# Agriculture in Pakistan
# Opportunities and Challenges

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Pakistan Agricultural Coalition

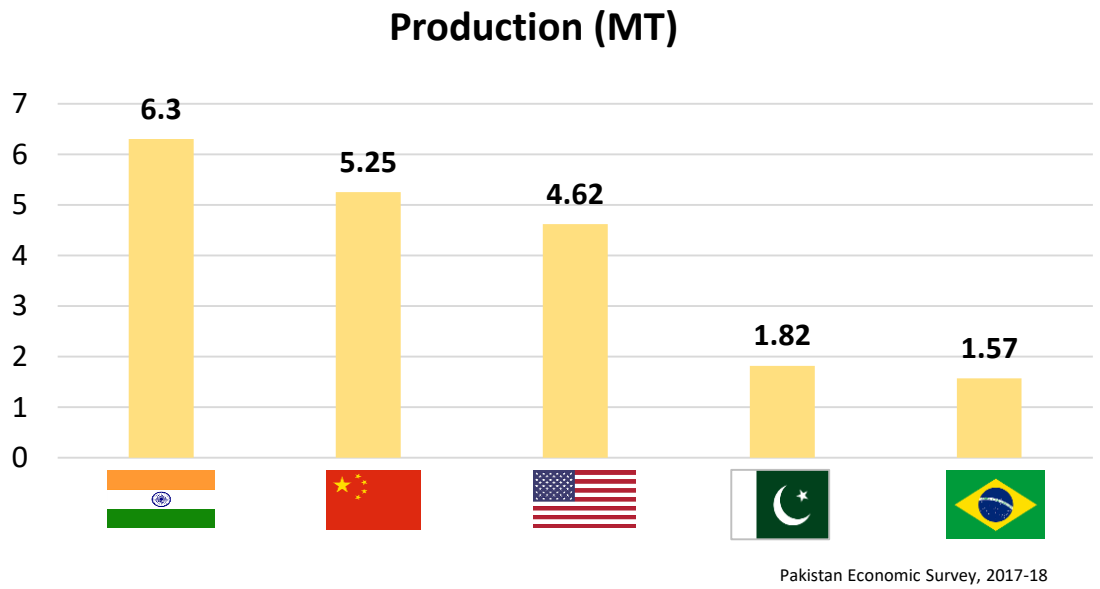
# Pakistan's Potential in Crop Sector

- Cotton
- Rice
- Oilseeds
- Storage

# Cotton

# Pakistan's cotton landscape

- Cotton is Pakistan's 2nd largest crop planted on 6.66 million acres
- Pakistan is the 4th largest cotton producer in the world
- Pakistan is 3rd largest cotton consumer in the world

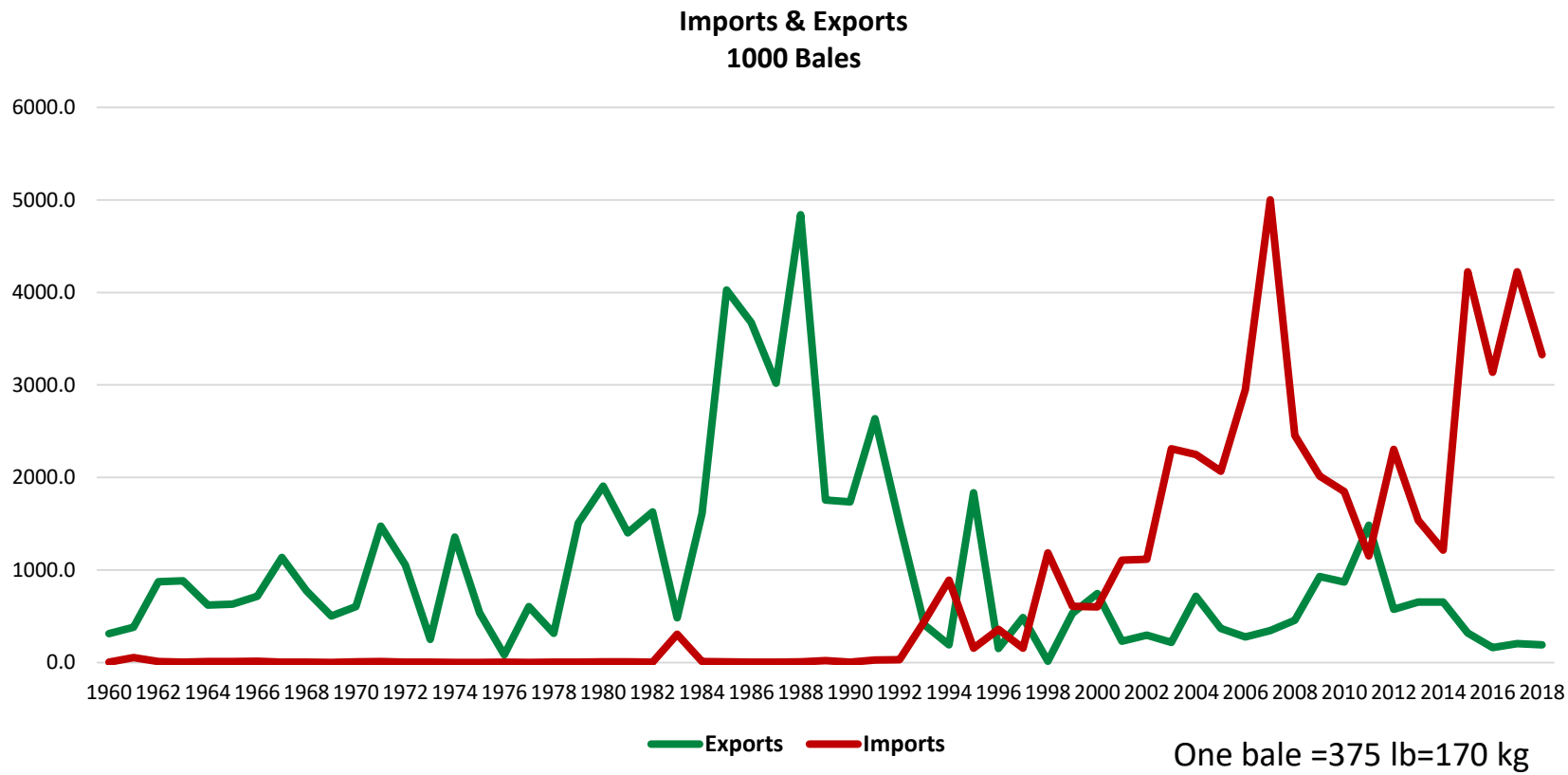



Pakistan Economic Survey, 2017-18

- It is the main source of cash earning for the farming community
- Cotton picking is the single largest source of employment for poor rural women
- Provides livelihood to nearly **1.7 million** farm families

# Cotton sector decline

- Pakistan was a major cotton exporter up to 1995
- Now is a net importer of raw cotton **(exports 0.21 m bales & imports up to 3.5 m bales)**




