

Name of Project: Corporate Farm Machinery Rental Centers
Location: All over Pakistan
Estimated Cost: US\$ 2.3 million per centre

CURRENT STATUS:

About 86% of the farmers in Pakistan have small land holdings of up to 5 ha and these are mostly into subsistence farming. Owing to the small farms size, they are unable to afford farm machinery and consequently their land is not productively used. The productivity of these farms can be increased if appropriate level of mechanization is adopted.

Although farm machinery such as tractors and threshers are available from other farmers in the vicinity, but these may be limited to land preparation, wheat / paddy harvesting and threshing only, and in some cases the farmers providing machinery and equipment on rental basis may also not be fully aware of their efficient and profitable use.

Pakistan also has more than 8.3 million hectares of culturable waste which can be brought under cultivation with the help of bulldozers or high power tractors. In order to develop 4 million ha over 25 years, about 1500 bulldozers operational all the year round are required. The current fleet of bulldozers held by provincial agriculture departments has almost completed their economic life, attracting heavy maintenance costs making it difficult to carry on operations. The farmers would prefer to hire bulldozers, tractors and other costly farm machinery on rental basis rather than investing in capital goods. Time has come to now introduce farm mechanization on corporate line. This can be achieved by establishing **Corporate Farm Machinery Rental Service Centre (CFMRSC)** throughout Pakistan. One **CFMRSC** would require investment in land, building and the following machinery:

| | | (Rs in millions) |
|--|----|--|
| Farm Machinery Centre (Land and building/sheds): | 1 | 15.0 |
| Tractors (70-80 HP): | 10 | 80.0 |
| Implement sets (Land preparation to harvesting): | 5 | 7.5 |
| Combined harvester (wheat/paddy): | 5 | 65.0 |
| Bulldozers: | 2 | 22.0 |
| Workshop facilities: | 1 | 4.5 |
| Total: | | <u>194.0</u> (US\$ 2.3 million) |

The investor can either enter into joint venture with a local investor or establish a corporate entity to set-up **CFMRSC**.

POSSIBLE SUPPORT FROM THE GOVERNMENT:

- i. Duty free import of farm machinery
- ii. Provision of government land on minimal cost
- iii. Tax holiday for a period of 5-10 years
- iv. Government will pick some percentage of the farmers' share of rental

Name of Project: Establishment of Modern Grain Storage Infrastructure
Location: All over Pakistan
Estimated Cost: US\$ 300-500 million

Justification: Pakistan produces almost 34.41 million tons of Food Grains (Wheat, Rice, and Pulses annually). There prevails underdeveloped grain storage and handling system in the country as a result post harvest losses are estimated at 25% per annum which is equivalent to almost \$900 million per annum. Traditionally the storage, handling and transportation of grains is responsibility of the public sector and it lacks participation of the private sector. There is immense need to involve and facilitate private sector in the development of Grain Storage Infrastructure with the ability to move grain efficiently to and from ports.

The storages under government were last constructed during 1980s and the available national storage capacity is around 4 million tons against the minimum storage requirement of 10 million. The existing storages have become insufficient due to at least twice as much increase in production, and substantial wear and tear. At the time of harvest, farmers need to be able to deliver their grain into a secure storage environment. This option doesn't exist for most Pakistani grain producers. In addition, the lack of secure and reliable grain storage limits the development of financing and marketing options based on warehouse receipts programs and other such modalities. A National Commodities Exchange was established recently, but it has certain limitations owing to its infancy. Currently it is dealing only in two agricultural commodities namely: palm oil and rice.

There are attractive investment opportunities in building grain storage and handling infrastructure; establishment of modern and reliable grain testing facilities at all delivery points to bring the produce in line with market requirements; introducing a warehouse receipts based program whereby growers can conveniently sell grains and / or use warehouse receipt to obtain cash from banks; introducing futures markets concept in trade of agricultural commodities.

