



Food and Agriculture
Organization of the
United Nations



Pakistan's Investment Case

Investment Forum | Rome, Italy | 16-20 October 2023





Pakistan: Country Overview



Location: Asia
Border India, Iran, Afghanistan, China



Area
79.6 Mil ha
Rank: 33rd



GDP (PPP)
\$ 1.2 Trillion
23rd largest economy



Coastline
1,046 KM
EEZ 200 nm



Labor Force
73 million
Agriculture 38%



GDP Structure
Services: 60%
Agriculture: 22%
Industry: 18%



Population
241.5 M, Rank: 5th
15-64 Years: 60%
Rural: 62%



Household Food Expenditure
50%



Food Industry Market
\$114 Billion



Pakistan's Investment Environment



Overall Investment Regime



- Level playing field:** Equal treatment to local & and foreign investors
- Liberal regime:** All economic sectors open to FDI
- Foreign equity:** 100%
- Profits:** Remittances of royalty, fees, profits
- Banking facility:** Borrowing facilities from local and foreign banks
- Foreign investment protection:** Protection by legislation
- Special Economic and Free Zones**

Economic Revival Plan 2023



- Agriculture**
- Mining**
- Information Tech**
- Energy**

Special Investment Facilitation Council 2023



- Prime Minister Level**
- One Window Solution**



Pakistan's Investment Environment



Agri. Investment Incentives



- Agriculture Income Tax:** Nominal
- Low custom duties:** Food Processing (Livestock, Horticulture, Seafood, Poultry)
- Zero customs duty:** Fruit processing for certain areas
- Sales tax exemption:** Livestock, meat
- Withholding tax exemption:** Certain food items
- Concessionary Agriculture credit facility:** USD 10 Billion annually
- Land and water tax:** Nominal

Agri. Investment Package



- Government permission:** Not required except for specific license
- Remittance of capital, profits, and dividends:** Allowed
- Customs duty on import of PME:** 0%
- Tax relief (% of PME cost):** 25%
- Royalty & Technical Fee:** Allowed Initial lump-sum up to \$100,000 - Max Rate 5% of net sales - Initial period 5 years



Fundamentals of Agriculture

Significance

- Provide raw material to industry, Contribution to economy: 22%
- Provision of food: 95%

Endowments

- Arable land: 22 million ha, Over 80% irrigated by one of the biggest irrigation system of the World
- Climate: 12 Agro-ecological zones, 4 Seasons, **50+ Food commodities**

Enabling environment

- Well spread power and communication network-transport and cellular
- Cheap and skilled labor and HR (3300 agriculture graduates, 25,000 Engineers per year)

High food consumption

- Population 241.5 million and increasing middle class

Big export potential

- 70% Agri. exports, high regional demands and export relations with big food importing countries

Established food value chains and value chain actors

- Crops, livestock and fisheries value chains,
- National and multinational companies in food business

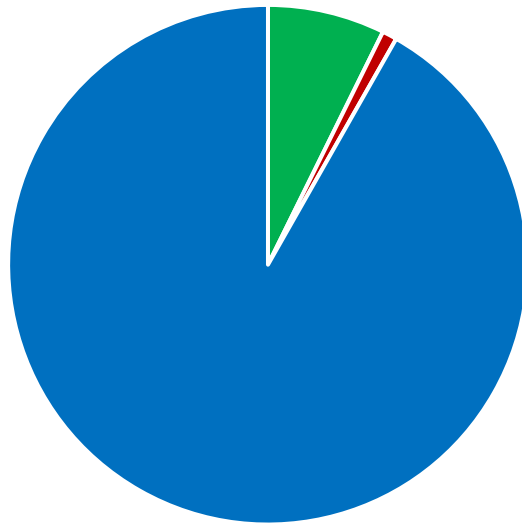


Public Sector Investment in Agriculture



(infrastructure, research, extension, value chain etc.)

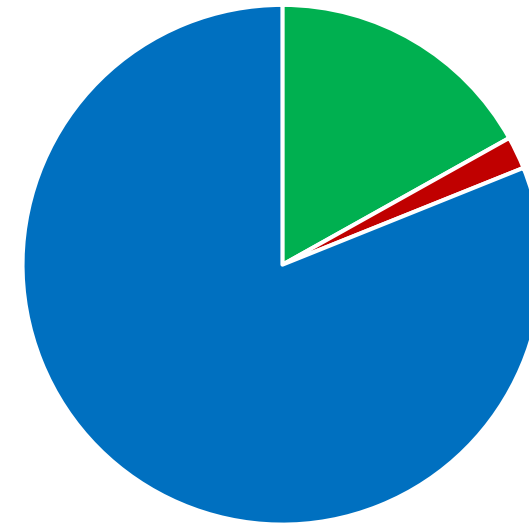
Total Investment Size
(Ten Years)



■ Crop ■ Livestock ■ Irrigation

USD 24 Billion

Delivery Estimates
(2023-2024)