One bale =375 lb=170 kg

Source: www.indexmundi.com

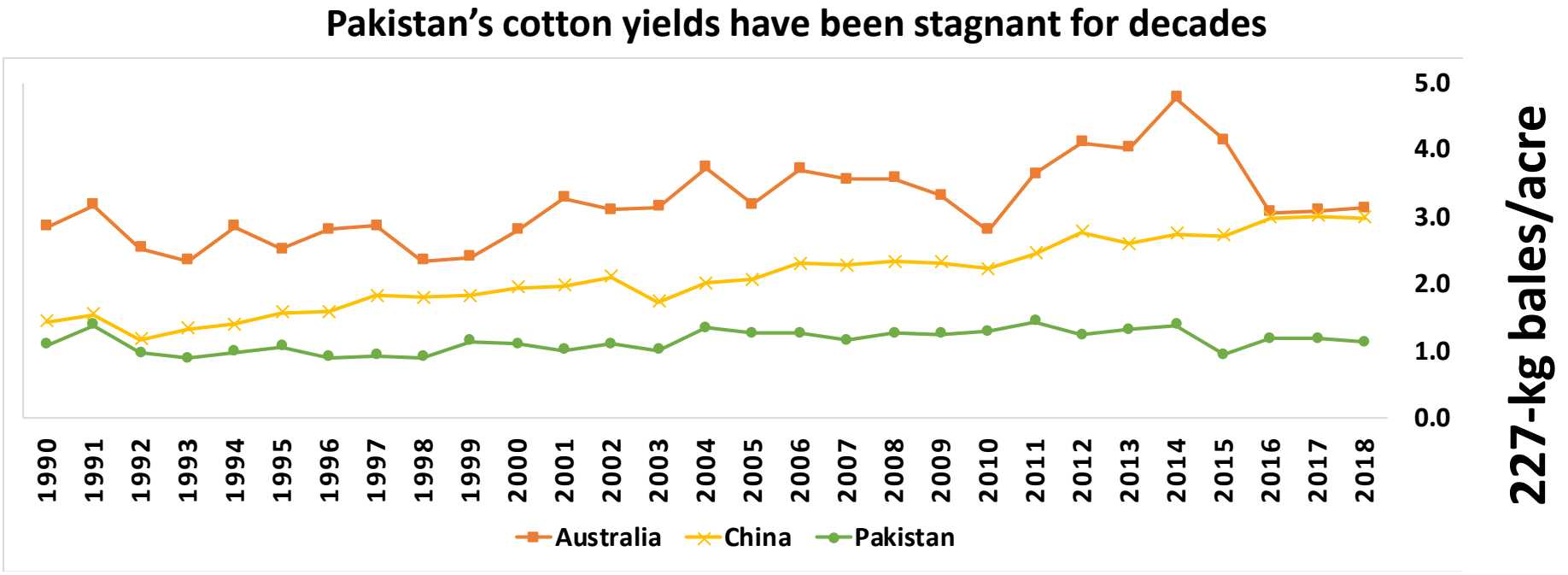
# All three pillars of agricultural development are weak for cotton crop

| Technology | Yield Loss |
| --- | --- |
| • Inadequate seed provision system | ~2-3 million bales |
| • Ineffective insect and pest control | ~1-2 million bales |
| • Poor weed management | ~2 million bales |

| Water Productivity | |
| --- | --- |
| • Inappropriate irrigation technologies<br>• Inequitable and unreliable surface supplies<br>• Lack of farm level drainage facilities | ~2 million bales |

| Agronomy Support |
| --- |
| • Obsolete production technology |
| • Inadequate agriculture advisory support |

# SANIFA: Developing quality seed to raise cotton yields




**Issues behind low cotton productivity**

- Critical input required by farmer: SEED!
- 88% unbranded seed, informal market: farmers ripped off (germination: 44%)
- Not just quantity but also quality issues

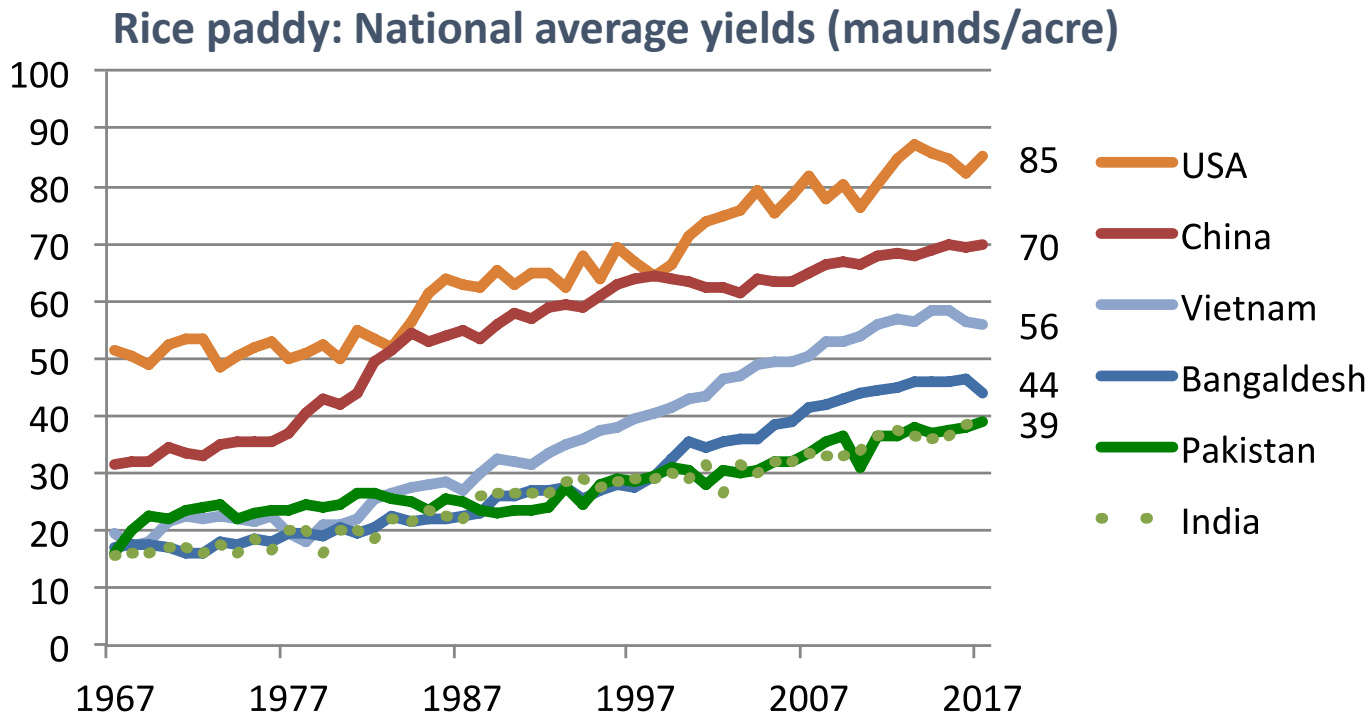
→ Average cotton imports: 2 million bales annually

