

IMPROVED NUTRITION FOR A BILLION: ROLE OF FOOD SECURITY AND PULSES¹

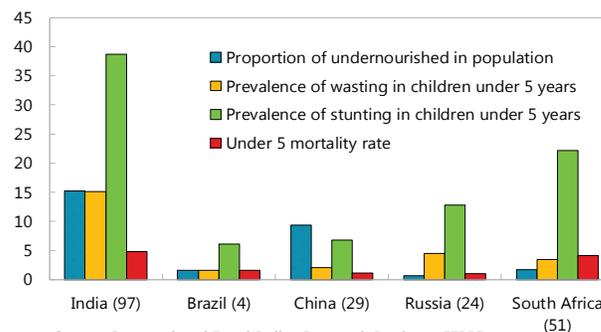
Despite economic growth and increase in production and distribution of food commodities, the prevalence of undernourishment and hunger remains high in India. Rising prices of pulses (grain legumes), which are a key source of protein for a large share of the Indian population, have been one of the key drivers of food inflation in recent years, leading to a nutrient poor diet. Complementing food security policies by addressing inherent long-term structural bottlenecks and improving productivity within the agricultural sector is needed for India to achieve its Sustainable Development Goal of ending all forms of malnutrition by 2030.

Hunger and Malnutrition

1. While India has achieved its Millennium Development Goal (MDG) target of reducing poverty by half, it has fallen short of achieving the target for reducing hunger. India ranked 97th

out of 118 countries on the International Food Policy Research Institute's Global Hunger Index (GHI) in 2016, lagging behind most of its peers. Although India is one of the world's largest producers of rice and wheat, its proportion of undernourished, prevalence of wasting (low weight for height) and stunting (low height for age) in children and the under-five mortality rate—the three indices which form the basis of the GHI index—are considerably higher than all other BRICS economies.

Global Hunger Index (GHI), 2016



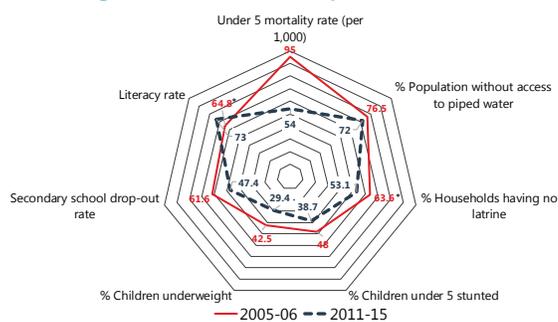
Source: International Food Policy Research Institute (IFPRI).

Note: The numbers in the brackets refer to the GHI ranking which is based on a GHI score, ranging from 0 (best score) to 100 (worst score).

2. Undernutrition and malnutrition in India is caused by a nutrient poor diet, infectious diseases from low quality water, sanitation, and health services, lack of appropriate child care, and poor implementation of health-related government schemes.

Current social protection programs (implemented at the state-level) aimed at improving the nutritional status of the population—distribution of subsidized food (through the Targeted Public Distribution System (TPDS)), targeted food supplementation (through the Integrated Child Development Services), and provision of a cooked meal once a day (through the National Mid-Day Meals Program)—have not led to a substantial decline in undernutrition. Typical problems associated with these programs include inadequate identification and

India's Progress on Various Development Indicators



Sources: UNICEF, WHO/UNICEF Water Supply Statistics; Census of India, 2001 and 2011; National Family Health Survey (NFHS); Rapid Survey on Children (RSOC), Ministry of Women and Child Development; Ministry of Human Resource Department.
Note: Asterisk refers to data in 2011.

¹ Prepared by Purva Khara.

reach of targeted groups; skewed consumption towards a cereal-dominant diet due to its subsidized price leading to inadequate nutrition; corruption and leakage of food in the PDS; and inadequate storage facilities for food grains (Banik, 2011). Gender inequality is another contributing factor—low levels of female education, early marriage and child bearing compromise the quality of child care.

3. Undernutrition entails substantial economic costs associated with poor learning outcomes and low productivity. According to a World Bank (2005) report, direct productivity losses from undernutrition are estimated at more than 10 percent of lifetime individual earnings, and entail about a 2-3 percent loss in GDP. Indirect losses are associated with deficits in cognitive development and schooling, and increased costs of health care (Spears, 2012).

