

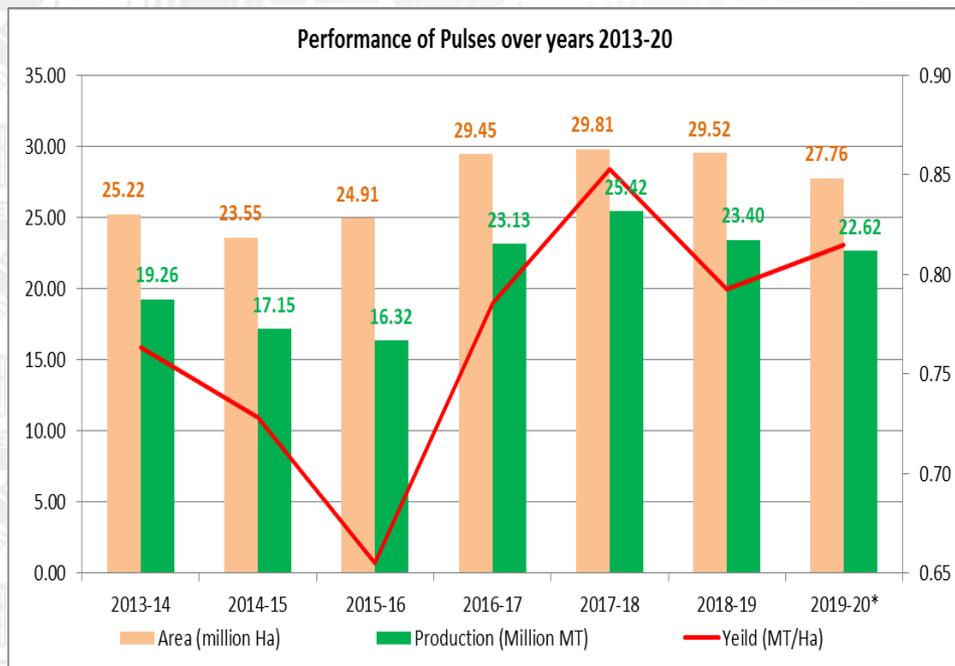
Indian Pulses Gearing up to Walk The Last Mile

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Agenda for Presentation

- Uncertainty in production cycle - yield gap analysis
- Need for long term policies initiatives & support (pre & post-harvest)
- Inadequate warehousing facilities & collateral finance
- Supply Chain (SWOT Analysis)

Uncertainty in Production Cycle - Yield Gap Analysis



- With the advent of Green Revolution, which promoted rice and wheat using external inputs and modern varieties of seeds, pulses were pushed to marginal lands resulting in significant decline in productivity.
- The pulses are still cultivated on marginal and sub marginal land, predominantly under un-irrigated conditions.
- The area under pulses has increased from 25.22 million hectares in 2013-14 to 27.76 million hectares in 2019-20 ~ 10% rise.
- If one could manage to bridge **Yield Gap (in line with Front Line Technology Demonstrations)**, our pulses scenario would have been quite different and we would have easily attained self-sufficiency in pulses by producing over 32 million MT in the year 2020.

Yield Gap Analysis

| Pulses | Field Level Demonstration | 2019-20* | % Yield Gap over 2019-20 |
|------------|---------------------------|----------|--------------------------|
| Pigeon Pea | 1394.00 | 701.50 | 49.68 |
| Black Gram | 813.00 | 538.11 | 33.81 |
| Green Gram | 781.00 | 428.83 | 45.09 |
| Chickpea | 1502.00 | 1032.99 | 31.23 |
| Lentil | 1289.00 | 795.32 | 38.30 |

Source: Indian Institute of Pulses Research & *NBHC Estimates

- Absence of high yielding varieties which could be pests and diseases resistant
- Low level of mechanisation in entire farming practice
- Ineffective government procurement operations
- Unfavorable prices and trade liberalization
- Sensible agronomic practices such as wet and dry system of irrigation
- Effective farm mechanisation – harvesters, threshers
- Use of Information and Communication Technology (ICT)
- Judicious public and private investment in building rural agricultural infrastructure
- Rejuvenation of the government extension agencies
- Lack of a supporting mechanism for the procurement and assured marketing of pulses