**Solution: SANIFA**

- A world-class cotton seed company by Sapphire, Nishat and Fatima
- Engaged international cotton breeders Dr. Don Keim and Dr. Albert Santos and leading Entomologist Dr. Neil Forrester
- **Result: 90% seed germination, ~100% purity, 2 bales/acre average yields**

# Rice

# Pakistan's low rice yields and high post-harvest losses present an opportunity




**Yields observed within Pakistan (maunds/acre)**

**Basmati**

Super Basmati: 30

**Non-Basmati**

IRRI-6, IRRI-9: 45

Hybrid: 60

**Post-harvest losses:** about 20% of farm output

Sources: FAO, Market sources

# Rapid program development: PAC & REAP

Dec 2018

First meeting with REAP

Agreements: among partners, with service providers, and with farmers

Follow-up meetings to design program and interventions

Creation of business model for mechanized rice cultivation services

Presentation of proposed program to REAP


Jan-Mar 2019

Presentation to Mr. Razzak Dawood & stakeholders


Apr 2019

Farmers receiving mechanized rice cultivation services

Preparation for scale up on-going thru PPP mode

# Interventions for yield increase & loss reduction
## piloted by the Asian Development Bank in Pakistan (2018)

Under implementation in Districts Thatta and Badin by Garibsons Consortium

**CURRENT**

Seed saved from last year

Unleveled fields

Traditional nursery-raising & manual transplantation: 55,000 plants per acre

Harvesters intended for wheat

Sun-drying of paddy

Traditional paddy storage

Seed choice — Bed preparation — Nursery raising — Transplantation — Harvesting — Drying — Storage

Proper seed

**PROPOSED**

Up to 50% yield increase

Laser-leveled fields

+20% water saving
Around 10% yield increase

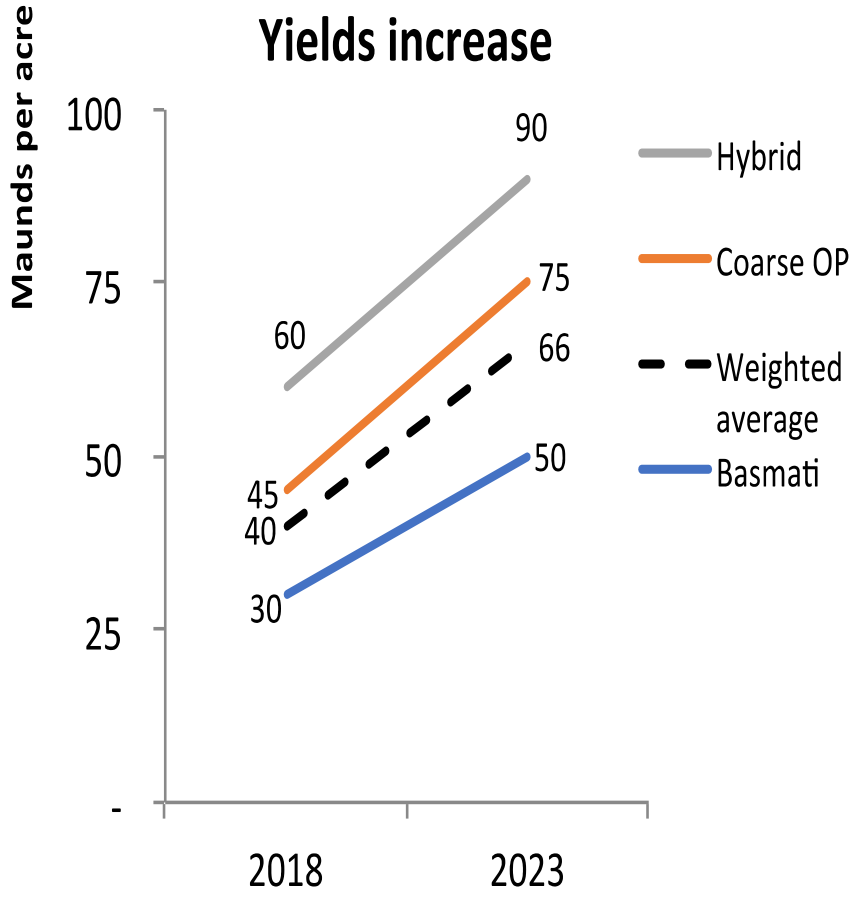
Nursery-raising in trays and mechanical transplantation

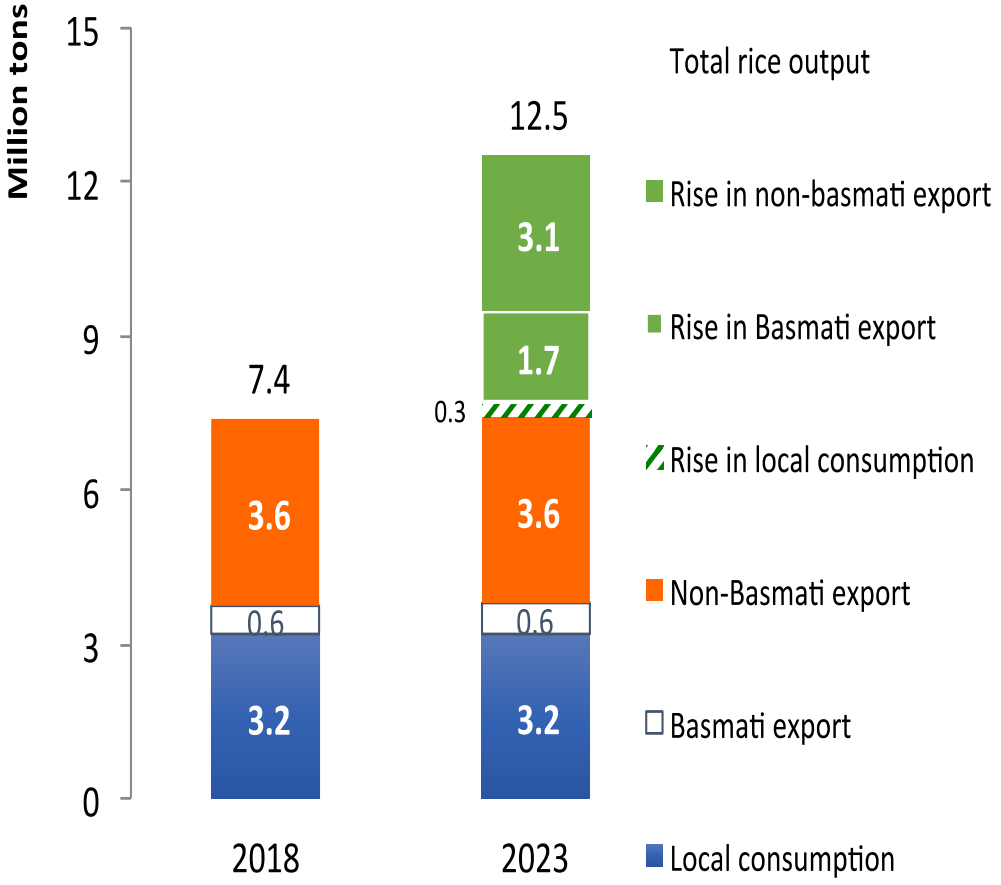
Plant population about 100,000 per acre
→ Higher yield