■ Crop ■ Livestock ■ Irrigation

USD 1.5 Billion



HHI Approach in Pakistan: Complementarity



Rationale for Selection



High Export Potential
and Market
Diversification



Scope for
Productivity
Enhancement



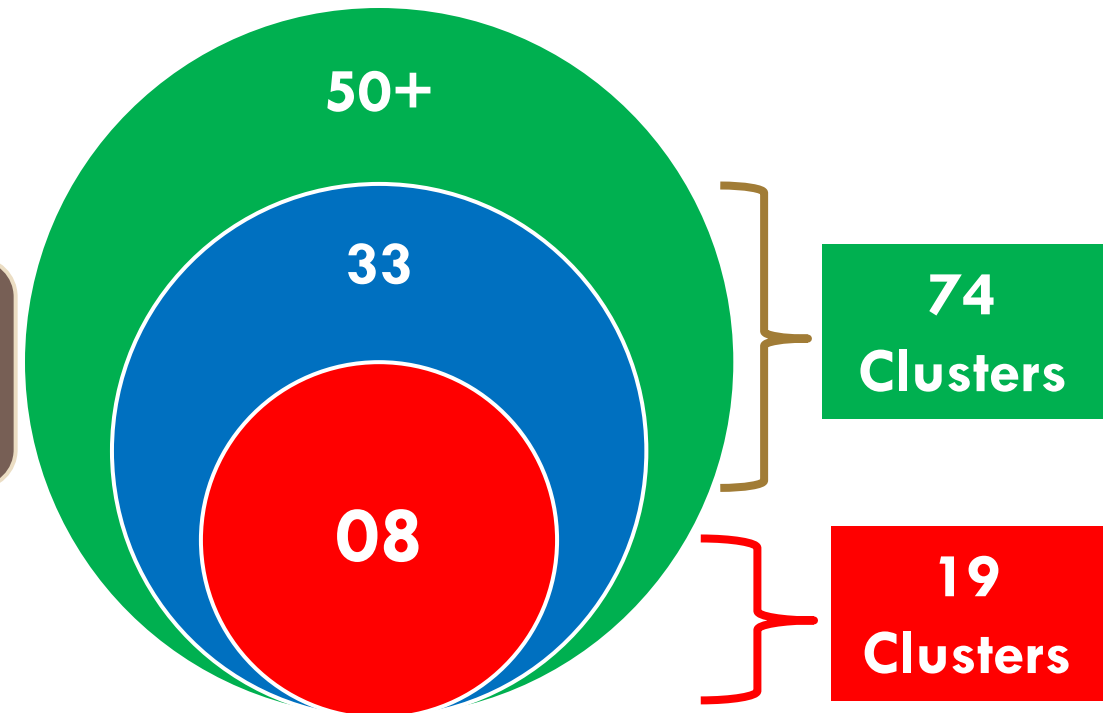
Scope for Value
Addition and Quality
Enhancement



High Rate of Return

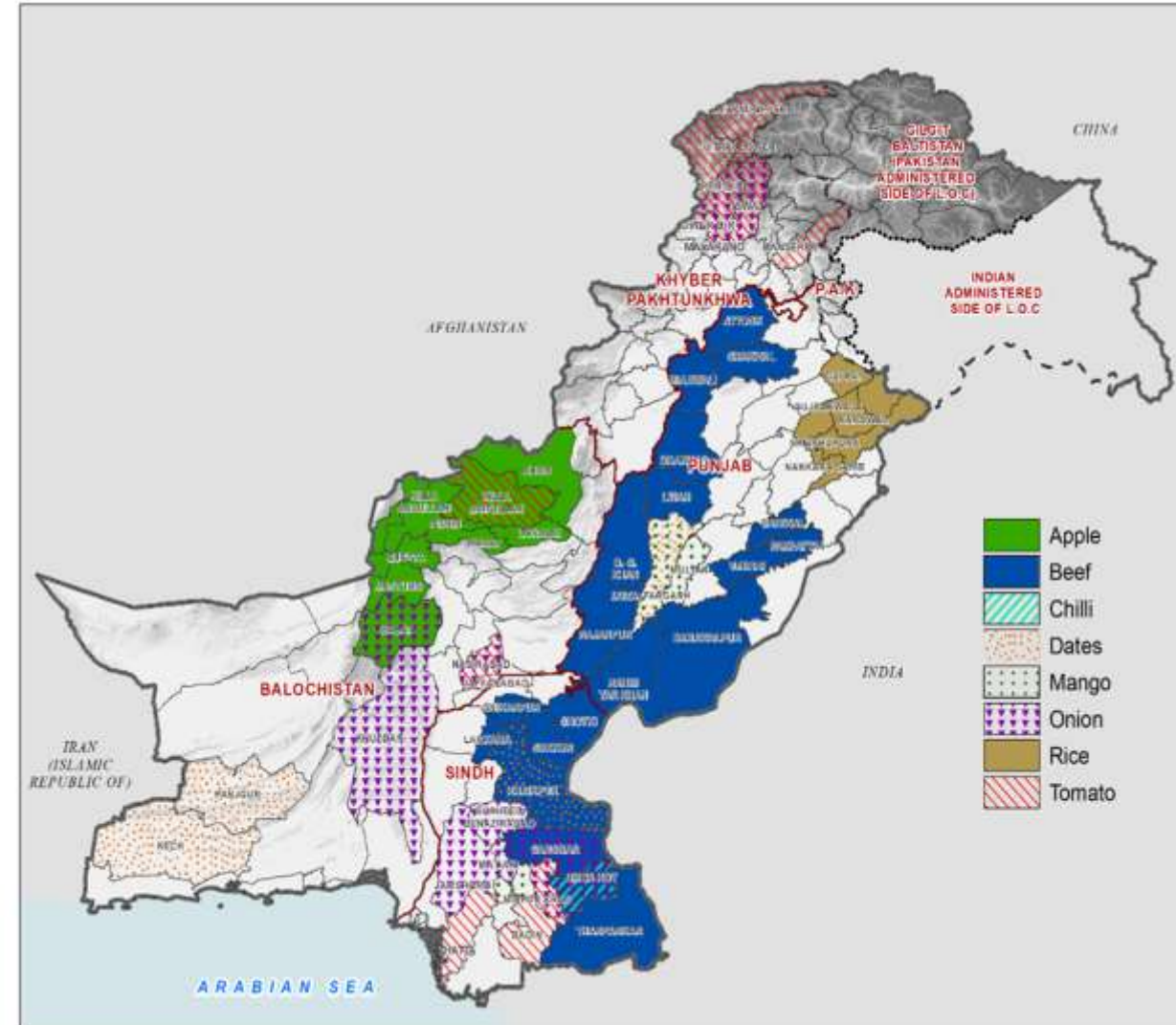
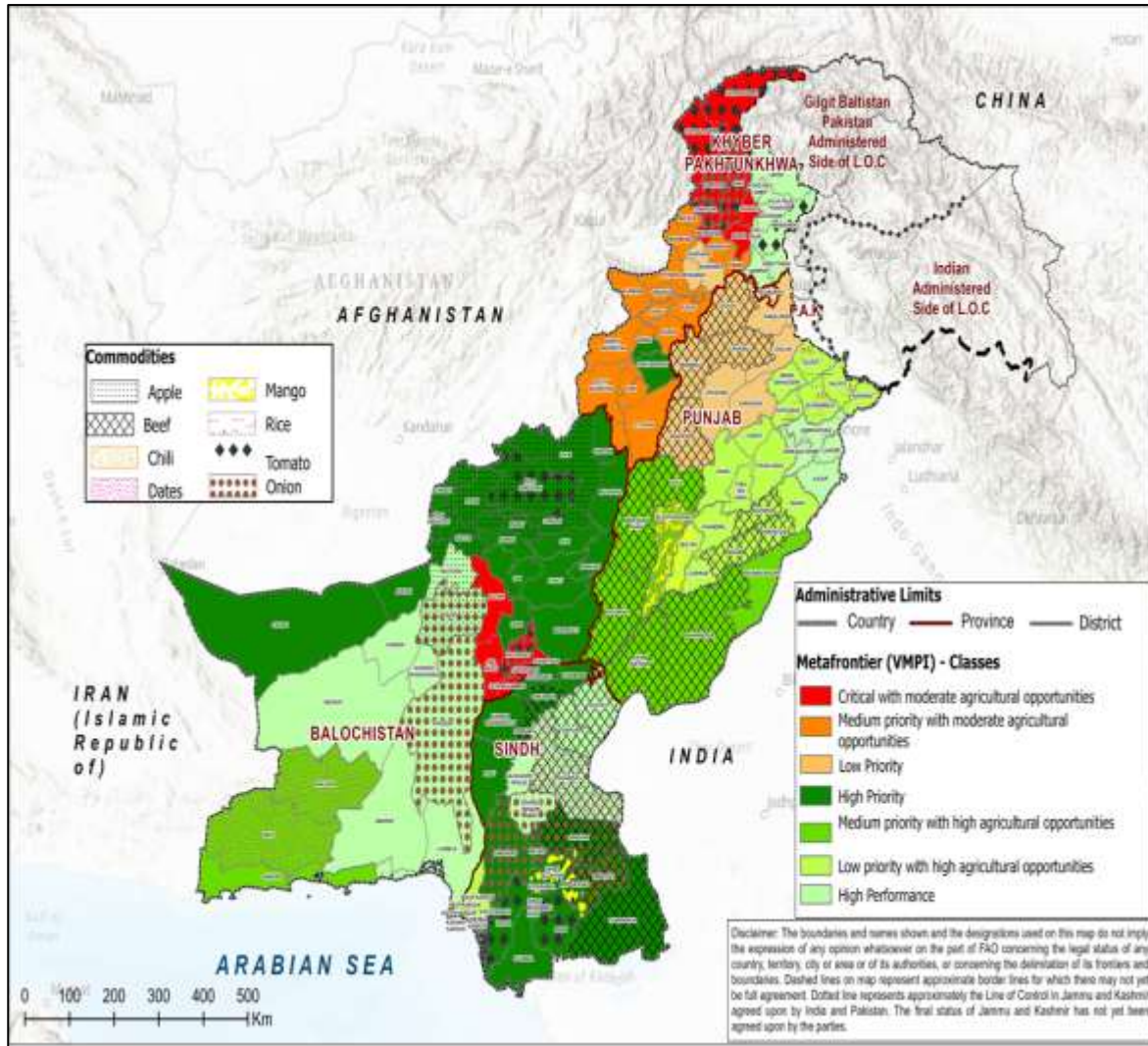
Cluster based Agriculture Development