Agri-Warehousing & Collateral Finance (2019-20)

Agri Warehousing Capacity in India

| Particulars | Million MT |
|--|--------------|
| Total Foodgrain Production | 284.95 |
| Govt. Procurement (~33%) | 94.03 |
| Minimum Buffer Stock | 21.00 |
| Total Stock in Stored by Govt. | 115.03 |
| Total Storage Capacity with Govt. | 75.08 |
| Overlapping factor for Kharif & Rabi* | 1.23 |
| Balance left for Pvt. Trade/Warehousing | 169.92 |
| Direct Industry Utilization (11%) | 31.34 |
| Retention by Farmers (10%) | 22.80 |
| Stock Left For Private Storage/Trade | 115.78 |
| Current Storage Capacity (Corporate + Private) | 77.68 |
| Total (C & P) Storage Available Annually | 95.55 |
| Potential of Expansion of Warehousing | 20.23 |

* Overlapping Factor arrived on Hypothesis that all stocks are not cleared from warehousing once the season changes from Rabi to Kharif or wise-versa.

* The pulses enjoys about 7.5 per cent of the total organised warehousing space available in the country (~14.10 million MT) against the total production of about 23 million MT.

Potential for Warehouse Receipt Finance

| Sr.No. | Commodity | Loan Amount(Rs. Crore) | % Business Share |
|--------------------|----------------------|-------------------------|------------------|
| 1 | Rice | 36893 | 17.62 |
| 2 | Wheat | 892 | 0.43 |
| 3 | Jowar | 1630 | 0.78 |
| 4 | Bajra | 2628 | 1.25 |
| 5 | Maize | 5725 | 2.73 |
| 6 | Other Coarse Cereals | 986 | 0.47 |
| 7 | Tur | 4149 | 1.98 |
| 8 | Gram | 2455 | 1.17 |
| 9 | Other Pulses | 2807 | 1.34 |
| 10 | Nine oilseeds | 32614 | 15.57 |
| 11 | Tobacco | 775 | 0.37 |
| 12 | Cashew nut | 12649 | 6.04 |
| 13 | Areca Nut | 2429 | 1.16 |
| 14 | Spices | 17282 | 8.25 |
| 15 | Cotton | 14000 | 6.69 |
| 16 | Chemical Fertilizers | 71492 | 34.14 |
| Grand Total | | 209407 | 100.00 |

* Pulses Contributes to about 4.5 % of the Total WHR Funding done in Commodities. Within Pulses, Pigeon pea and Chickpea governs the lion share of 70 %.

Source: Authors Compilation

Strength

- Diverse agri-ecological situations
- Strong research network
- Strong first line extension system
- Strong public sector network for seed
- Production Expansion
- Strong HRD Facilities

Opportunities

- Biotechnological options for genetically enhanced germplasm
- Huge exploitable yield reservoir
- Exploiting niche areas of pulses cultivation
- Value addition to pulses and products
- Scope for improving efficiency of pulses processing
- Extension of retail boom to pulses

Weakness

- Dependence on vagaries of monsoon
- Lack of adequate seed multiplication
- Lower seed replacement ratio
- Production under energy starved conditions
- Vulnerability to pest and diseases
- Gap in resistance breeding
- Weak infrastructure
- Lack of regulatory and trade policy support

Threats

- MSP support for competing crops
- Continuous cropping
- Aberrant weather
- Alarming demand for pulses
- Lack of linkage to assured market

- Public private partnership in varietal developments
- Developing self-reliant seed supply mechanism
- Efficient input and MSP support for pulses
- Delineation and development efficient pulses production zones
- Developing and promoting of situation specific IPM and INM packages
- Promotion of contract farming
- Exploitation of niche areas for pulses expansion
- Value addition to Pulses and products
- Gap-specific extension strategies
- Providing effective market linkage
- Favourable policy framework for pulses

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