Harvesters intended for rice

50% reduction in harvesting losses and brokens

# Target yield increase, loss reduction and output 2018-23



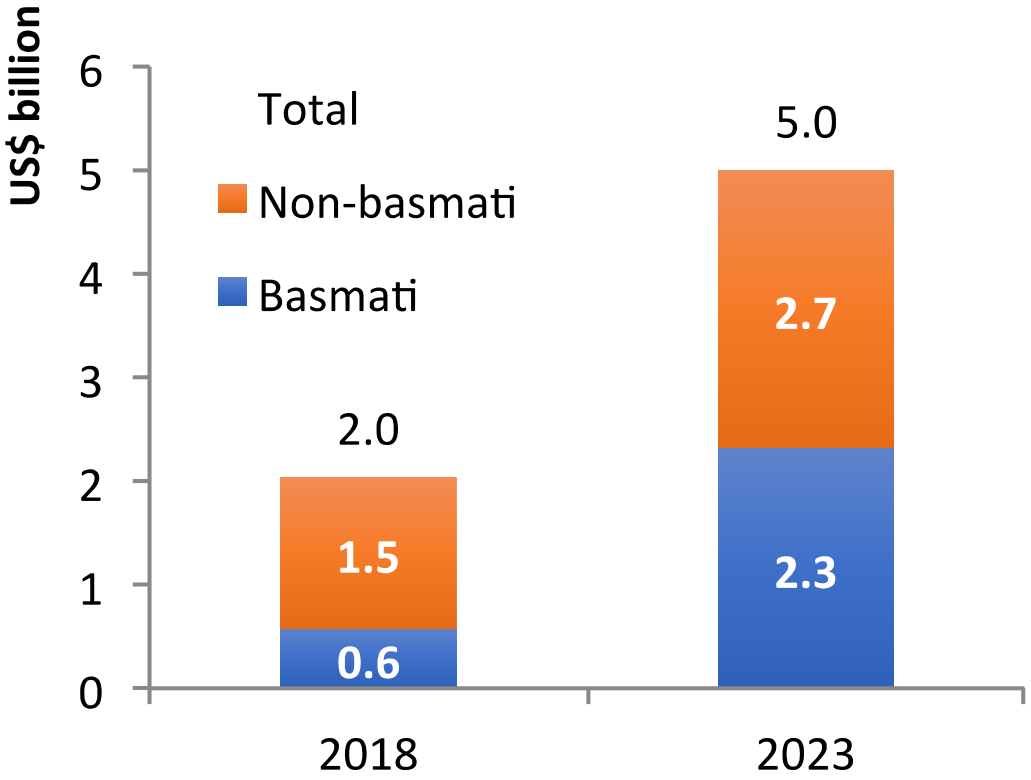




| | | |
|---|---|---|
| **Acreage** | 6.92 million | 6.92 million |
| Basmati | 50% | 50% |
| Coarse OP | 35% | 25% |
| Hybrids | 15% | 25% |

10% reduction in post-harvest losses through better drying and storage

Assumptions: 5% per annum rise in local consumption

# Proposed program 2019-23 for doubling rice exports




**A**

Seed development & advisory to farmers

**B**

Farm machinery-based services to farmers

Minimized water use

**C**

Investment in drying & storage

**D**

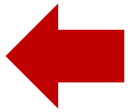
Investment in rice processing

# Oilseeds

# 88% of edible oil in Pakistan is imported

**Edible Oil Requirement** (3.62 Million Tons)

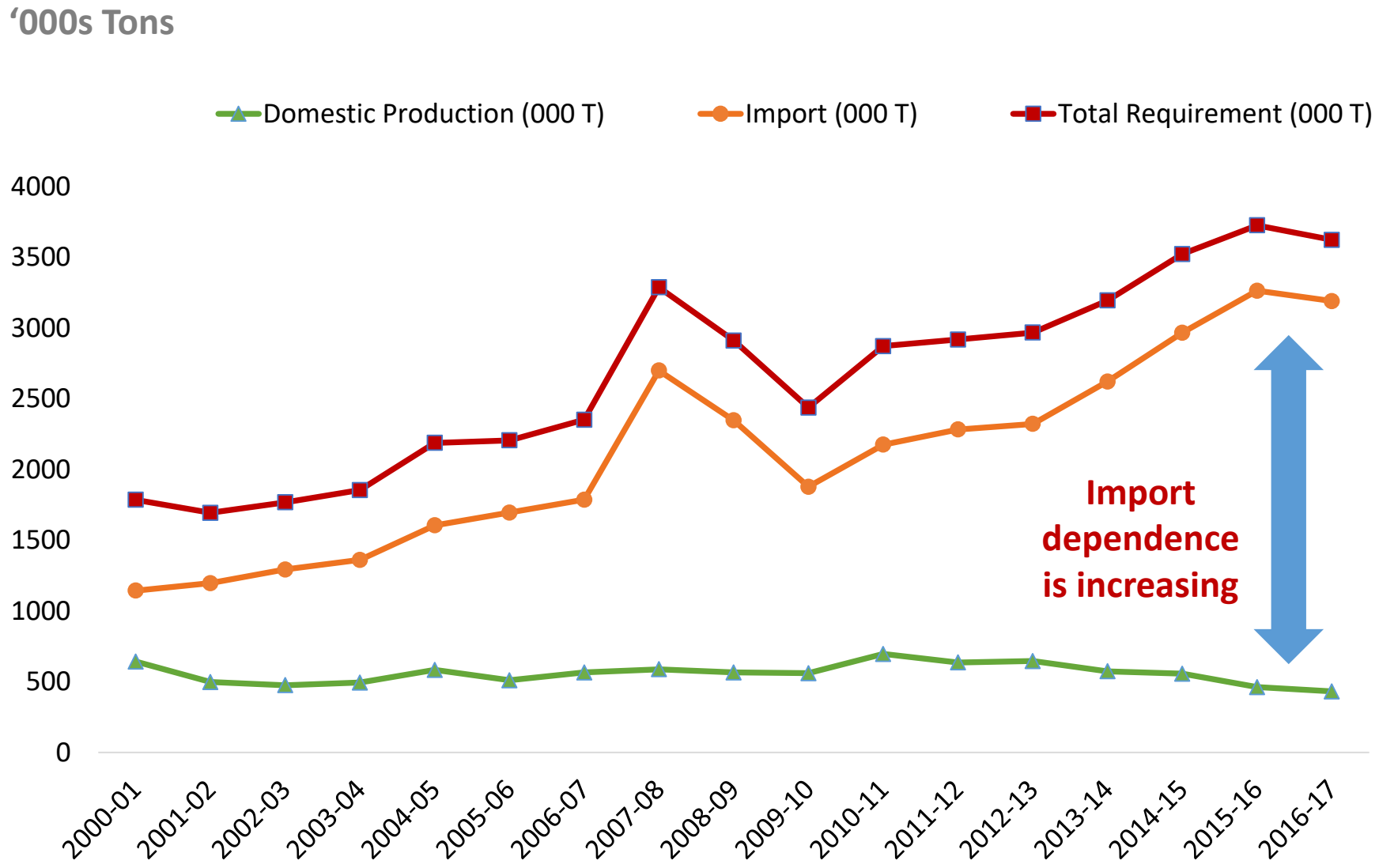
**Import Share**
**(3.191 Million Tons 88%)**



