



Mains Practice Question

Q. Identify the issues related to stubble burning. Mention how an effective policy planning can convert crisis of stubble burning into opportunity. (250 words)

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Introduction

- Stubble (parali) burning is the act of setting fire to crop residue to remove them from the field to sow the next crop. It has been the primary reason for air pollution in Delhi NCR region every year before the onset of winters.
- Recently, the Supreme Court had ordered the Centre to prepare a comprehensive national scheme, in consultation with the States, within three months to wean small and marginal farmers away from stubble burning.

Body

Issues related to stubble burning:

- **Air pollution:** Open stubble burning emits large amounts of toxic pollutants in the atmosphere which contain harmful gases like methane (CH₄), Carbon Monoxide (CO), Volatile organic compound (VOC) and carcinogenic polycyclic aromatic hydrocarbons.
- **Lack of effective alternatives:** Farmers are not given adequate policy support in the form of acquisition of straw or other monetary incentives. Also, **short sowing season** for the next crop makes it a compulsion of farmers to resort to stubble burning.
- **Lack of mechanization:** Farm equipment like 'Happy Seeders' are limited in number and do not cater to the needs of millions of farmers in the region.
- **Adverse Impact of Laws:** Implementation of the Punjab Preservation of Subsoil Water Act (2009) made the time period of stubble burning coincident with the onset of winter in Northern India.
- **Impact on agriculture:** Burning husk on ground destroys the nutrients in the soil, making it less fertile. Also, the heat generated by stubble burning penetrates into the soil, leading to the loss of moisture and useful microbes.

Effective policy measures to convert crisis into opportunity:

- From parali (stubble), **high-grade organic fertilizers** can be prepared by mixing with cow dung and few natural enzymes.
 - The total amount of nitrogen, phosphorus, potassium and sulphur in the parali burnt annually in Northwest India is about seven lakh tonnes, valued at Rs 1,000 crore.
 - Along with the above-mentioned nutrients, organic carbon is also destroyed during stubble burning.
 - These nutrients, if successfully utilized in organic manures, can also reduce the risk of cancer in Punjab by reducing the levels of carcinogens caused by chemical fertilizers in the soil.
 - Chhattisgarh model of '**gauthans**' can be replicated **which** is a dedicated five-acre plot, held in common by each village, where all the unused parali is collected through parali

daan (people's donations) and is converted into organic fertiliser by mixing with cow dung and few natural enzymes. This also helps in employment generation in villages.

- Using **straw for electricity generation** is another productive way of generating wealth from residue.
 - **USA-based New Generation Power International** has proposed to set up **1000 MW** biomass energy generating plants in Punjab to address stubble burning.
 - The company plans to set up 200 plants, each having 5 MW capacity, which will use the stubble as raw material.

Conclusion

Green revolution policies and push for exports of highly water-intensive rice by the government have skewed the cropping pattern in the regions of Punjab, Haryana and Western Uttar Pradesh. Hence, in the longer time span, **shifting cropping pattern** away from paddy to maize, cotton, fruits or vegetables in Punjab, Haryana and UP should be the way forward.

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