Food Safety Net Programs

4. The Government of India passed the National Food Security Act (NFSA) in September 2013, one of the largest safety net programs in the world.² This scheme provides subsidized food grains through the TPDS to 67 percent of the population (75 percent of the rural population and up to 50 percent of the urban population). While the NFSA will help increase caloric availability, overcoming distortions in previous schemes (which could be achieved through direct cash transfer of the food subsidy via direct benefit transfer (DBT) mode or by increasing access to a diverse set of food crops) is essential for creating a balanced diet.³ In addition, periodic monitoring by putting in place a comprehensive nutritional data collection system is needed for its success.

5. Increasing protein consumption is a policy priority, and hence pulses have been included in the National Food Security Mission (NFSM), along with wheat and rice. For a majority of low-income and vegetarian households, pulses are a major source of protein, cheaper than fish and meat (National Sample Survey (NSS) 68th round). India is the world's largest producer, consumer and importer of pulses (grain legumes). It accounts for about 33 percent of the global acreage area, 25 percent of total world production, and 27 percent of world consumption of pulses.

² This Act also has special provisions for nutritional support to women and children.

³ Amongst the 32 States and Union Territories implementing the Act at present, only Chandigarh and Pondicherry are implementing the Act in DBT mode.

Pulses: Production and Price Volatility

6. Despite being the world's largest producer of pulses (grain legumes), India has consistently fallen short of meeting its own domestic demand.

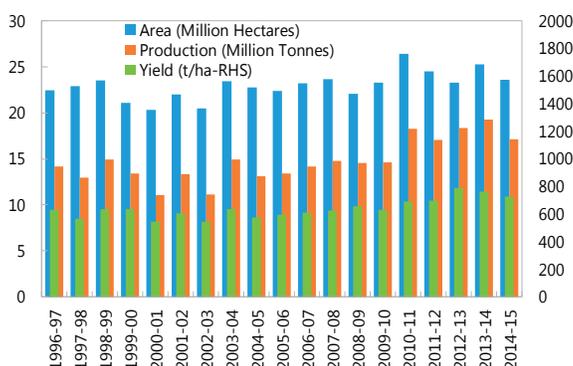
The area under cultivation of pulses has not increased much and yields have remained stagnant for a long time. This is because of the large risk and uncertainty in production and prices (pulses are typically grown in rain-fed areas⁴ with high incidence of pests), which has led farmers to move away from pulse cultivation to other crops with better return and lower risk (such as rice, wheat and cash crops). The excess demand for pulses is estimated at about 3–5 million tons per year, and while imports help fill this excess demand, they come at a cost as the global supply of pulses is limited compared with India's needs, which then pushes up world prices (see Joshi et al, 2016). Moreover, demand for pulses are expected to keep growing, due to changing food demand patterns with rising incomes (see Gokarn, 2011).

7. Rising prices of pulses have been one of the key drivers of food—and overall—inflation in recent years, also leading to a nutrient poor diet.

Short-term government interventions to keep prices low, and thereby benefit consumers, end up hurting them in the long run as production and availability of pulses remain unaddressed. Large hikes in the Minimum Support Prices (MSP) for rice and wheat, combined with the government's massive cereal stockpiling, have resulted in a shortfall in the production of pulses and high food inflation. In addition, hikes in the MSP for pulses have not been effective in stimulating pulses production due to technological and market constraints, and a failure to back up price support policies with sufficient and effective procurement. Bans on exports and forward markets, and stock limits have undermined price discovery, thus also de-incentivizing farmers.

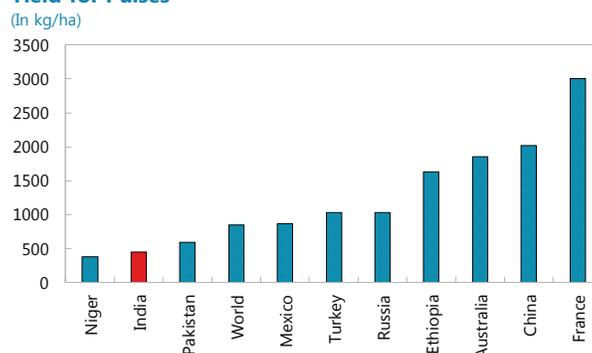
⁴ Less than 15 percent of the area under pulses has assured irrigation (DES, Ministry of Agriculture).

Trend in Area, Yield, and Production of Pulses



Source: Directorate of Economics and Statistics, Ministry of Agriculture, Government of India.

