

11th European EPIDEMIOLOGY AND PUBLIC HEALTH CONGRESS

June 25, 2021 | Webinar

A study to determine factors influencing crop residue burning in Haryana**Rashi Saboo**

CSRBOX | Public Health | Education, Nagpur, Maharashtra, India

Background: Pollution envisages no political boundaries. Substandard air quality is a global epidemic. The resultant air pollution is causing irreversible damages to environment, and is also affecting health outcomes of populations. Northern states of India have been particularly battling with deteriorating air quality over past few years and are witnessing public health emergency like situations in months starting from October until December. Crop residue burning (CRB) has been touted to be a significant contributor to the exacerbating Air Quality Index (AQI) in these months. However, despite all efforts taken, the practice still persists. This necessitates further research with primary stakeholders, the farmers and at the same time from the government officials who are at the fore front of implementing and undertaking the schemes and initiatives in this regard. This study will thus help to identify gaps and barriers limiting effectiveness of existing initiatives pertaining to crop residue management.

Methodology: The study has been conducted in Faridabad and Gurugram districts of Haryana. It employed a cross sectional, mixed methods approach. The quantitative arm involved getting perspectives of 175 farmers regarding crop residue burning and management. It was done with the aid of a semi-structured questionnaire that was administered to each participant. The qualitative arm involved six In-depth Interviews with government officials from department of Agriculture and Farmers' welfare, Haryana. STATA 15.1 was used for data analysis.

Results: Of the total sample of 175 farmers, fifty three percent were of middle age group (31-55year). Forty one percent farmers managed crop residues by burning. We found that high labour cost, less turn-around time and profitability of burning emerged as top three reasons for stubble burning. The need for fodder, will to comply with laws and deteriorating air quality emerged as the top three reasons for not burning the residues. Fifty four percent farmers agreed that if provided an incentive in the range of Rs 2500-5000, could discourage burning of residues.

Conclusion and implications: The study provided critical insights on the practice of crop burning in selected districts of Haryana. Our study suggests that although crop residue burning is not as extensive as envisaged and stated in media and literature, in the sample studied, there are important insights into the determinants of the practice where it exists. A complex interplay of factors at individual, community and policy level determines the practice and management of crop residue burning. A strategic focus on addressing farmer-centric knowledge and perceptions on crop-residue burning coupled with effective development, implementation and regulation of crop residue management programs that are informed by regional sensitivities may work better in addressing the long-standing environmental and health issues around the practices of crop residue burning.