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Stubble burning and pollution: It's a question of dignity and identity of farmers

How is it that farmers, who were celebrated as national heroes and saviors of the country after the Green Revolution, are now criminalised and called irresponsible? If they are feeding the nation, isn't the problem of stubble burning a collective responsibility?

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Updated: Oct 27, 2017 17:51 IST



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Darshan Singh, a farmer from Bandna Village talks about why farmers burn stubble. Stubble burning is the process of deliberately setting fire to the straw stubble that remains after grains have been harvested (Sanchit Khanna/HT PHOTO)

Attempts by a range of agencies to address the issue of stubble burning in Punjab have repeatedly failed. We suggest that this is not only because we've missed the key explanation of the problem but also because of a far deeper cultural issue: the question of what it means to be a farmer.

We contend that it is impossible to solve the issue of stubble burning, unless we pay proper attention to the way farming communities are organised, circulate knowledge, and produce value while retaining their dignity. Only when alignment with these cultural values is addressed, can one address stubble burning as a problem of health and environmental damage.

This is not to deny the reality of the stubble burning problem. The air quality in cities such as Delhi is deteriorating with each passing day due to multiple factors including rapid and unplanned urbanisation, increasing number of cars and population growth. This gets worse with bursting of Diwali firecrackers in Delhi and the burning of straw after harvest in Punjab, Haryana and western Uttar Pradesh. Satellite images and scientific data confirm that smoke from burning fields in Punjab deteriorate the air quality in Delhi in the month of October and November.

This has enabled news agencies, citizen charters, government bodies and the National Green Tribunal (NGT) to find a common culprit – the farmer. Unaware of these developments in the elite quarters of Delhi, farmers in Punjab and Haryana only came to know about the problem when they were threatened with fines and imprisonment. Reactions from farmers ranged from letting the straw rot in one corner of their fields to protesting and defying government regulations.

The question of farmers' dignity and identity is a common thread in all these reactions. How is it that farmers, who were celebrated as national heroes and saviors of the country after the Green Revolution, are now criminalised and called irresponsible? If they are feeding the nation, isn't the problem of stubble burning a collective responsibility? Aren't all of us culprits, then?

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In our view, addressing stubble burning only as a health and environmental problem disregards the connection that stubble burning has with the nation's expectation from farmers of producing food.

It should come as no surprise that this 'disengaged' consumer, living in the urban environment of Delhi, and buying their food from a supermarket aisle, now holds farmers responsible for a problem of which they are an integral part

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This delinking of food production and health and environmental problems has created dual effects. On the one hand, it prioritises agricultural productivity over agricultural synergy with the environment, resulting in unaccounted detrimental impacts on practices of farming and local ecosystems including the burning of fields. On the other hand, it disengages the consumers from being part of the food production process, its larger context, and its relation to the environment. It should come as no surprise that this 'disengaged' consumer, living in the urban environment of Delhi, and buying their food from a supermarket aisle, now holds farmers responsible for a

Besides the ban and criminalisation, solutions proposed by different agencies mostly ask farmers to use stubble (or straw) for purposes other than burning, such as collecting and delivering it to bioenergy or cardboard industries. Here again, the challenges point to a lack of understanding of agricultural systems. Associating straw to any kind of industry would require a sustained supply (of biomass) and a sustained demand (of bio-energy).

This requires that agricultural systems and energy generation are realigned to each other. A thorough assessment of available resources in local ecosystems (water, soil and microflora) and of market demand for specific bio-energies is necessary. Which crops can best maintain a balance between food and energy outputs? What technologies make the best use of straw in a sustainable manner? What kind of model benefits farmers, consumers as well as industries? This would require the coming together of the separate ministries of science and technology, agriculture, and energy. Currently, none of these conditions exist. Moreover, these solutions are typically proposed without any regard to how they would fit into the lives and livelihoods of farmers.

To explore solutions that retain farmers' dignity, we need to identify mechanisms which promote the local appraisal of their knowledge by building mutual trust and then combining it with scientific insights. For example, one option of sustainable straw use is its re-incorporation into the soil. This brings us back to the questions of identity and belonging that are central to what it means to be a farmer. Some farmers reported to the NGT that this cannot work because the straw then causes fungal infections and water logging.

However, during our field research, organic and regular farmers demonstrated multiple methods of straw incorporation that did work. Organic farmers have a different philosophy of farming in which burning of fields or biomass means severe damage to fields and the destruction of soil micro-flora. This understanding builds on trust in local knowledge systems and practices and working with nature rather than against it. The long-term practice of chemical farming and relying on science that does not relate to farmers' knowledge has diminished farmers' confidence in their own knowledge and capacities. The solution of incorporating straw in the soil can only work if that confidence is regained through a sustained effort.

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