

Laws related to control Air Pollution in India:-

1. Air (Prevention and control of pollution) Act 1981
2. Environmental (Protection) Act 1986
3. National Environment appellate authority Act 1997
4. The National Environment Tribunal Act 1995
5. Biological diversity Act 2002

Program & agencies to control Air Pollution in Punjab:-

1. Punjab pollution control board.
2. Punjab state council for science & technology.
3. Punjab department of Agriculture.
4. Agriculture councils.
5. Punjab energy development Agency (PEDA).
6. Punjab agriculture university (PAU)
7. Punjab state farmer’s commission.

There is no specific law in Punjab to ban stubble burning. Every Deputy Commissioner (DC) has the power to impose a ban under section 144 of Criminal Procedure Act.

DC also has the power under 188 IPC. Under the law, a violator may be punished up to six months jail and a fine of Rs. 1000. Hardly any action is taken under this law against violators in Punjab. There’s a lack of ‘political will’ resulting in poor implementation in the state.

In Haryana, the environment department had banned the burning of agriculture waste in the open fields under the Air (Prevention and Control of Pollution) Act 1981.

Even after the presence of laws/programs/institutes, the every winter smog in NCR shows the governments failure in discouraging the practice of residual burning, also banning this practice strictly is difficult as it makes life for the poor farmer more difficult.

2. Alternatives of Paddy straw burning

- 1) **Happy Seeder:** Happy seeder is designed for direct drilling wheat into heavy nice residue loads and therefore provides an alternative to biomass burning. It is a tractor powered machine that cuts & lifts the rice stubble, sows the seeds into the soil & deposit the lifted stubble over the sown area as mulch.
- 2) Livestock fodder.
- 3) Mushroom cultivation.
- 4) Paper & pulp board manufacture.
- 5) As a fuel in thermal power plant.
- 6) Ethanol production.
- 7) Cushioning material in the packaging of manufactured goods.
- 8) Floor tiles.



3. Challenges in implementing the alternatives

1. Problem with happy seeder – Despite being a low cost alternative to conventional tillage, farmers may not be inclined to adopt happy seeder because they may not believe that wheat will grow in fields covered with rice residue. Farmers that aware of the happy seeder technology, but non adopters were indeed skeptical.

2. Problem with livestock feeder – Specifically for rice straw as the case of Punjab, Haryana & UP causing smog in NCR, major challenges to use as livestock feeder as is, its low digestibility due to high silica content, along with very low protein content (2 to 7%).

Summary

Crop residue is largely burnt as it is limited value to the farmers both as livestock feed & non feed use, the paper concludes some alternatives to residue(paddy straw) burning causing smog every year to central region and stress on the challenges to implement the alternatives, The paper also talks about existing laws and regulations, Institutions and agencies available. It can be concluded that burning residue should be in the least priority and environment friendly options should be encouraged using economic instruments.

References

- [1] Niveta Jain*, Arti Bhatia, Himanshu Pathak (2013) “Emission of Air Pollutants from Crop Residue Burning in India.”
- [2] K. V. S. Badarinath1,*, T. R. Kiran Chand1 and V. Krishna Prasad2 (2006) “Agriculture crop residue burning in the Indo-Gangetic Plains – A study using IRS-P6 AWiFS satellite data.”