**Import bill of ~USD 2 billion**

**Local Production**
**(0.431 Million Tons 12%)**

# Increasing demand and static local production has made us dependent on importing edible oils

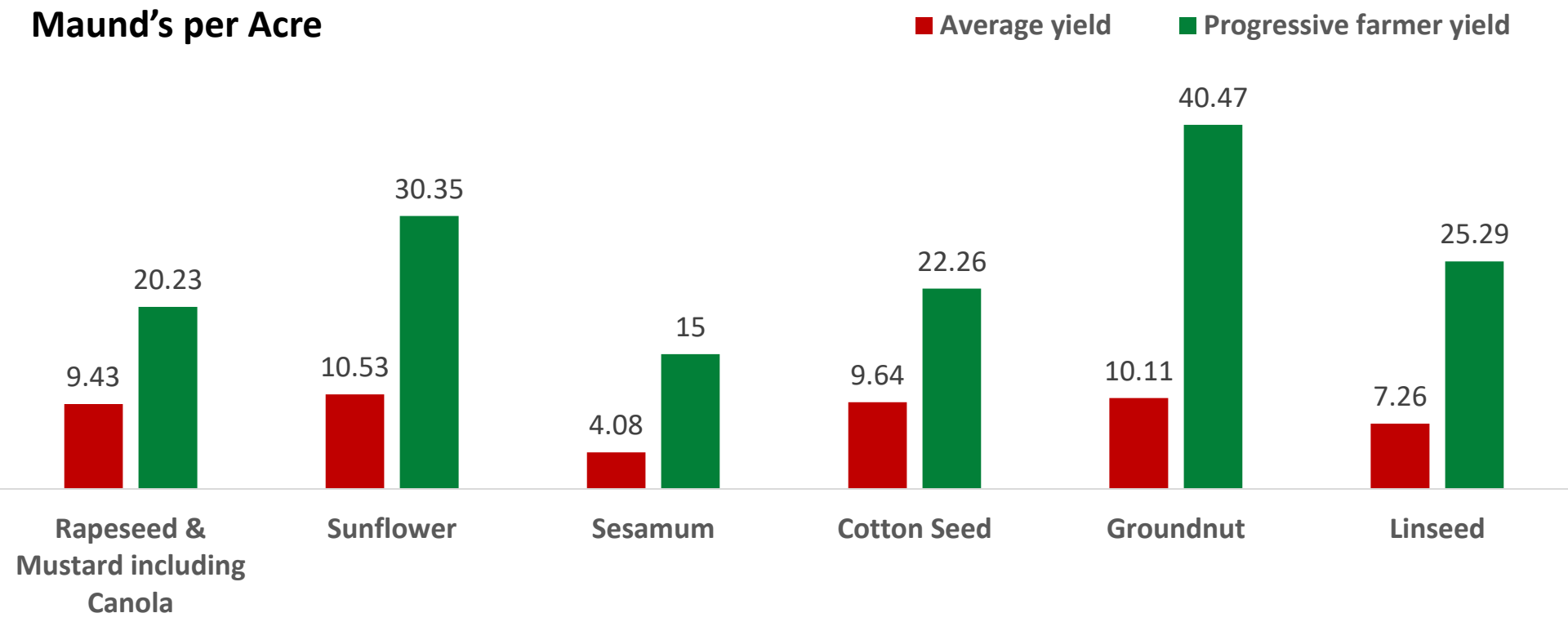


# There are 3 main causes of poor domestic output of edible oils

| Challenges | Details |
| --- | --- |
| **Low returns of oilseed crops vis-à-vis competing crops** | ▪ Planting of oilseed crops on marginal lands mainly under rainfed conditions<br>▪ Sub-optimal use of inputs and minimal crop care<br>▪ Traditional cultural practices (seed broadcasting, minimal weed control, hand harvesting etc.) |
| **Oilseed Categorized as "Minor Crops" and interpreted as "unimportant"** | ▪ Negligible focus on R&D<br>  ▪ Lack of high yielding varieties/ hybrids<br>  ▪ Non development of appropriate production technologies<br>▪ Insignificant extension advisory support |
| **Nonexistent Oilseeds Policy** | ▪ Liberal imports-enabling regime restricting local production<br>▪ Oilseed planning is exclusively a provincial subject after 18th amendment but got little attention in the provinces |

# Low yields of oilseed crops is the key reason for poor returns

- **Average national yields of all oilseed crops are 25% to 50% of what the progressive farmers achieve**