Desk Study, Field Work,
Stakeholder Consultations
and Validation



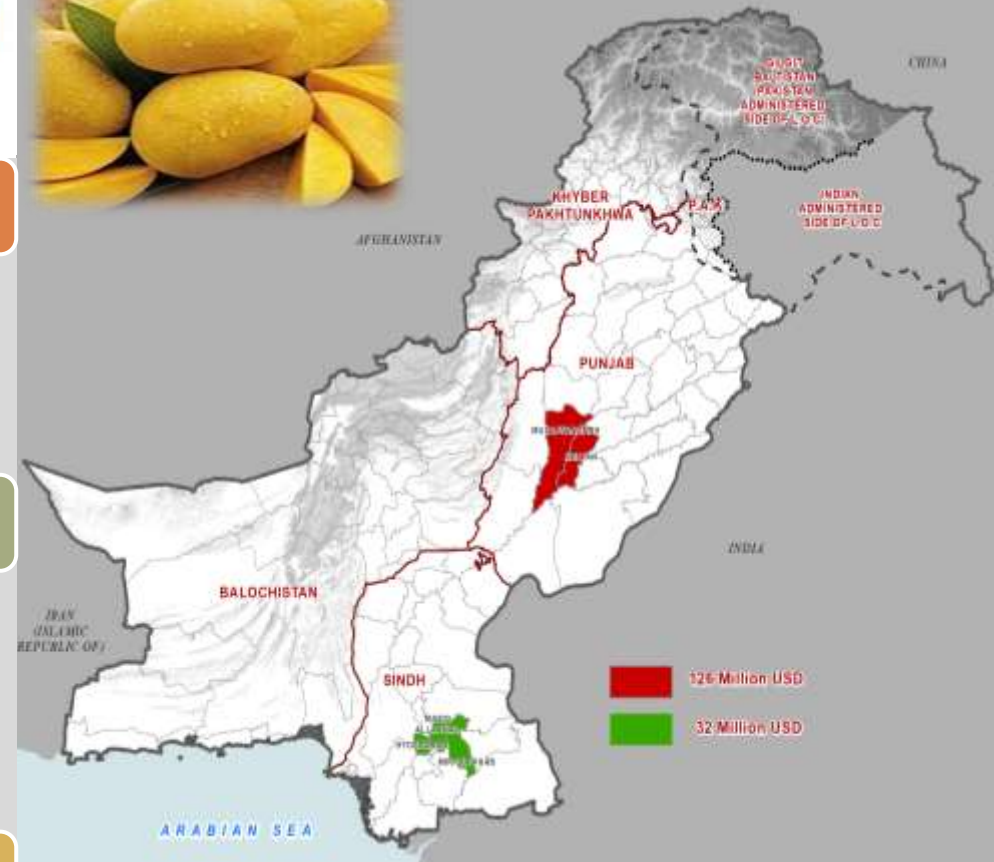


Agricultural Typologies and Investment Potential Identified Under HIHI





Mango Clusters



Situation in Pakistan

- **Production:** 1.7 million tons, World ranking 5
- **Yield:** 10.5 tons/ha (1.10 times higher than the world average)
- **Export:** 107K tons, \$ 101 million, World share 4.4%
- **Export price:** \$ 947/ton, (1.5 times lower than the world average)

Investment Potential: \$ 158M (Govt 10%, Private 90%)

