

secondary and scientific case studies are used to collect the information related to the environmental impact of the use of pesticides

## **Results and Discussion**

The study found highly hazardous pesticides in ambient air and soil samples that further results in various health issues such as cancer emergence, death fatalities, premature hair greying, reproductive abnormalities and miscarriages. The Study also found that farmers, labourers (farmers hire for spraying practices) and cotton pickers (men, women and children) have not adopted any protective equipment such as gloves, shoes, shocks, etc. that result in health hassles, which ends with monetary loss (treatment costs, job leave) and productivity loss (physical weakness). The primary health issues for cotton pickers and the labourers are facing skin problems, cough, eye irritation, flu/fever, headache, etc. Monoculture cropping pattern was highly witnessed during survey as compared to the past where crop rotation was performed i.e. crops belonging to leguminous family followed by cotton crop but now large area is covered by only paddy crop, having nature of higher water requirements and state already witnessing shortage of potable water in the area under study. The study also found that banned pesticides are easily available in the market and is used. The economic cost of pesticide is found increasing for paddy and cotton due to resistance of pest.

## **Conclusion**

The study suggested few measures to lower the impact of pesticides on livelihood of the farmers and other people engaged with the occupation of agriculture. Awareness should be heightened by government, agricultural institutions, NGOs etc. to enhance the effective use of pesticides and also early assistance is required for pest identification and their timely management as farmers mostly use pesticides application before the emergence of pest to control them on early stage. To lower the impact of hazards pesticides farmers should be facilitated with lower cost bio-pesticides and import of improved seed varieties that would lead to higher income for farmers as yield of various import vegetable seed varieties is higher as compare to the local research varieties. Mechanization as a substitute of manual spraying practices is viable solution for effective pesticide use, to reduce labour costs, time, and the health problems such as availability of machine Boom Sprayer by United Phosphorus Ltd. The study further suggests adoption of Integrated Pest Management (IPM) and Insecticide Resist Management (IRM) techniques can contribute to food and environment safety.