POSSIBLE SUPPORT FROM THE GOVERNMENT:

- i. Duty free import of farm machinery
- ii. Provision of government land on minimal cost
- iii. Tax holiday for a period of 5-10 years
- iv. Public private partnership mode of execution
- v. Government to enter into medium term tenancy contracts for storage utilization

Name of the Project: Mango Pack house / Processing Units

Location: Mango Cluster Areas of Punjab and Sindh

Project Description for Pack houses / Processing Units:

Mango is the second largest fruit grown in Pakistan. It is the largest tropical fruit grown in the country. Availability of mangoes in Pakistani markets starts by end of May and lasts till middle of August. Mango cultivation is concentrated in southern districts of Punjab and northern districts of Sindh. Total production of mangoes in Pakistan during 2007-08 was 1,753,686 tons which was 25% of the total fruit production of Pakistan. Major portion of Pakistani mango production is consumed as fresh fruit in the local markets. Along with this, Pakistani mangoes have a demand in international markets such as Middle East, Europe and Central Asian states.

It will include to establishing a processing facility of 10 tons of per hour capacity mainly for mango for local and export market.

Investment cost per unit (Million Rs.):

| | | |
|--|------|--|
| Land Cost: | | 10.0 |
| Civil Works: | | 39.0 |
| Plant & Machinery-Cold Store (500 tons): | 40.0 | |
| Plant & Machinery-Pack House: | | 38.0 |
| Operational cost: | | <u>10.0</u> |
| Total Cost: | | <u>137.0</u> (US\$ 1.6 million) |

Possible Support from the Government:

- Duty free import of farm machinery
- Tax holiday for a period of 5-10 years
- Provision of government land on minimal cost
- Public private partnership mode of execution

Name of the Project: Date Processing Units

Location: Cluster Areas of Balochistan, Punjab, and Sindh

Project Justification

According to Food and Agricultural Organization (FAO), the total world production of dates amounted to 6.64 million tons in the year 2007. Pakistan's average yearly date production during last ten years was more than 0.547 million tons. Pakistan is the 6th largest date producer as well as 2nd largest exporter (in terms of quantity) in the world. A comparative analysis of production and export data clearly reflects the big gap between both figures and that the potential of exporting Fresh Dates exists if these are processed according to international standards with state of the art technology for value addition and packaging.

The proposed plants should be meant for processing of all varieties of date with a processing capacity of 1.5 tons per hour or 3,500 tons per year (based on two shifts and 5 months operation) at 100% capacity level. It shall be a straight line processing plant, which receives the raw material (dates) and after fumigation at one end delivers the washed, dried and graded dates to the packing section.

Investment cost per unit (Million Rs.):

| | | |
|--|------|--|
| Land Cost: | | 10.0 |
| Civil Works: | | 35.0 |
| Plant & Machinery-Cold Store (500 tons): | 40.0 | |
| Plant & Machinery-Pack House: | | 30.0 |
| Operational cost: | | <u>10.0</u> |
| Total Cost: | | <u>125.0</u> (US\$ 1.5 million) |

POSSIBLE SUPPORT FROM THE GOVERNMENT:

- Duty free import of farm machinery
- Tax holiday for a period of 5-10 years
- Provision of government land on minimal cost
- Public private partnership mode of execution

Name of the Project: Apple processing plant

Location: Apple Cluster Areas of Balochistan and NWFP

Project Justification

More than 70 per cent apple production is in Balochistan and the rest (about 27 percent) almost in NWFP province. Apple yield considerably increased in Balochistan (about 50 percent over the last ten years).

| | 2003-04 | 2004-05 | 2005-06 | 2006-07 | 2007-08 |
|-----------------------------------|----------------|----------------|----------------|----------------|----------------|
| Area ('000' ha) | 110.8 | 111.6 | 112.0 | 112.6 | 113.0 |
| Production (Rs. Thousands) | 333.7 | 351.9 | 351.3 | 348.3 | 441.6 |

The exports of apple have decreased over time due to damage of crop in the Balochistan due to drought spell in past few years. The details of apple exports are given as follows;

| | 2003-04 | 2004-05 | 2005-06 | 2006-07 | 2007-08 |
|------------------------------|----------------|----------------|----------------|----------------|----------------|
| Quantity (ton) | 97.3 | 100.4 | 145.9 | 427.7 | 20.4 |
| Value (Rs. thousands) | 3492 | 3649 | 3539 | 10774 | 547 |