- Research and establishment of certified nurseries: 4.4
- Capacity building: 11.5
- Marketing: 2.5
- Orchard Management: 58.4
- Processing (25 units): 81.3

Assumptions

- Certified orchards establishment: 50%
- Yield increase from certified orchards: 50%
- Yield increase due to improved management: 15%
- Reduction in post-harvest losses: 20%

Feasibility and Benefits

- Investment: \$ 158 million, NPV: \$ 170 million, IRR: 25%
- Area: 77,334 ha, Beneficiaries: Direct 38,000, Indirect 266,000 Nos
- Increase in Income: Farm \$ 2100/ha, Beneficiary: \$4200

Funding/Financing Sources

- PSDP + Development Partners, Private Investment + Financial Institutions



Date Clusters



Situation in Pakistan

- **Production:** 550K tons, World ranking 6
- **Yield:** 6 tons/ha (1.3 times lower than the world average)
- **Export:** 116K tons, \$ 60 million, World share 4.5 %
- **Export Price:** \$520/ton (2.5 times lower than the world average)

Investment Potential: \$ 157M (Govt 20%, Private 80%)

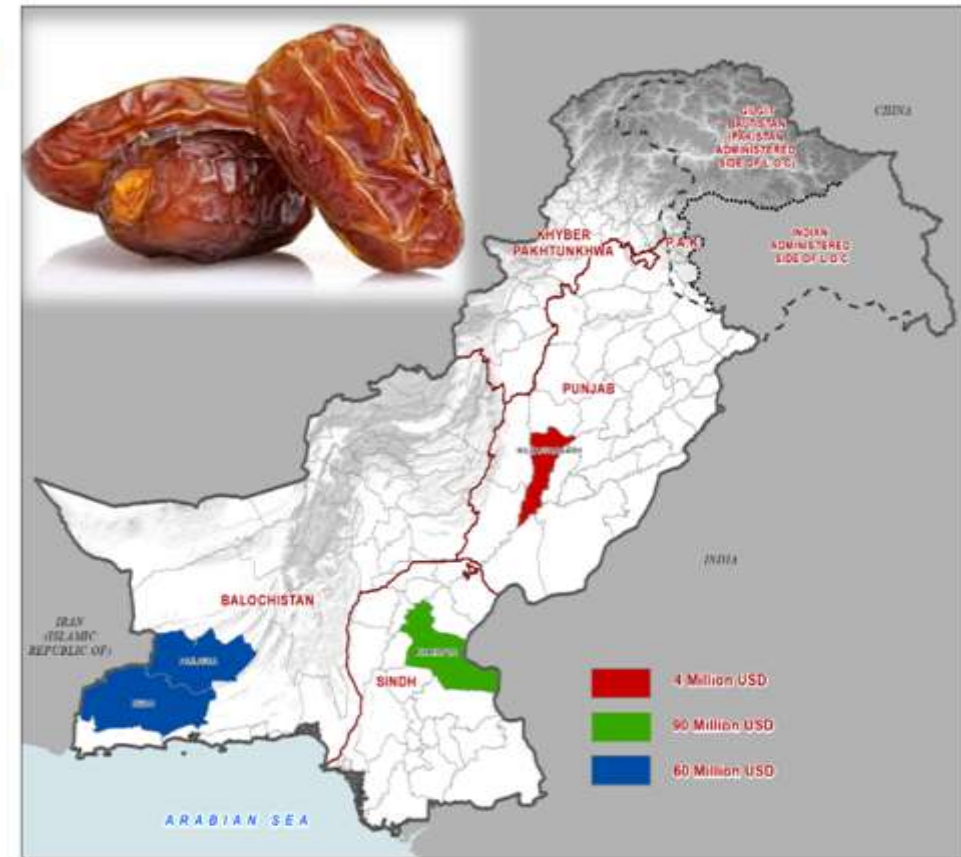
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| • Varieties and High-density plantation: | 32.4 |
| • Export Promotion: | 0.1 |
| • Better management practices: | 5.8 |
| • Harvest and post-harvest Losses: | 57.8 |
| • Solar drying: | 42.1 |
| • Improvement in Value Chain: | 19.0 |

Assumptions

- | | |
|---|-----|
| • Orchard area renovation: | 20% |
| • Increase in yield by farm management: | 20% |
| • Decrease in post-harvest losses: | 10% |
| • Increase in dry dates by processing: | 15% |
| • Increase in export quantity of dates: | 25% |

Feasibility and Benefits

- Investment: \$ 157 million, NPV \$ 41 million, IRR 25%
- Area: 80,982 ha, Beneficiaries: Direct 40,000 Indirect 280,000 Nos
- Increase in Income: Farm \$ 300/ha, Beneficiary: \$600



Funding/Financing Sources

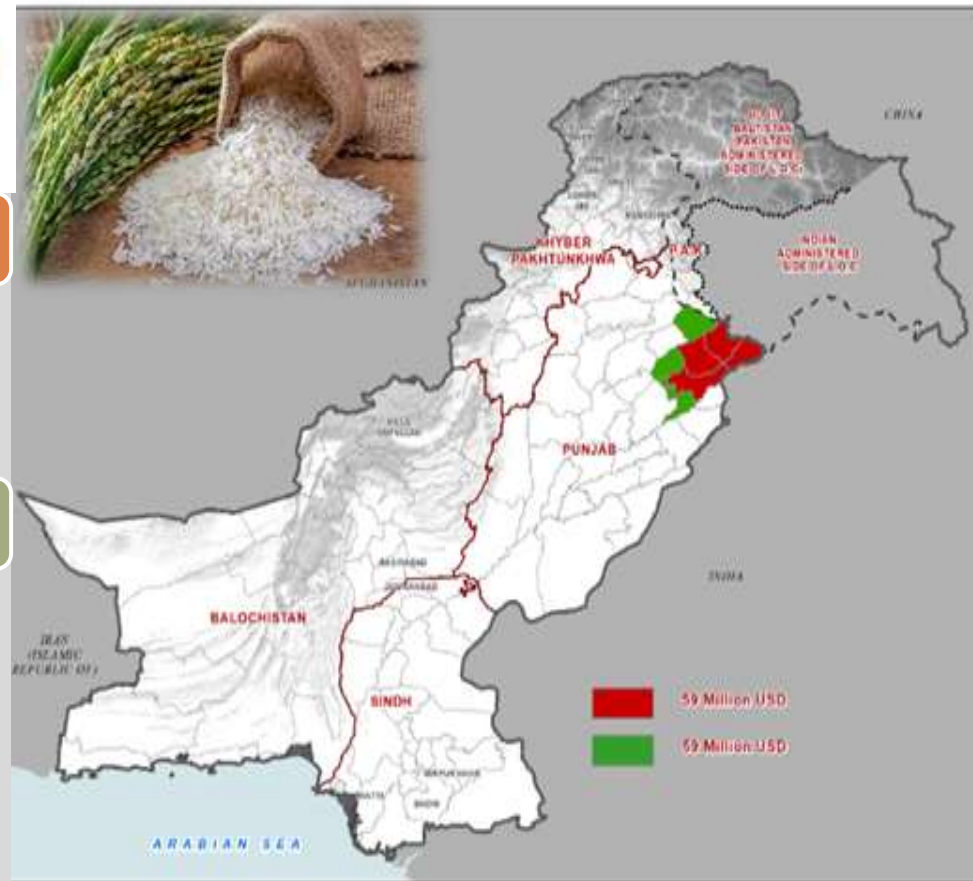
- PSDP + Development Partners, Private Investment + Financial Institutions