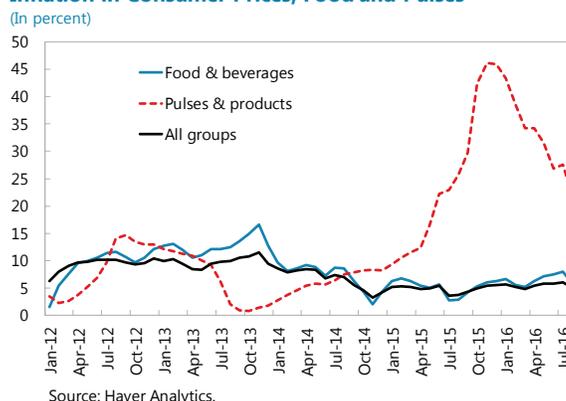
Yield for Pulses



Source: FAOSTAT (2014).

Note: As an aggregate category, pulses includes the following crops: Dry Beans, Broad beans, Chick peas, Cow peas, Lentils, Pigeon peas, Bambara beans, Lupins, Dry Peas, Pulses, Nes, and Vetches.

Inflation in Consumer Prices, Food and Pulses



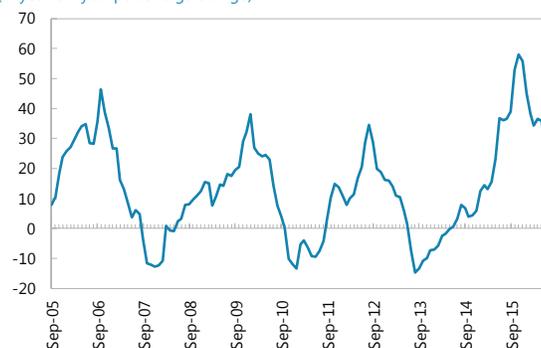
Source: Haver Analytics.

Policy Priorities: Way Forward

8. A national strategy on agriculture and pulses should be undertaken involving both the Union and state governments. Close to 90 percent of public investment in agriculture is at the state level. Hence, for any government measures to be effective, coordination at the national and state level is essential. In addition, pulses production is highly concentrated in a few states, where five states—Maharashtra, Rajasthan, Karnataka, Madhya Pradesh, Andhra Pradesh—typically account for more than 70 percent of Indian production. Investment in logistics, marketing infrastructure, and roads can help create efficient supply chains linking the farmer to the consumer across states. The Prime Minister launched a common electronic trading platform for National Agriculture Market (e-NAM)⁵ in April 2016, which aims to integrate 585 wholesale markets across India.⁶ This is expected to improve competitiveness in marketing through larger participation of buyers and yield a more transparent system of bidding. To reduce weather-dependent production risks, providing affordable and wide coverage of insurance and provision of irrigation will help make supply more responsive to increase in prices. The assured irrigation initiative under the *Pradhan Mantri Krishi Sinchayee Yojana* (PMKSY)⁷ program launched in July, 2015 and the crop insurance scheme, *Pradhan Mantri Fasal Bima Yojana* (PMFBY), launched in February, 2016 should target pulse-producing areas. Ultimately, public policies should ensure market-driven diversification in agriculture and reduce the dependence of farmers on the current system of MSP and public procurement.

Volatility in Prices of Pulses (WPI)

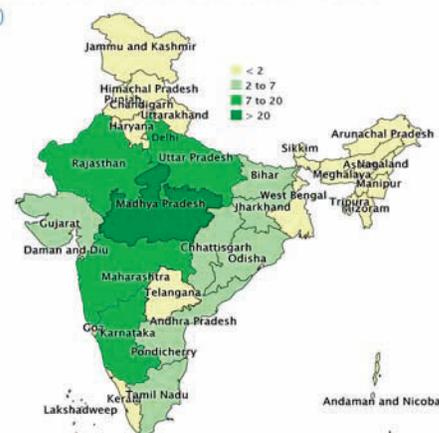
(In year-on-year percentage change)



Source: Haver Analytics.

States' Share in Pulses Production - 2011

(In percent)



Source: Ministry of Agriculture, Government of India.

9. Moreover, complementing food policies with improvements in sanitation and reforms to agricultural policies is important for enabling a balanced diet and for disease control. A multi-sectoral approach aimed at better sanitation, health and gender equality, along with addressing inherent long-term structural bottlenecks and improving productivity within the agricultural sector, is needed for India to achieve its Sustainable Development Goal of ending all forms of malnutrition by 2030, including achieving by 2025 the internationally-agreed targets on stunting and wasting in children under five years of age.

⁵ See <http://www.enam.gov.in/NAM/home/index.html>

⁶ Karnataka government launched a unified online agricultural market in 2014. A total of 105 markets spread across 27 districts have been brought under the Unified Market Platform (UMP) as of March 2016.

⁷ See Ministry of Agriculture and Farmers website at: <http://pmksy.gov.in/>

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