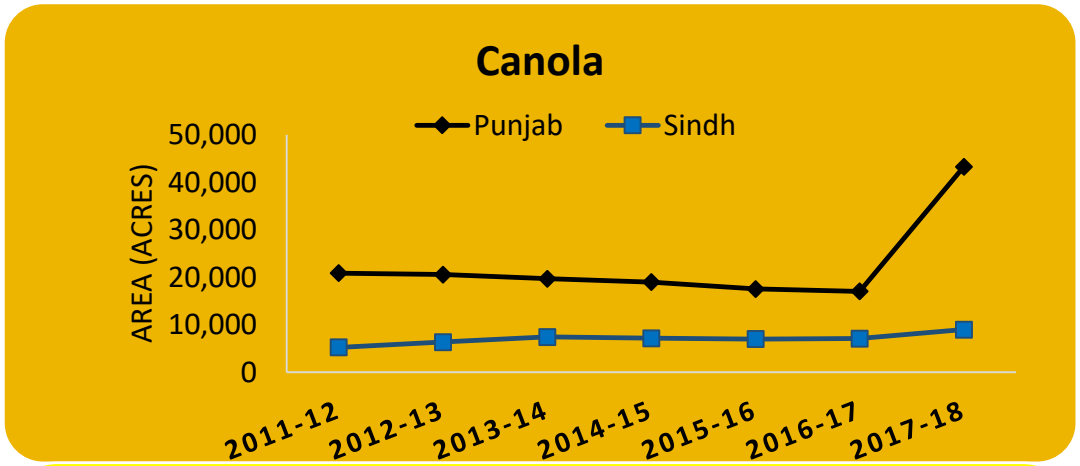


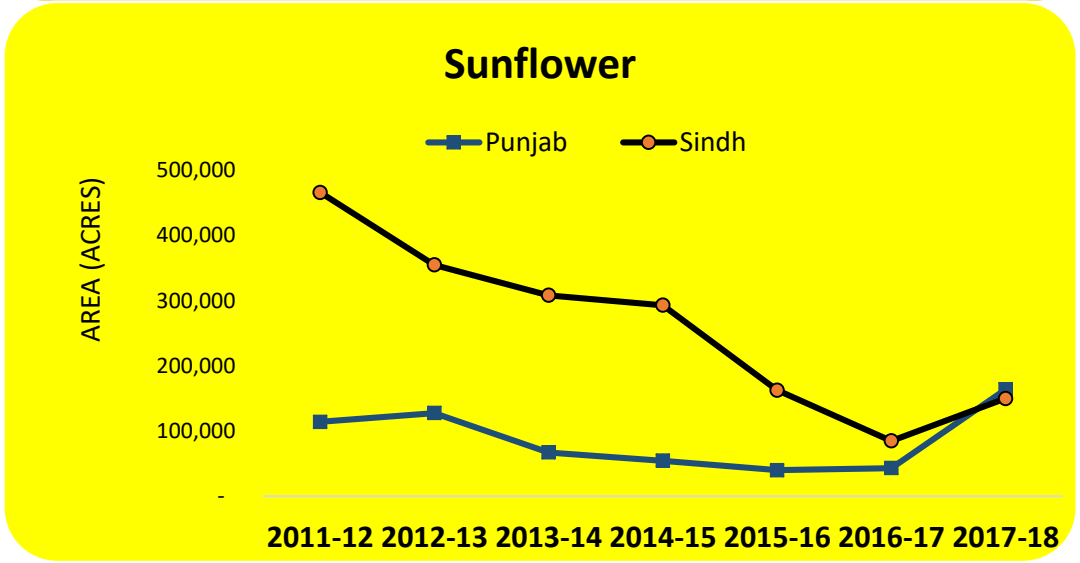
# Oilseed Promotion initiative: GoPb successfully piloted direct cash transfers to farmers

## Program features

- Cashless transfers of Rs. 5,000/acre into grower's account through scratch cards placed in oilseed bags
  - Farmers receive Rs. 1,000 in their accounts at the time of sowing and remaining Rs. 4,000 on verification of planting the crop
- Farmers are provided off-take guarantee @ Rs. 2,500/maund by solvent extraction plants

## The program has exponentially increased canola and sunflower acreage



# Sesame cultivation is attractive and has a solid export demand

- Pakistan annually exports ~27,000 tons (87% of production) sesame worth USD 45 million to Kazakhstan, Vietnam, Turkey, Korea, China, Japan, USA and UAE

- Average yield of sesame is 4 maunds/acre whereas progressive growers are achieve 15-20 maunds/acre and *earn more than PKR 70,000* per acre

**There is a massive untapped potential:**

- Current annual international export market of sesame is US$ 2 billion

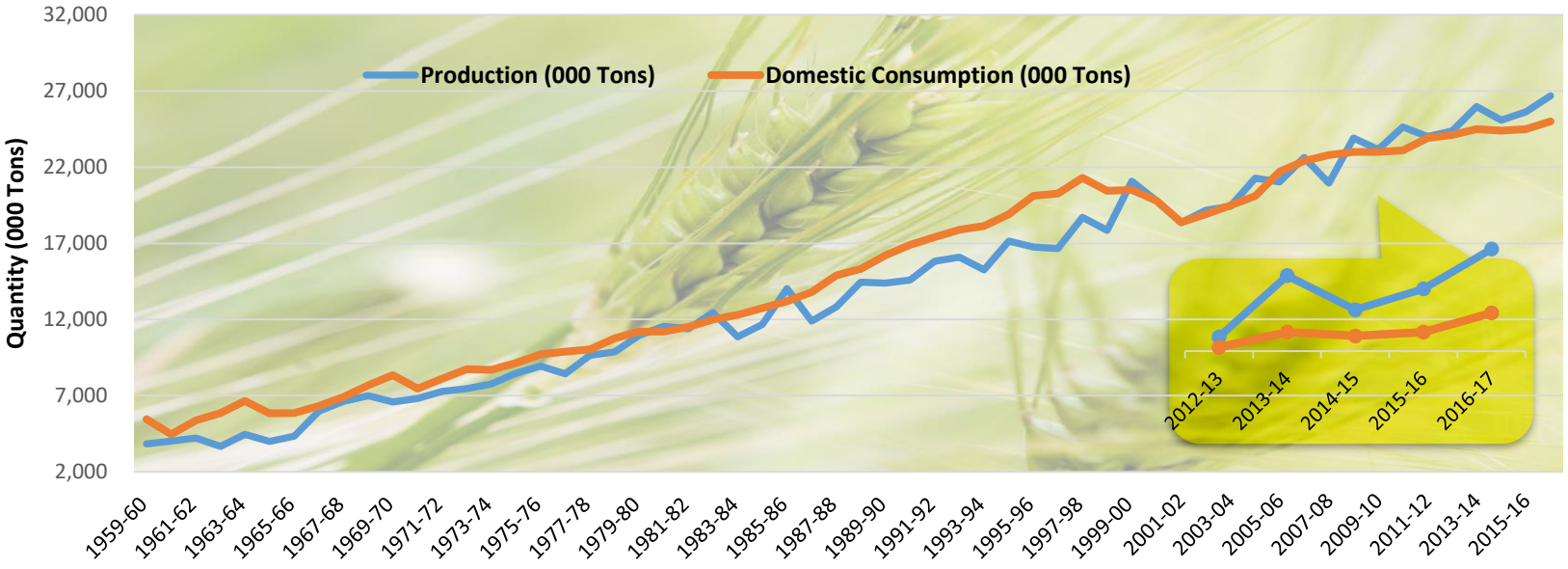
- Only China imports sesame valuing USD 734 million every year; our share is USD 2-3 million

- Sesame is a highly water efficient

- Sesame exports can be enhanced in 5 years to US$ 300 million by:
  - Increasing cultivated area to 500,000 acres from of 192,544 acres by substituting rice
  - Enhancing average yield from 4 maunds/acre to 10 maunds/acre

# Prospects of agriculture as an engine of growth for Pakistan

## Pakistan has now attained self-sufficiency in wheat and now producing it in surplus quantities




Source: Pakistan Bureau of Statistics

- About 2 million acres can, therefore, be shifted from wheat to sunflower and canola cultivation; which together with enhancing their average yield from 10 maunds/acre to 20 maunds/acre
  - **can curtail country's annual edible oil imports by nearly US$ 600-700 million**
- Likewise, growing sesame on 500,000 acres with 10 maunds/acre yield
  - **may earn around US$ 300 million foreign exchange from its exports**

# Storage

# Existing agri-warehousing landscape of Pakistan

Lack of quality public storage facilities

- Existing system is unstructured and fragmented
- High post-harvest losses (~20%)
- Quality degradation