Basmati Rice Clusters



Hand-in-Hand Initiative



Situation in Pakistan

- **Production:** 9 million tons, world ranking 9
- **Yield:** 3.8 tons/ha, (1.3 times lower than the world average)
- **Export:** 3.9 million tons, \$ 2.5 billion, world share 8.5%
- **Export price:** \$ 527/ton (course) \$ 900/ton (basmati) same as of the world

Investment Potential: \$ 118M (Govt 10%, Private 90%)

- High-yielding varieties: 2.2
- Production management: 17.2
- Machine transplanting (50% subsidy): 43.6
- Mechanical harvesting: 35.9
- Food safety: MRL and Aflatoxin control: 16.2
- Improvement in parboiled rice making: 1.01
- Oil extraction from rice bran (3 units): 1.2

Assumptions

- Mechanized transplantation: 10%
- Improved variety and management practices: 7%
- Post-harvest-losses reduction: 5%
- Paddy bran to be converted to bran oil from 0 to 80%

Feasibility and Benefits

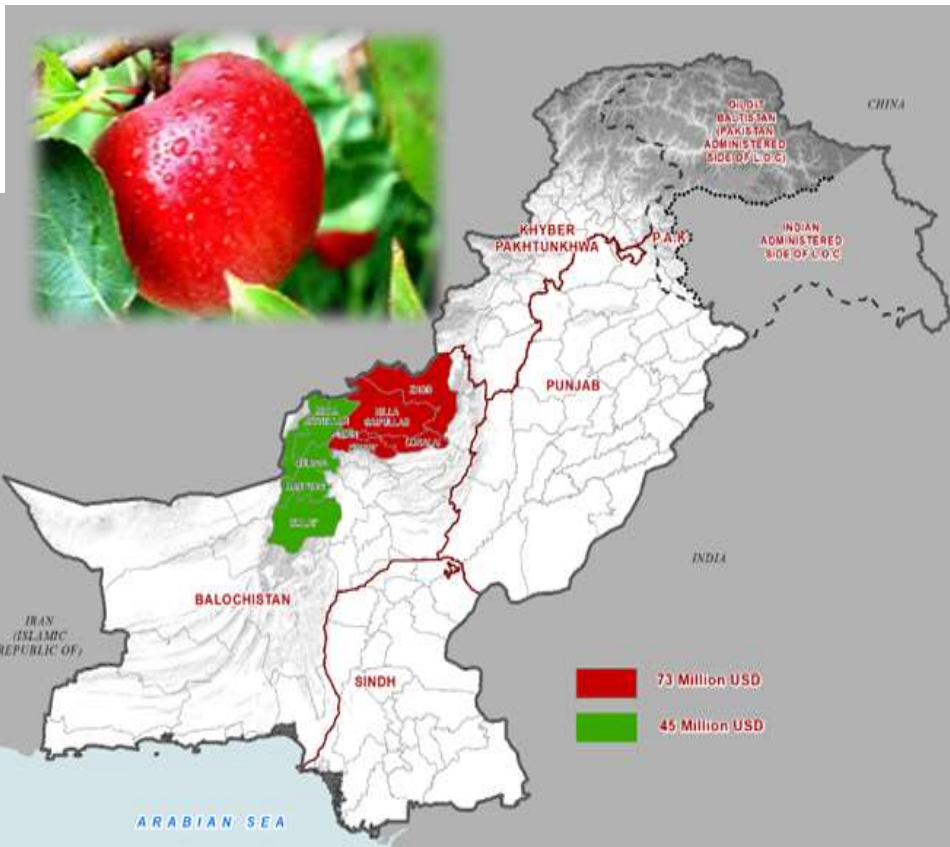
- Investment: \$ 118 million, NPV \$ 12 million, IRR 33%
- Area: 298,259 ha, Beneficiaries: Direct 150,000, Indirect 1,050,000 Nos
- Increase in Income: Farm \$ 300/ha, Beneficiary: \$600

Funding/Financing Sources

- PSDP + Development Partners, Private Investment + Financial Institutions



Apple Clusters



Situation in Pakistan

- **Production:** 77K tons, world ranking 10
- **Yield:** 8 tons/ha (2.4 times lower than the world average)
- **Export:** 528 tons, \$ 0.2 million, world share negligible
- **Export price:** \$ 438/ton (2 times lower than the world average)

Investment Potential: \$ 118M (Govt 10%, Private 90%)

- Orchard renovation with high-density plantation (50% subsidy): 76.9
- Raising productivity by better management practices: 1.7
- Controlling harvest and post-harvest losses: 0.14
- Improvement in value chain to enhance quality: 30.0
- Apple juice units as a cottage industry (42 units): 9.3

Assumptions

- Increasing average yield: 15%
- Renovating apple orchards with high density orchards: 25%
- Reducing post-harvest losses from 30% to: 10%
- Increasing proportion of value addition: 10%

