iesconf2024@gmail.com

Note: Abstract and full-length articles should report the results of the original research not previously published or submitted for publication elsewhere. Strictly follow the author guidelines for **ABSTRACT** (word count, font size, formatting and references).