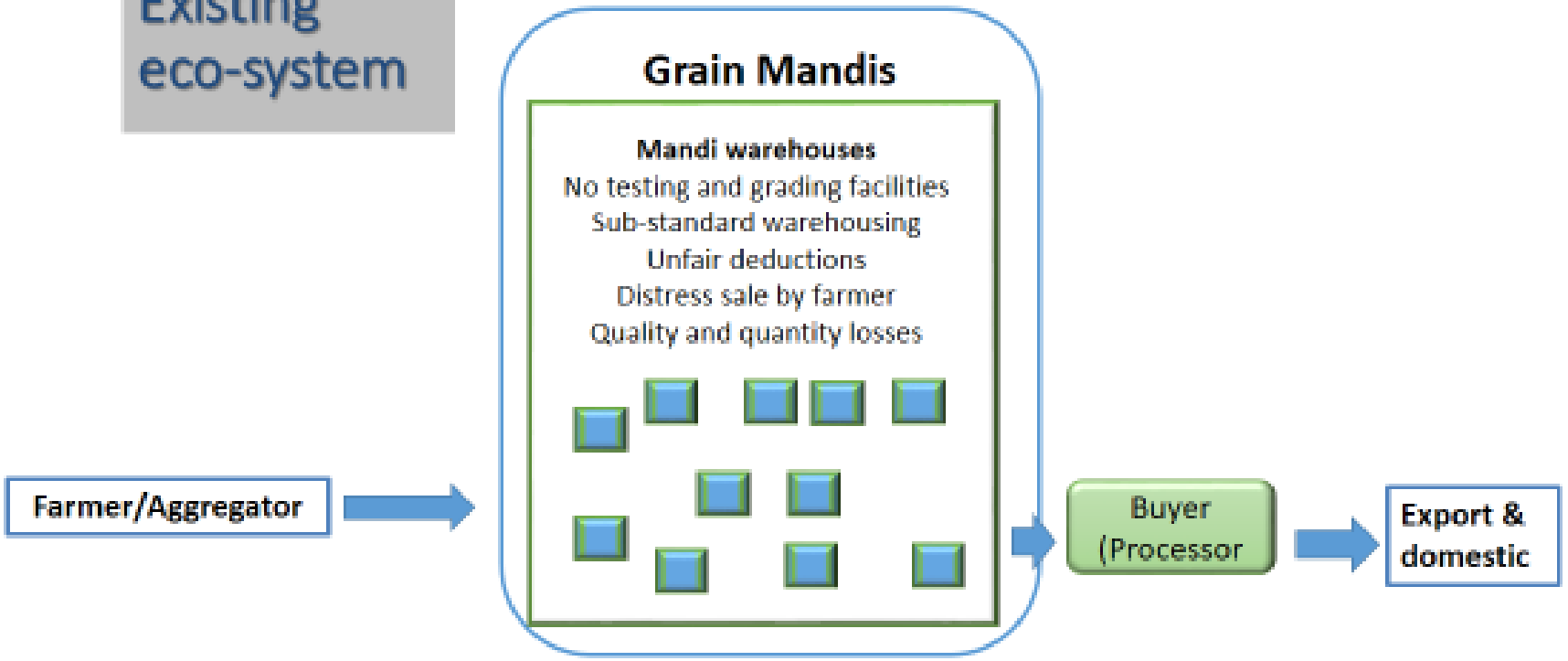
Farmers have to make ‘distress sale’ to repay loans

- Commodity prices are lowest at time of harvest
- Farmers sell at harvest time to finance next crop
- Benefit of price increase goes to middlemen

Lending product is not beneficial for farmers

- Banks require land as collateral; leaves out tenant/landless farmers
- Borrowing from middlemen who typically charge more than 36% per annum!