Feasibility and Benefits

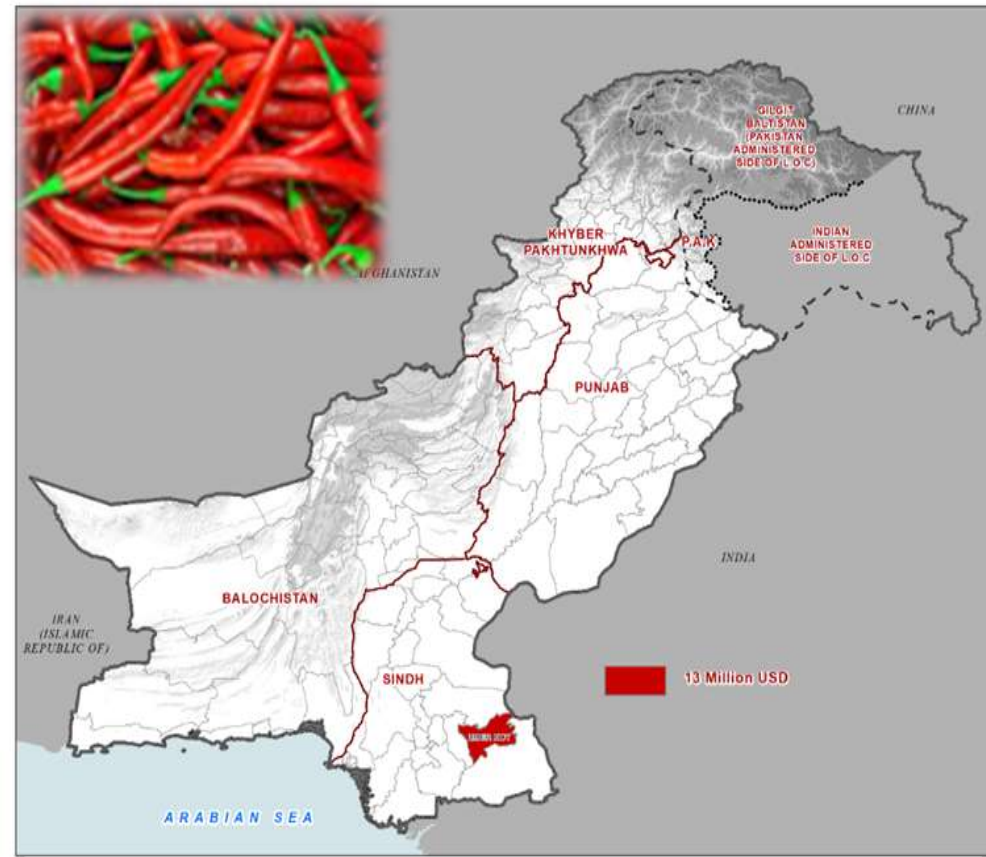
- Investment: \$ 118 million, NPV: \$ 54 million, IRR: 26%
- Area: 67,759 ha, Beneficiaries: Direct 34,000, Indirect 238,000 Nos
- Increase in Income: Farm \$ 350/ha, Beneficiary: \$ 700

Funding/Financing Sources

- PSDP + Development Partners, Private Investment + Financial Institutions,



Chilly Clusters



Situation in Pakistan

- **Production:** 105K tons, World ranking 6
- **Yield:** 2.25 tons/ha (1.2 times lower than the world average)
- **Export:** 2.7K tons, \$ 7.5 million, world share negligible
- **Export price:** \$ 2793/ton, same as of world average

Investment Potential: \$ 13M (Govt 10%, Private 90%)

- Farm management and varieties: 6.3
- Market linkages: 0.3
- Harvesting and post-harvest handling: 2.0
- Value chain infrastructure: 1.0
- Processing/drying (34 units): 3.4

Assumptions

- Increase yield: 25%
- Reduce post-harvest losses: 15%
- Increase processing: 5%
- Increase export: 8%

Feasibility and Benefits

- Investment: \$ 13 million, NPV: \$2.7 million, IRR: 34%
- Area: 15,055 ha, Beneficiaries: Direct 7,500 Indirect 52,000 Nos
- Increase in Income: Farm \$ 900/ha, Beneficiary: \$1800

Funding/Financing Sources

- PSDP + Development Partners, Private Investment + Financial Institutions



Tomato Clusters



Situation in Pakistan

- **Production:** 800K tons, world ranking 33
- **Yield:** 12 tons/ha (3.5 times less than the world average)
- **Export:** 15K tons, \$ 3.7 million, world share: 0.17%
- **Export price:** \$ 248/ton (5 times lower than world average)

Investment Potential: \$ 11.4M (Govt 10%, Private 90%)

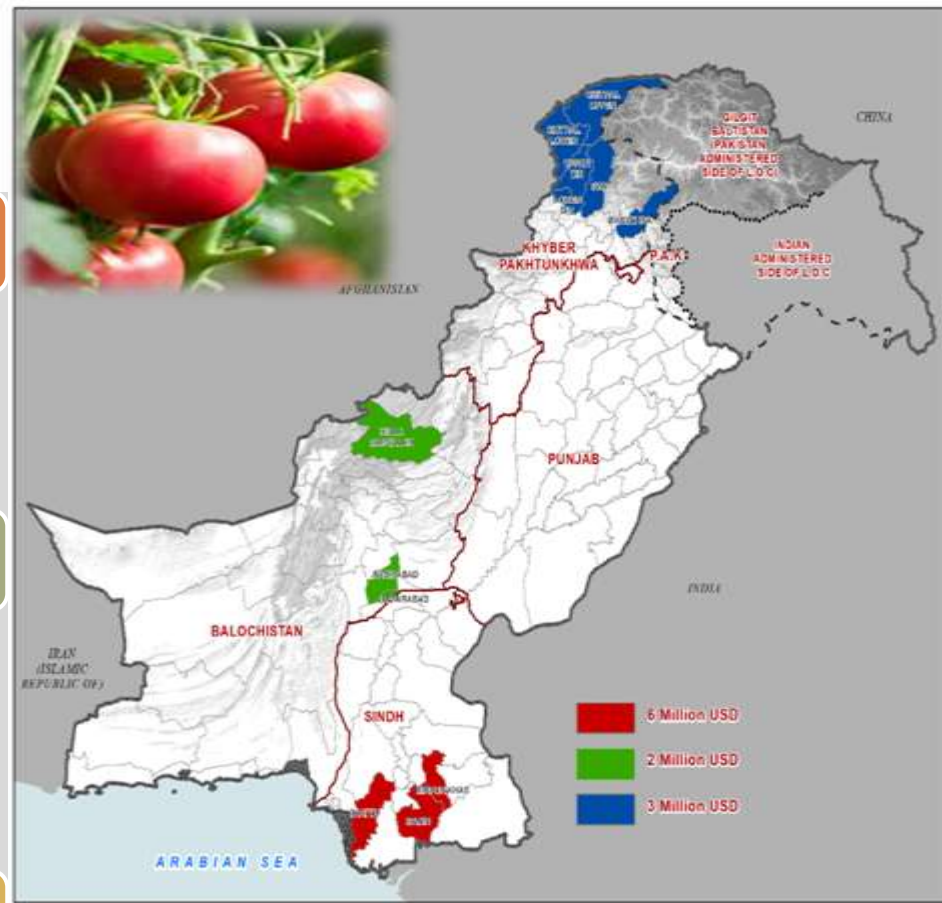
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| • High-yielding varieties and management practices: | 2.1 |
| • Market linkages for export: | 0.9 |
| • Mechanization to reduce post-harvest losses: | 4.3 |
| • Product value addition and quality improvement: | 3.4 |
| • Processing (9 units): | 0.7 |

