Stubble Management: Workable Options for Farmers Beyond Monitoring

News context: 5 October 2026 | Agriculture • Air Quality • Policy Implementation | GS-III



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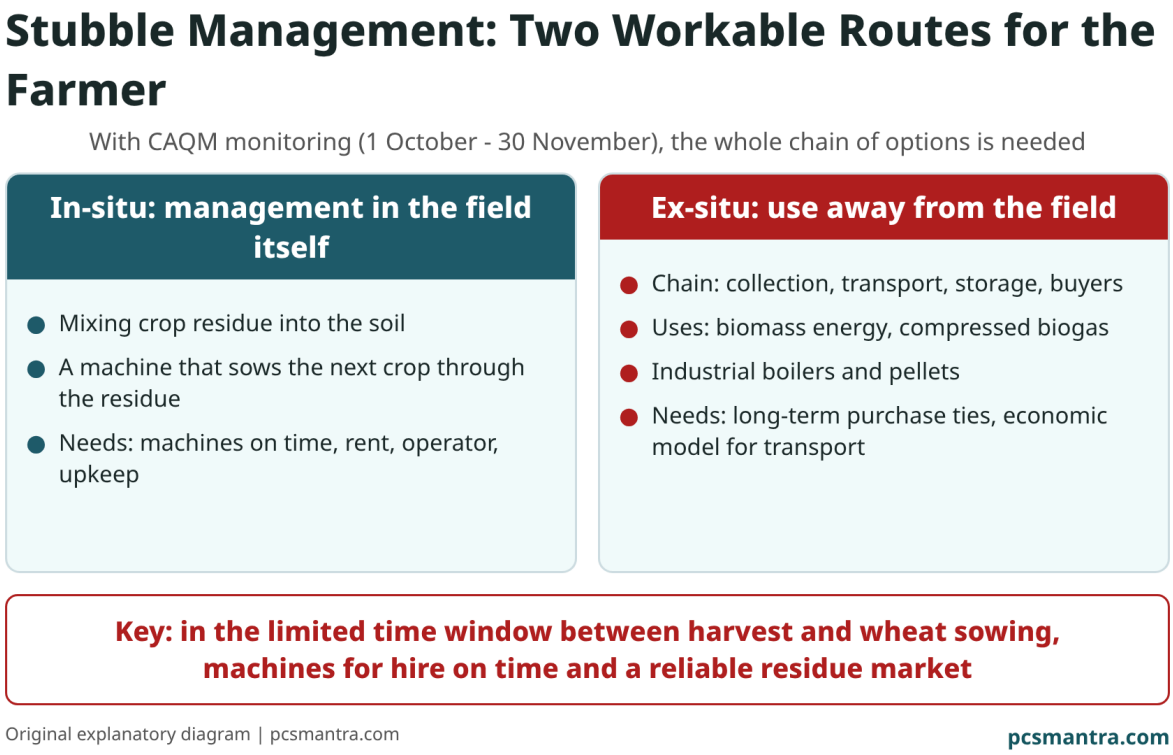
Advice not to burn stubble turns into practice only when the farmer has an alternative that is available in time and bearable. Monitoring is necessary, but a ban alone is not sufficient without the full arrangement of machines, transport, storage and purchase.

Why in the News

According to official information of 5 October 2026, the Commission for Air Quality Management (CAQM) arranged the deployment of flying squads in 34 districts of Punjab and Haryana to prevent the burning of paddy stubble. The period of deployment was from 1 October to 30 November. Understand this as an initiative of monitoring, not as the result of incidents of fire or pollution having fallen across the whole season.

What Are In-Situ and Ex-Situ Management?

In in-situ management, the crop residue is handled in the field itself by a suitable method, such as mixing it into the soil or using a machine suited to sowing the next crop amid the residue. In ex-situ management, the residue is collected outside the field and sent for energy, fuel or other use. In the first, the timely machine and the farming method are important; in the second, the chain of collection, transport, storage and a buyer is necessary.



Key Facts

The constraint of little time: Punjab's action plan identifies the limited time between the paddy harvest and the sowing of the next wheat crop as the main operational problem. The solution should be available within the actual timeline for preparing the field.

Giving machines and their use: besides the purchase of machines, availability on rent, drivers, maintenance and reaching the field at the right time are also necessary. A larger number of machines does not prove their use by all farmers.

Use outside the field: the action plan includes uses such as biomass energy, compressed biogas, industrial boilers and pellets. Potential demand will be useful only when the quality of the residue and a steady supply are assured.

Plan and outcome: the state's action plan has targets, responsible departments and proposed arrangements. A provision being in a plan and a facility reaching the ground on

time are different things.

Why Does Punishment Alone Not Fully Solve the Problem?

Private cost and public benefit: the farmer may bear the immediate cost of stubble management, while the benefit of clean air goes to the wider society. So a balance of accountability is needed with appropriate support and an accessible service.

The market's last link: if the stubble is lifted from the field but there is no storage or buyer, the collection system can stall the next time. Long-term purchase relationships and an economic model of transport are necessary.

The effect of the crop system: paddy-centred farming produces a large quantity of residue. While discussing diversification, the purchase, income and risk of the alternative crop must be considered; merely telling the farmer to change the crop is not enough.

Analysis and Way Forward

An effective policy should have, alongside monitoring and rule compliance, a timely rental machine, a village-level service and a trustworthy residue market. Assess separately the cost and access of small farmers. Connect the information of a fire to ground verification and action. To measure improvement, look at the number of incidents, the residue managed and the service farmers received. Avoid tying a city's entire pollution to stubble alone or assuming a fixed contribution every day.

Difference in Concepts

An incident of fire in a field, the area burned and the contribution reaching a city's air are different measures. Weather and other sources also affect air quality. So do not take a change in one number directly as equal pollution reduction everywhere.

Mains Perspective

In the answer, do not place the farmer only as a violator. Write economic incentive, the constraint of time, the service arrangement and enforcement as parts of one combined policy.

UPSC CSE Mains Style: Original Practice Question

A lasting solution to the problem of stubble burning rests on workable farming and market alternatives alongside enforcement. Examine.

(Answer in 150 words) | 10 marks

Answer Outline: introduction: the seasonal problem and limited time → the role of enforcement → the alternatives: in-situ and ex-situ → the obstacles: cost, machines,

storage and buyers → conclusion: a farmer-centred, outcome-based policy.

Sources

- PIB, 5 October 2026: CAQM's flying squads and monitoring arrangement
- Punjab's 2026-27 stubble-management action plan, available on CAQM

Remember: the alternative to burning stubble will be strong only when it suits the farmer's time, cost and field's need.