# Existing eco-system



# Post-harvest losses of 20%

## Near-farm agri-warehousing is needed!

Sun-drying of maize

Aggregation at maize mandi, Okara

Proper warehousing exists inside mills…

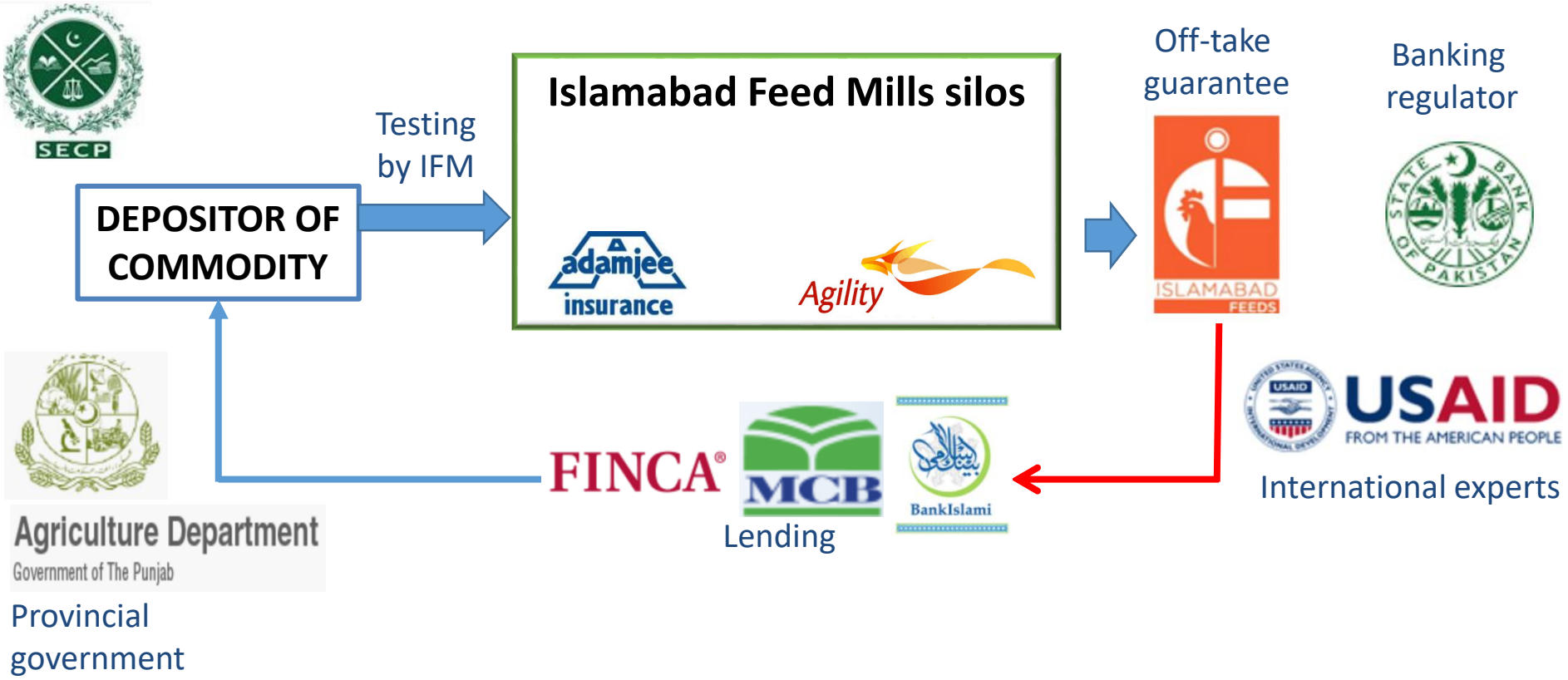
Sun-drying of rice paddy

Traditional paddy storage

…but not near farms

# Basic business model of collateral management

Pakistan Agricultural Coalition's maize pilot 2018 at Okara




Banks lend 70% of the value of the collateral

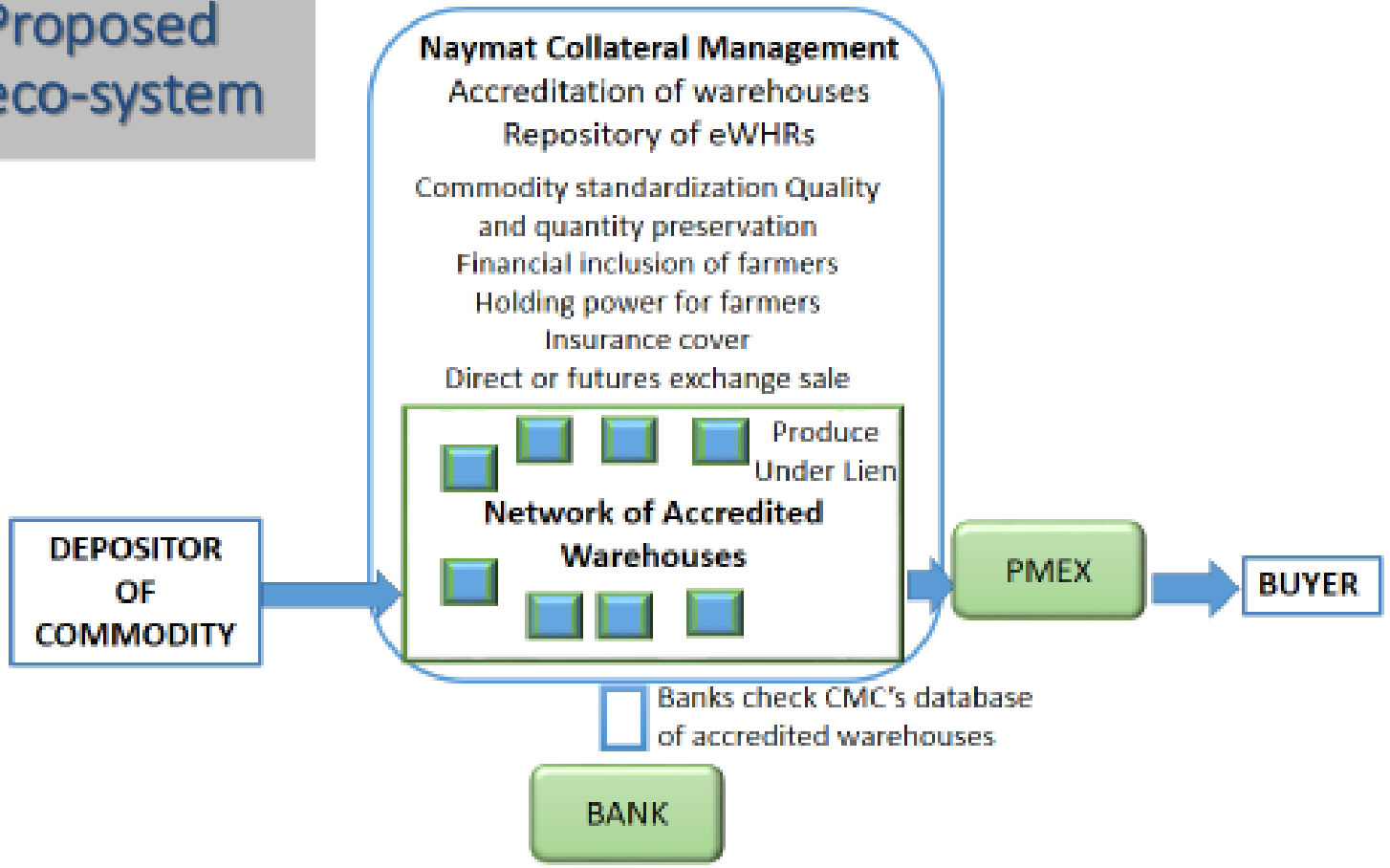
Islamabad Feeds guaranteed off-take if farmer unable to sell

Adamjee insured the commodity listing each bank as co-loss payee

Islamabad Feeds paid insurance; depositor paid Islamabad Feeds a charge

Islamabad Feeds was warehouse operator; Agility oversaw as collateral manager

# Proposed eco-system



# Launch of first CMC under the EWR regime
# set for Mar-Apr 2020

**Jun 26** PM Advisor on Finance chaired meeting on EWR regime

- Set 5-week deadline for launch
- Governor State Bank and Chairman
  - SECP & endorsed this timeline

**Jul 31** SECP notification of CMC Regulations 2019

**Sep 24** SECP stakeholders consultation in Karachi

**Oct 18:** SBP amended all relevant PRs to declare EWRs as collateral for lending

**Oct onwards** PAC brought in IFC to advise SECP on the operational and regulatory framework for CMC

**Nov 24** Application for registration of Naymat Collateral as CMC sent to SECP

ISLAMABAD: Adviser to PM on Finance, Revenue and Economic Affairs, Dr Abdul Hafeez Shaikh, presides over meeting about warehouse receipt financing, here on Wednesday.—INP

Warehouse receipt financing

## Hafeez wants final draft of proposed law be submitted in a month

RECORDER REPORT

ISLAMABAD: Adviser to Prime Minister on Finance, Dr Abdul Hafeez Shaikh has directed that final draft of proposed law with regard to warehouse receipt financing to facilitate the farmers should be submitted in a month after consultation.

A meeting was chaired by the advisor on Wednesday to discuss the framework to facilitate the structure for agriculture commodities which could save billion of rupees and make agriculture sector more competitive.

The meeting discussed the key challenges facing the implementation of WHRF in Pakistan, including lack of regulatory framework for Collateral Management Companies (CMCs) and lack of capacity of banks and other stakeholders to Pakistan (SECP) and State Bank of Pakistan (SBP) in establishing the warehouse receipt financing facility in Pakistan. He said that the WHRF would help reduce post-harvest losses in agriculture sector.

It was also decided to hold another meeting in the next month to review the progress about the subject.

The adviser directed the con-

Brief recordings

An interview with Chairman Securities & Exchange Co

## We will turn SECP into a mode

Going forward, we will soon issue Warehouse Receipt and Collateral Management Companies Regulations. The matter just went to public consultation starting yesterday. But this is a great product for the development of the eco-system in agriculture. Farmers can get credit against their warehoused goods. The receipts can trade on PMEX. The opportunities, once this gets going, are endless. One other matter being given serious thought is the prospect of allow listing of loss-m

Agri, corporate and SMEs

## SBP amends three Prudential Regulations

# Collateral management will help reduce post-harvest losses of 20%

- Cumulative annual volume of these leading crops of Pakistan:
  - 44 million tons
  - Rs. 1.8 trillion

- Value lost in post-harvest losses:
  Rs. 360 billion per annum!

- Wheat
- Maize
- Cotton
- Sugar
- Rice paddy
- Rice
- Oil seeds

Average of 2012-2018

# Thanks