Assumptions of Analysis

- | | |
|--|-----|
| • Increasing average yield: | 20% |
| • Reducing post-harvest losses: | 20% |
| • Improving quality resulting in price increase: | 10% |
| • Increasing processing: | 10% |

Feasibility and Benefits

- Investment: \$ 11.4 million, NPV: \$ 3.0 million, IRR: 31%
- Area: 21,561 ha, Direct Beneficiaries 11,000 Indirect Beneficiaries: 77,000 Nos.
- Increase in Income: Farm \$ 600/ha, Beneficiary: \$1200



Funding/Financing Sources

- PSDP + Development Partners, Private Investment + Financial Institutions



Onion Clusters



Situation in Pakistan

- **Production:** 2.3 million tons, world ranking 6
- **Yield:** 15 tons/ha (1.3 times lower than the world average)
- **Export:** 304K tons, \$ 124 million (3% of the world)
- **Export price:** \$ 408/ton (Same as of world average)

Investment Potential: \$ 8M (Govt 10%, Private 90%)

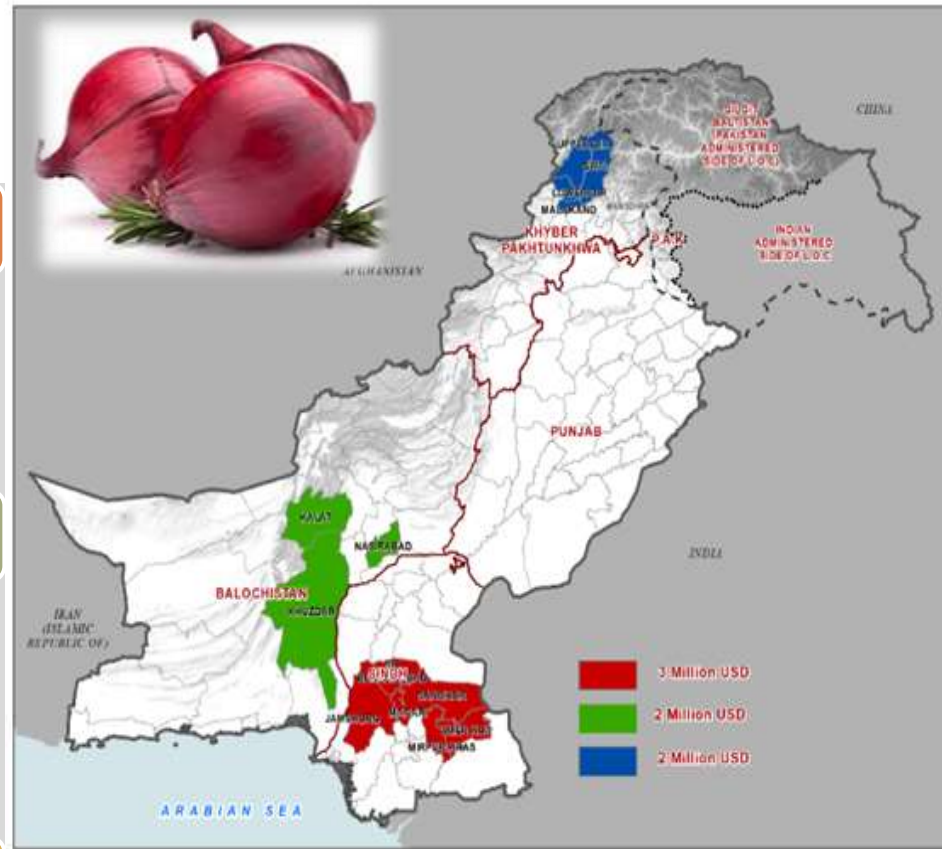
- | | |
|--|------|
| • Research system and farm management: | 3.42 |
| • Export promotion: | 1.01 |
| • Market linkages: | 1.07 |
| • Post-harvest losses: | 0.60 |
| • Processing (127 units): | 2.06 |

Assumptions

- | | |
|--|----------|
| • Increase average yield: | 10% |
| • Reduce post-harvest losses: | 10% |
| • Increase export-production ratio from | 2% to 8% |
| • Processing Conversion of to dry onion: | 5% |
| • Increase in export price: | 10% |

Feasibility and Benefits

- Investment: \$ 8 million, NPV: \$ 1.5 million, IRR: 30%
- Area: 16,366 ha, Beneficiaries: Direct 8,000, Indirect 56,000 Nos
- Increase in Income: Farm \$ 650/ha, Beneficiary: \$1300



Funding/Financing Sources

- PSDP + Development Partners, Private Investment + Financial Institutions



Beef Clusters



Hand-in-Hand Initiative

Situation in Pakistan

- **Production:** 2.3 million tons, world ranking: buffalo 4, cattle 12
- **Export:** 70K tons, \$ 248 million, world share: 0.7%
- **Export price:** \$ 3544/ton (1.5 times lower than the world average)

Investment Potential: \$ 45M (Govt 25%, Private 75%)