Investment cost per unit (Million Rs.):

| | |
|--|---------------------------------------|
| Land Cost: | 10.0 |
| Civil Works: | 25.0 |
| Plant & Machinery-Cold Store (500 tons): | 20.0 |
| Plant & Machinery-Pack House: | 22.0 |
| Operational cost: | <u>10.0</u> |
| Total Cost: | <u>87.0</u> (US\$ 1.1 million) |

POSSIBLE SUPPORT FROM THE GOVERNMENT:

- Duty free import of farm machinery
- Tax holiday for a period of 5-10 years
- Provision of government land on minimal cost
- Public private partnership mode of execution

Name of the Project: Kinnow processing plant in Punjab

Location: Cluster Areas of Punjab and Sindh

Project Description for Pack houses / Processing Units:

In citrus crop production, Pakistan is primarily predominated by the mandarin type kinnow (*Citrus reticula*), which is the largest sector by volume and is a major export commodity. Citrus fruit is grown in all four provinces of Pakistan. Area under different varieties of citrus horticultural crops indicates that about 60 per cent of the citrus is covered by Kinnow (Mandarin), followed by orange 13 per cent and Musambi 12 per cent. Punjab produces over 95% of the kinnow crop because of favorable growing conditions and good quality of kinnow fruit

The proposed kinnow pack house at Salam District Sargodha will be a modern plant with state of the art facilities to cater the need and to comply with international standards of new emerging markets for export of kinnows.

Technical Parameters and Technology Transfer Aspects Kinnows Processing Plant at Salam District Sargodha

The major scope of processing activities includes harvest handling, washing/cleaning, grading, packing and storage.

Investment cost per unit (Million Rs.):

| | |
|--|---------------------------------------|
| Land Cost: | 10.0 |
| Civil Works: | 39.0 |
| Plant & Machinery-Cold Store (500 tons): | 40.0 |
| Plant & Machinery-Pack House: | 38.0 |
| Operational cost: | <u>10.0</u> |
| Total Cost: | <u>137.0 (USD 1.6 million)</u> |

POSSIBLE SUPPORT FROM THE GOVERNMENT:

- Duty free import of farm machinery
- Tax holiday for a period of 5-10 years
- Provision of government land on minimal cost
- Public private partnership mode of execution

Investment Proposal in Seed Sector

Project Title: Hybrid Bt-Cotton Seed Production

Justification: Pakistan has domestic market of 40,000 MT certified Bt-cotton seed with or without herbicide-resistant trait. Presently there is no hybrid cotton seed production in the country and there is ready market of 10,000 MT hybrid Bt-cotton seed.

Market Value: Rs. 40,000 million

Infrastructure Available:

- i. Product is already popular with the farmers.
- ii. Farmers are acquainted with seed production of cotton and will need minor training in hybridization techniques.
- iii. Cotton seed marketing dealer network is available.
- iv. Local Partner Seed Companies are available to manage seed production, processing and marketing.
- v. Well adapted elite cotton varieties are available in Pakistan for incorporation of Bt-traits.
- vi. Bt-trait Cry 1Ac (Mon-531) is available in public domain.

Proposed Areas of Foreign Investment:

- i. Introduction of new Bt-traits and herbicide resistant trait on royalty payment basis.
- ii. Payment of royalty of local elite cotton lines to be used for hybrid seed production.
- iii. Civil works, Machinery and equipments for cotton ginning, seed delinting, grading, treatment and packaging.

Size of Investment for production of 10,000 MT seed:

- | | | |
|------|---|-------------------|
| i. | Annual royalty payment for elite inbred lines and biotechnology traits: | Rs. 1,000 million |
| ii. | Fixed cost of Machinery and Civil works: | Rs. 300 million |
| iii. | Annual operating cost: | Rs. 3,750 million |
| iv. | Cost of seed per MT: | Rs. 500,000 |
| v. | Sale price of seed per MT: | Rs. 1,000,000 |
| vi. | Total cost: | Rs. 5.0 billion |
| vii. | Rate of return | 50% |

Incentives Available:

- i. No restriction on transfer of profits.
- ii. No duty on import of machinery, no excise duty on production and no sale tax on marketing.
- iii. Protection against double taxation.
- iv. National and foreign banks are present to manage liquidity.
- v. Regulatory framework for protection of intellectual property rights is on the way.

