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STEPS TO STOP THE ROT: ON DANGERS OF STORING FOODGRAINS IN THE OPEN

Relevant for: Indian Economy | Topic: Issues of Buffer stocks and Food Security

In India, the height of the rainy season is a time that one prays will pass — flooded roads, wet clothes, masses of insects and mould. No place is safe from the growth of fungi that spring up overnight. With the humidity in the air and the warmth of summer, all that fungi need is something to feed on. To prevent fungal attack. we store food items at home in airtight containers with well-fitting lids or in sealed plastic bags.

If I were to suggest that instead of all the airtight containers and waterproof bags, you build a cement plinth on the roof of your house or in your yard and pile up your flour, bread, biscuits, rice and other cereals and pulses there in bags and then cover all this with a tarpaulin, assuring you that it would be perfectly safe through the rainy season, you would probably lose all faith in me and my suggestions. This would be based on your practical experience.

Most grain in India, which is procured from farmers by the government, is stored using the CAP, or cover and plinth method. Very cheap and easy to make, it is described in the preceding paragraph. India stores about 30.52 million tonnes of rice, wheat, maize, gram and sorghum in such structures at Food Corporation of India godowns and hired spaces.

In other parts of the world, grain is stored in silos. Here, stored grain is kept dry and aired so as to prevent fungal and insect attacks. When the North American mid-west came under the plough during the 19th and 20th centuries, the first thing that was done was to build large grain silos and a railway system to export the grain. Today, the U.S. has a permanent storage capacity nearly equivalent to its annual grain production. But in India, the government has considered only four silos to be sufficient for the nation’s needs — one each in Kolkata, Chennai, Mumbai and Hapur-Ghaziabad. The last one, in Uttar Pradesh, is the most modern with a storage capacity of 500 tonnes, according to a recent paper.

The remainder of government-procured grain is stored in conditions so shoddy that it is estimated that there is a 10% loss of harvested grain, of which 6% (around 1,800,000 tonnes) is lost in storage. This means that the grain is so damp and fungus-ridden that it cannot be ground and passed on to the public for consumption.

In order to export basmati rice, Punjab has, in a public-private partnership, built modern, temperature-controlled grain silos with a storage capacity of 50,000 tonnes — but this is not for the Indian market.

Eating mouldy grain causes a variety of illnesses. According to a World Health Organisation paper, titled “Mycotoxins”, mycotoxins, which are found in mouldy grain/foods, are associated with human disease and produce aflatoxins (cancer-causing), trichothecenes, ochratoxins, citrinin and other toxins. The paper says: “Aflatoxicosis causes abdominal pain, vomiting, hepatitis and (sometimes) death after acute exposure to high concentrations in food. Chronic low dose exposure to aflatoxin can result in impaired growth in children.”

This is why traditional wisdom ensured that mouldy food was discarded. Today, our grain, especially wheat and paddy, is stored outdoors under tarpaulins through the rainy season. After this, grain is converted to flour or flour-based products or de-husked, which we store in airtight containers and bins to prevent mould. However, this is shutting the stable door after the horse has bolted. The mycotoxins which we seek to prevent by keeping food dry are already present from the time the flour was stored in the form of grain.

The government is aware of the deadly consequences of grain with mycotoxins. Although there are regulations in place to prevent the purchase of mouldy grain from farmers, there do not seem to be any published studies on the extent of mould infection in grain stored using the CAP

method. However, one does not need these studies. All one has to do is purchase flour from the market, make rotis, bread or biscuits and compare the taste with similar products from developed countries. The “nutty taste” of wheat is missing in what is available in the Indian market. If you get wheat from farmers and get it ground, you will find the “nutty taste”.

One needs to ask a pertinent question. When there is an abundance of steel, cement and other building materials, money and the technological know-how, why is the government not moving on a war footing to store food grains in the proper manner?

Given the weather conditions during the monsoon months, how is it acceptable that our foodgrains, which the public pays to procure, are stored in the open under tarpaulins?

How can we gloat about a growing economy when 30 million tonnes of foodgrain is stored outside under tarpaulins? Even though foodgrain production has been encouraged and increased, why is there no effort being made to ensure that grain being procured annually is stored properly? Are our planners unaware of what is going on even in their own kitchens?

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