



CONCEPT DESIGN&PHOTO: GURUG

Isn't it quite convenient to think that the food we consume is something we are entitled to? For a moment, imagine if one-third of the food served to you was thrown away or is unfit for consumption. And what if this happened consistently, almost daily?

While this might sound disturbing or even absurd, however, it is true that one-third of the global food production is either lost or wasted. And this is leading to severe repercussions and chronic hunger. More than 820 million people around the world do not have enough to eat. In India, 14.8% of the population is undernourished and 51.4% of women in reproductive age are anaemic (FAO's 'State of Food Security and Nutrition in the World, 2018'). These figures become even more depressing when India's food production is consistently increasing.

As we are struggling to sail through Covid-19 challenges, the World Food Programme (WFP), the winner of the Nobel Prize for Peace 2020, has warned of a greater danger in store — The Hunger Pandemic. According to the WFP, the coronavirus wreaked havoc with supply chains, disrupting the movements of critical food assistance, personnel and critical equipment. An additional 130 million people could be pushed to the brink of starvation by the end of 2020. The situation could be much more severe in developing and underdeveloped economies.

Covid Effect

It was already estimated that by 2050 the world would need 70% more food. However, the Covid effect seems to be making the situation much more complex in the coming years. Therefore, food security needs to be treated as an extremely urgent issue.

Interestingly, in India, the problem is not food availability but inequitable distribution and massive food loss and waste. According to the FAO estimates, nearly 40% of the food pro-

duced in India is lost or wasted. Food wastage, which was already a burning issue, has become even more critical in today's times. More so because adequate food and nutrition is one of the primary requirements to keep Covid at bay.

Delving Deeper

There is no single reason, but a number of factors responsible for this dreadful supply-demand gap, which are threatening food security. One is definitely the consumer behaviour, where huge quantities of food go into trash without a second thought.

The retail industry is yet another checkpoint where food items (especially the perishables) are discarded for minor defects. Being a high volume, low-margin business, the food retail business is extremely competitive and hence players don't prefer taking chances. However, in the past few years, there is an increasing awareness among consumers and retailers about food wastage and the irreversible damage it causes to the ecosystem.

Unfortunately, a significant amount of wastage happens in

the agricultural supply chain, which is still not given enough attention. Poor post-harvest management is one of the major contributors to global food loss. According to the State of Food and Agriculture (SOFA), 14% of the world's total food is lost between harvest and retail sale.

Even for a large country like India, food production is less of a problem than the food loss that happens in agriculture, particularly in the post-harvest supply chain. Harvesting, storage, handling, packaging, and transport are critical points in the food supply chain and need urgent attention.

The Ripple Effect

It is not difficult to understand the direct impact of increasing food insecurity. The enormous food loss and wastage (FLW) the world is going through is robbing several people of their basic right. Increasing hunger, especially in developing and underdeveloped nations is severely impacting the well-being of people. Children, pregnant and lactating mothers suffer long-term damages.

While food insecurity and malnutrition are the most threatening consequences of this wastage, the list is rather long. Food production is a resource-intensive business and involves several stakeholders. Any amount of food that is wasted puts severe pressure on the environment. Agriculture already uses almost half of the world's vegetated land, and agriculture and related land-use change generate one-quarter of annual greenhouse gas (GHG) emissions. In terms of GHG emissions, the food that is lost is associated with around 1.5 gigatonnes of CO₂ equivalent every year. The waste disposal on landfills leads to rotting of food, generating methane that has a global warming potential 23 times higher than that of CO₂.

Food loss creates a huge burden on the economy too. The value of food lost or wasted annually at the global level is estimated at \$1 trillion. While farmers, traders, processors and other stakeholders in the chain suffer income loss, it also creates a financial burden for the end consumer. There is an unnecessary burden on farm production

to meet demand that triggers food inflation. People with limited economic resources bear the brunt and the entire system is thrown out of balance, making it unsustainable.

Collaboration is Key

According to the WFP, preventing the current food wastage can feed twice the number of undernourished people across the globe. Mitigating food loss requires urgent attention and strategic intervention at all levels. In fact, the United Nations SDG (Sustainable Development Goals) 12.3 talks about halving per capita global food waste at the retail and consumer levels and reducing food loss along production and supply chains (including post-harvest losses) by 2030.

In agriculture, the need of the hour is to strengthen the post-harvest mechanism that can potentially create a significant change in food availability and security. To achieve this, it is crucial that organisations and institutions adopt a collaborative approach and aim to create an end-to-end solution for con-

sumers and stakeholders. Public-private partnerships, greater investment and policy support in post-harvest management can provide the required boost to initiatives in FLW mitigation.

Robust Infrastructure: To create an efficient value chain in the post-harvest segment, improved storage structure (including cold storage), improvement in processing infrastructure and logistics support can play a significant role in reducing food losses. Storage infrastructure is extremely critical as the proportion of agri-produce lost due to decay, weather exposure, pests and diseases is alarmingly high.

Innovation & Technology: There is a greater need to invest in innovative solutions to reduce post-harvest losses especially suited to developing countries with limited economic power and dynamic ecosystem. There is also a need to focus on developing efficient channels to collect and assess FLW data at all the critical stages in agriculture. Access to relevant and accurate data is an essential requisite to devise effective solutions. **Financial Support:** Besides investments to reduce the post-

harvest losses, financial institutions need to pitch in and provide support at various other stages. These could be in the form of a loan against collateral and trade finance. Promoting more trade finance will also help enhance food availability at affordable prices.

Market Integration: Often, farmers struggle to find the right market and price for their produce. This delay not only affects the produce quality, but also results in economic losses. Exploring the right market is critical for reducing the demand and supply gap and making agriculture a viable option for all stakeholders.

Consistent Efforts

Reducing food loss and wastage will also impact several other SDGs, including Zero Hunger (SDG 2), Sustainable Water Management (SDG 6), Climate Change (SDG 13). The efforts we put in today will take time to yield results, and, therefore, need long-term commitment and collective action. Mitigating FLW in the agricultural value chain can play a huge role in creating a sustainable food system, thereby creating a balance in the ecosystem.

The WFP winning the Nobel Peace Prize is a big reminder that food security, peace and stability go together. As the American agronomist, Norman Borlaug, had said, "You can't build a peaceful world on empty stomach and human misery".

With India faring dismally, ranking 94 among 107 countries in the Global Hunger Index (GHI) 2020, and continuing to be in the "serious" hunger category, we have little option but to strive to ensure no food waste and contribute actively to create mechanisms that will enhance the true potential of Indian agriculture.

(The author is co-founder and Director of Origo Commodities, an agri commodity supply chain company. It offers from scientific storage techniques to trade finance services to reduce commodity degradation)

Hunger Pandemic

MITIGATING FOOD LOSS AND WASTE IN THE POST-HARVEST PHASE AND ON PLATE IS CRITICAL TO HAVING ENOUGH TO EAT FOR ALL

— by SUNOOR KAUL

EMPTY PLATE

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