Possible Support from the Government:

- i. Government may consider provision of land for installing plant and machinery on soft terms.
- ii. Tax holiday may be considered.
- iii. Any further regulatory support required.

Investment Proposal in Seed Sector

Project Title: Hybrid Corn Seed Production

Justification: Pakistan has domestic market of 30,000 MT hybrid corn seed with or without Bt-gene or herbicide-resistant trait. Presently there is very little hybrid corn seed production in the country and there is ready domestic market of 20,000 MT hybrid corn seed and good opportunities for seed exports to Central Asian States due to low cost of seed production.

Market Value: Rs. 13,500 million

Infrastructure Available:

- i. Product is already popular with the farmers.
- ii. Farmers are acquainted with seed production of hybrid corn.
- iii. Corn seed marketing dealer network is available.
- iv. Local Partner Seed Companies are available to manage seed production, processing and marketing.

Proposed Areas of Foreign Investment:

- i. Introduction of new elite cotton lines to be used for hybrid seed production on royalty payment basis.
- ii. Civil works, Machinery and equipments for seed processing, grading, treatment and packaging.

Size of Investment for production of 20,000 MT seed:

| | | |
|------|--|-------------------|
| i. | Annual royalty payment for elite inbred lines: | Rs. 1,000 million |
| ii. | Fixed cost of Machinery and Civil works: | Rs. 200 million |
| iii. | Annual operating cost: | Rs. 4,900 million |
| iv. | Cost of seed per MT: | Rs. 300,000 |
| v. | Sale price of seed per MT: | Rs. 450,000 |
| vi. | Total cost: | Rs. 6.0 billion |
| vii. | Rate of return | 50% |

Incentives Available:

- i. No restriction on transfer of profits.
- ii. No duty on import of machinery, no excise duty on production and no sale tax on marketing.
- iii. Protection against double taxation.
- iv. National and foreign banks are present to manage liquidity.
- v. Regulatory framework for protection of intellectual property rights is on the way.

Possible Support from the Government:

- i. Government may consider provision of land for installing plant and machinery on soft terms.
- ii. Tax holiday may be considered.
- iii. Any further regulatory support required.

Investment Proposal in Seed Sector

Project Title: Seed Potato Production

Justification: Pakistan has domestic market of 310,000 MT seed potato for planting of the crop. Presently there is very little potato seed production in the country and there is ready domestic market of 100,000 MT certified seed potato and good opportunities for seed exports to central Asian states due to low cost of seed production.

Market Value: Rs. 18,600 million

Infrastructure Available:

- i. Product is already popular with the farmers.
- ii. Farmers are acquainted with seed production of potato seed.
- iii. Seed marketing dealer network is available.
- iv. Local Partner Seed Companies are available to manage seed production, processing and marketing.

Proposed Areas of Foreign Investment:

- i. Introduction of new elite varieties to be used for seed potato production on royalty payment basis.
- ii. Civil works, Machinery and equipments for seed processing, grading, treatment and packaging.

Size of Investment for production of 100,000 MT seed:

| | | |
|------|--|-------------------|
| i. | Annual royalty payment for elite lines: | Rs. 1,000 million |
| ii. | Fixed cost of Machinery and Civil works: | Rs. 200 million |
| iii. | Annual operating cost: | Rs. 2,900 million |
| iv. | Cost of seed per MT: | Rs. 40,000 |
| v. | Sale price of seed per MT: | Rs. 60,000 |
| vi. | Total cost: | Rs. 4.0 billion |
| vii. | Rate of return: | 50% |

Incentives Available:

- i. No restriction on transfer of profits.
- ii. No duty on import of machinery, no excise duty on production and no sale tax on marketing.
- iii. Protection against double taxation.
- iv. National and foreign banks are present to manage liquidity.
- v. Regulatory framework for protection of intellectual property rights is on the way.

Possible Support from the Government:

- i. Government may consider provision of land for installing plant and machinery on soft terms.
- ii. Tax holiday may be considered.
- iii. Any further regulatory support required.