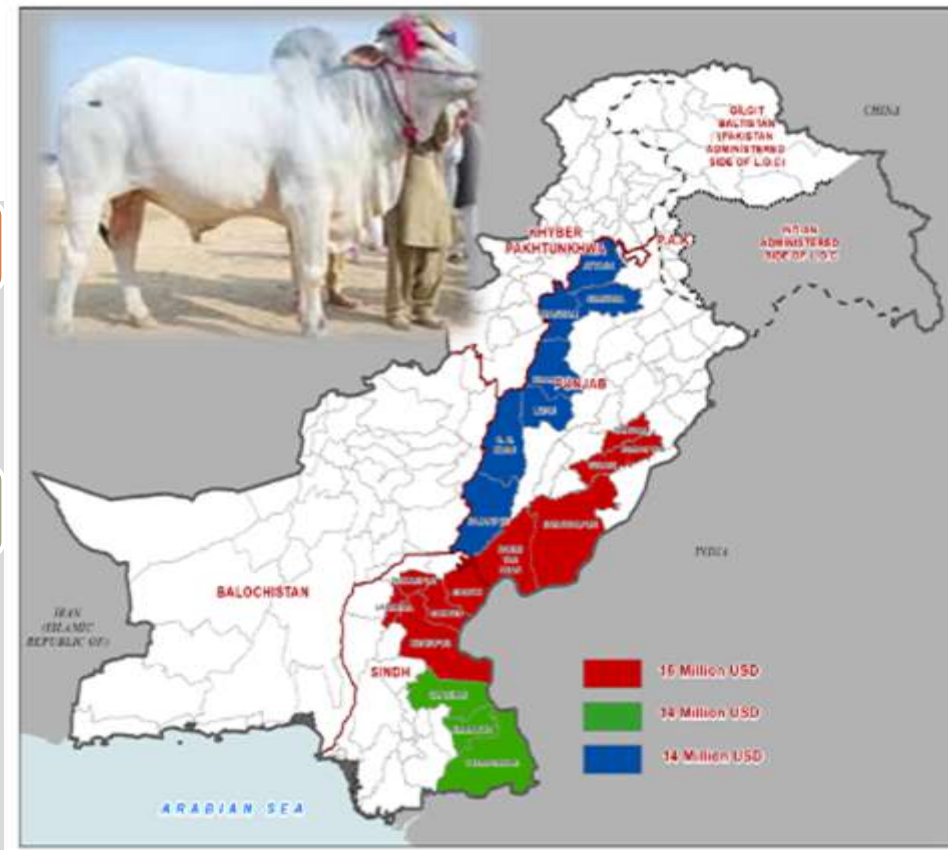
- Research & Development: 9.5
- Capacity building: 11.1
- Establishment of modern cattle markets: 11.4
- Export promotion: 0.2
- Feed lot fattening (333 units): 9.4
- Small feed mills (167 units): 1.1
- Modernization of slaughterhouses (19 units): 2.6

Assumptions

- Reduce average calf mortality from 20% to 10%
- Increase growth rate of animals from 180 to 250 gm/day
- Increase export production ratio from 0.2% to 5%
- Increase beef value addition from 1 to 5%

Feasibility and Benefits

- Investment: \$ 45 M, NPV: 25 million, IRR: 39%
- Animals: 2,328,395, Beneficiaries: Direct 100,000, Indirect 700,000 Nos
- Increase in Income: Farm \$ 112/animal, Beneficiary: \$ 257



Funding/Financing Sources

- PSDP + Development Partners, Private Investment + Financial Institutions



Reducing Environmental Impact



Emissions

- Overall carbon balance is +6,000,469 tCO₂eq over 20 years, meaning that the analysed activities contribute to GHG emissions.
- Electricity consumption due to processing/building operations is a source of emissions (+1.4 million tCO₂eq/20 years).
- New irrigation and building construction (in the Inputs category) contribute to emissions instead (+8.7 thousand tCO₂eq and +609 thousand tCO₂eq over 20 years).



Mitigation

- Interventions aimed at improving livestock productivity lead to a reduction in emissions (-3.9 million tCO₂eq/20 years).
- Reduction in fertilizers and pesticide application (in the Inputs category) also contributes to emission reduction (-3 million tCO₂eq/20 years).
- Energy audit to reduce energy leakages
- Installation of solar units on processing facilities, farm production/tube wells, etc. (**ample sunshine**)



HHI-Agriculture Investment Symposium, February 28, 2023, Islamabad



- Organizers: FAO, ADB, IFC, Government of Pakistan/Board of Investment
- Organizations/Companies: 150
- Participation: 350 (Public, Private, Academia, Development Partners)
- Technology Display Booths: 43 Public and Private Companies
- B2B and B2G Meetings: 20 (4 B2B and 5 B2G Expression of interests signed)



Investment Potential and Economic Benefits-**Summary**



Investment

\$ 628 M (Govt. 85, Private 543)

NPV

\$ 309 M

IRR

30%

Direct Ben.

0.39 M

Indirect Ben.

2.7 M

Income Inc

\$1300/Ben

Tomato

- Investment: \$ 11.5 M
- NPV: \$ 3.0 M
- IRR: 31%
- Direct Beneficiaries: 11,000 No
- Indirect Beneficiaries: 77,000 No

Beef

- Investment: \$ 45 M
- NPV: \$ 25 M
- IRR: 39%
- Direct Beneficiaries: 100,000 No
- Indirect Beneficiaries: 700,000 No

Chili

- Investment: \$ 13 M
- NPV: \$ 2.7 M
- IRR: 34%
- Direct Beneficiaries: 7,500 No
- Indirect Beneficiaries: 52,000 No

Dates

- Investment: \$ 157 M
- NPV: \$ 41 M
- IRR: 25%
- Direct Beneficiaries: 40,000 No
- Indirect Beneficiaries: 280,000 No

Mango

- Investment: \$ 158 M
- NPV: \$ 170 M
- IRR: 25%
- Direct Beneficiaries: 38,000 No
- Indirect Beneficiaries: 266,000 No

Onion

- Investment: \$ 8 M
- NPV: \$ 1.5 M
- IRR: 30%
- Direct Beneficiaries: 8,000 No
- Indirect Beneficiaries: 56,000 No

Basmati Rice

- Investment: \$ 118 M
- NPV: \$ 12 M
- IRR: 33%
- Direct Beneficiaries: 150,000 No
- Indirect Beneficiaries: 1,050,000 No

Apple

- Investment: \$ 118 M
- NPV: \$ 54 M
- IRR: 26%
- Direct Beneficiaries: 34,000 No
- Indirect Beneficiaries: 238,000 No