

GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

LOK SABHA
UNSTARRED QUESTION No. 1737
TO BE ANSWERED ON 10.03.2025

Stubble burning in Punjab

1737. SMT. HARSIMRAT KAUR BADAL:

Will the Minister of ENVIRONMENT, FOREST AND CLIMATE CHANGE be pleased to state:

- (a) the number of stubble burning incidents reported in the State of Punjab in 2024;
- (b) the total amount of environmental penalties collected from farmers for stubble burning;
- (c) the effectiveness of the increased penalties for stubble burning;
- (d) the alternatives provided to farmers for stubble management; and
- (e) the impact of stubble burning on air quality in Punjab and neighbouring States?

ANSWER

MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(SHRI KIRTI VARDHAN SINGH)

(a) to (e)

The number of Stubble burning incidents reported in the State of Punjab is 10,909 during Paddy Stubble season in 2024 i.e from 15th September, 2024 to 30th November, 2024.

Total amount of environmental compensation (EC) collected from farmers for Stubble burning during Paddy Stubble season in 2024 in the State of Punjab is Rs 1,48,03,000 /- (Rupees One crore forty Eight Lakh Three Thousand).

The Commission for Air Quality Management (CAQM) developed a framework for effective prevention and control of Stubble Burning by considering the needs of the farmers. This includes measures like in-situ crop residue management, ex-situ utilization of paddy straw, strict monitoring and enforcement, and extensive awareness campaigns, all aimed at reducing the practice of burning agricultural residue after harvest.

The plans / schemes to promote sustainable agriculture practices and to reduce generation of paddy straw include crop diversification, promoting Basmati variety as this is conveniently used as cattle fodder, promoting low straw and early maturing paddy varieties – to enhance time window between harvest and sowing of wheat crop and promoting direct seeding of rice method against transplant to shorten the overall crop cycle etc.

Farmers are provided with alternative measures like in-situ crop residue management, ex-situ utilization of paddy straw in various applications. The in-situ crop residue management envisages in-situ mulching / incorporation of the paddy residue in the field itself through efficient and affordable mechanised means / crop residue management machinery.

The Government of India has taken several initiatives to address the issue of paddy straw burning in Northern India and to provide the farmers with alternatives for stubble management:

- Ministry of Agriculture & Farmers Welfare (MoA&FW) has implemented a Central Sector Scheme on Crop Residue Management (CRM) w.e.f. 2018-19. Under this scheme, financial assistance of 50% is provided to the farmers for purchase of crop residue management machinery and financial assistance of 80% is provided to Rural Entrepreneurs (Rural youth & Farmer as an entrepreneur), Cooperative Societies of farmers, Registered Farmers Societies, Farmers Producer Organisations (FPOs) and Panchayats for establishment of Custom Hiring Centres (CHCs) of crop residue management machines. Financial support of 65 % up to a maximum of Rs. 1.50 Crore is also provided to paddy supply chain projects on the capital cost of machinery and equipment like higher HP Tractors, Cuffers, Tedder, Medium to large Balers, Rakers, Loaders, Grabbers & Telehandlers.
- During the period from 2018-19 to 2024-25 (as on 28.02.2025), Rs. 3698.45 crores have been released by MoA&FW (Punjab - Rs. 1756.45 crores, Haryana - Rs. 1081.71 crores, Uttar Pradesh - Rs. 763.67 crores, NCT of Delhi - Rs. 6.05 Crores, ICAR- Rs. 83.35 crores & others Rs. 7.22 Crores). The states have distributed more than 3.00 lakhs machines to the individual farmers and to more than 40000 CHCs in these 4 States, which also include more than 4500 Balers & Rakes which are used for collection of straw in the form of bales for further ex-situ utilization.
- Large scale workshops have also been convened at Ludhiana (Punjab) & Kamal (Haryana) by ICAR-Krishi Vigyan Kendras (KVKs) on effective management of paddy straw through Crop Residue Management scheme.
- Central Pollution Control Board (CPCB) has framed Guidelines for grant of one-time financial support under Environment Protection Charge funds for establishment of pelletisation and Torrefaction plants to promote utilisation of paddy straw. A total of 15 applications for establishment of pelletization and Torrefaction plants under the above mentioned CPCB Guidelines have been sanctioned so far. Pellet production capacity of 15 sanctioned plants is 2.07 lakh tonne/annum. These plants are expected to utilize 2.70 lakh tonne of paddy straw per annum.
- The CAQM has issued directives & advisories to various stakeholders including the 11 Thermal Power Plants (TPPs) located within 300 km of Delhi, State Governments of Punjab, Haryana and Uttar Pradesh on “Ex-Situ Stubble Management” and to establish an ecosystem and robust supply chain mechanism to boost ex-situ utilisation of straw for tackling the problem of stubble burning.
- Ministry of Petroleum and Natural Gas (MoPNG) has launched a scheme to provide financial assistance to Compressed Bio-gas producers for procurement of biomass aggregation equipment for ex-situ management of paddy straw.
- MNRE is supporting setting up of Biomass Briquette/Pellet manufacturing plants and to support Biomass (non-bagasse) based cogeneration projects in Industries in the country, by providing Central Financial Assistance (CFA).
- MNRE is also providing CFA for setting up of Waste to Energy plants for generation of Biogas, Bio-CNG/enriched Biogas/Compressed Biogas, Power/ generation of producer or syngas, from urban, industrial, agricultural wastes and municipal solid waste.
- Under the Pradhan Mantri JI-VAN Yojana, a 2G Ethanol Project has been set up by Indian Oil Corporation Limited at Panipat, Haryana, which is expected to utilize 2 lakh metric tonnes of paddy straw per annum. Another 2G Ethanol Project is being set up by HPCL at Bathinda (Punjab).

In addition to above, the Government of Haryana is providing incentives to the farmers which include an incentive of Rs. 1000/- per acre for management of crop residue by making bales, additional top up of Rs. 500/MT in addition to above in the clusters identified by Indian Oil Corporation Limited for 2G Ethanol plant at Panipat, declaring common determined Rate of Paddy Straw of Rs 2500/ MT, transportation charges of Rs. 500 per acre limited to maximum of Rs. 15000 to Gaushalas for consumption of paddy straw bales, one time grant of Rs. 7000 per acre under Mera Pani Meri Virasat (MPMV) initiative for diversification of paddy to other crops, incentive of Rs. 4000 per acre for Direct Seeding of Rice (DSR).

The Government of Punjab is also providing a financial incentive of Rs. 1500 per acre to farmers who adopt the Direct Seeded Rice (DSR) technique, aiming to bring a total of 7 lakh acres under DSR cultivation. The Government of Punjab has offered the incentives of SGST reimbursement on the cost of the boiler (based on paddy straw) to be installed in industries such as Sugar Mills, Paper Mills and boilers of steam generation capacity more than 25 TPH under the PBIP Investment promotion policy of the State of Punjab. Further incentives under agriculture infra fund for industrial units utilising paddy straw is also offered.

With persistent efforts made continually from year to year, significant reduction has been recorded in the number of open paddy residue burning incidences as tabulated under:

Paddy Residue Burning events during September 15 – November 30				
Name of State	2021	2022	2023	2024
Punjab	71304	49922	36663	10909
Haryana	6987	3661	2303	1406

Daily Mean contribution from Stubble Burning to PM_{2.5} mass concentration in Delhi is provided by Decision Support System of Indian Institute of Technology and Management (IITM), Pune, Ministry of Earth Sciences. Contribution of stubble burning to PM_{2.5} in Delhi for the past 05 years is given below:

Contribution (earlier SAFAR, now IITM)	2024	2023	2022	2021	2020
Average Contribution	10.6 % (Oct 08-Dec 7)	11% (Oct 22- 10 Dec)	9% (Oct 12- 01 Dec)	13% (Oct 10- 23 Nov)	13% (Oct 10- 03 Dec)
Maximum Contribution	35%	35%	34%	48%	42%

It has been reported that an average contribution of stubble burning towards PM_{2.5} in Delhi is 10.6 % with a maximum contribution of 35% during the period of 8th October – 7th December 2024.
