A Good Case/Practice/Programme on Financing for Sustainable Agricultural Mechanization in Pakistan

Dr. TURAB HYDER
Member Finance
Engr. LIAQAT ALI SHAHID
DG-AED
Pakistan Agricultural Research Council, Islamabad - Pakistan

7th Regional Forum on Sustainable Agricultural Mechanization in Asia and the Pacific Financing for Sustainable Agricultural Mechanization

27-29 November 2019, Jeonju, Republic of Korea
Financing Mechanization in Pakistan
Year-Wise Production of Farm Tractors

1. The increase in tractor production from 33,883 to 53,499 is due to reduction in GST on sales (from 10 to 5%).
2. The major reason of decline in production in 2018-19 of tractors is low sale because of filer condition.
PM Agriculture Package (2015-16): Rs 341 Billion

**Salient Features**

- The custom duty, sales tax and withholding tax on the agriculture machinery reduced from 45% to 9%.
- The sales tax on cold chain machinery has been reduced from 17 to 0%.
- Solar tube wells would be provided on markup free loans to the farmers who own up to 12.5 acre of land.
- Electricity Price for running tube wells: Fixed: Rs 10.35/unit at peak hours and Rs 8.85 at off-peak hours.
- Reduction of mark-up rate on agriculture loans by 2% which would give a benefit of Rs 11 billion per annum to farmers.
Relevant Measures:

• Accelerate mechanization through import/export Policy and indigenization of modern mechanization technologies.
• Incentivize production and adoption of value addition machinery reducing post-harvest losses.
• Incentivize machinery import for silage making, milking, dairy and meat products.
• Promote use of renewable energy sources at farm level.
• Incentivize establishment of agricultural machinery pools as private sector services centers in provinces.
National Programs on Rice, Wheat, Sugarcane, Oilseeds And Pulses

Focus: Financing mechanization by 50% subsidy on:


- **SUGAR CANE CROP**: Chisel Plow, Early hill-up Implement, planter with band fertilizer, Billet Planter, and granular fertilizer spreader.


- **OILSEEDS**: Planter/Drill, Oilseed Thresher, and Combine header.

- **PULSES**: Seed drill, Small weeders, Mechanical weeders, Multi-crop thresher, and solar irrigation system etc.
Sources of Agricultural Credit

NON-INSTITUTIONAL CREDIT SOURCES

- Numerous advantages in providing better services at inferior cost than institutional sources of credit.
- In rural areas landlord farmers have better access to institutional source of credit.
- Small farmers mostly small farmers depend on non-institutional sources of credit.
- Money lender, shopkeeper, landlord, aria, input supplier and commission agents.
- The input supplier, commission agent and aria deliver lending for consumption as well as for production purposes and in return gets repaid majority of benevolent in terms of input.
- Landlords and commission agents force the small farmers to sell the produce to them at low rates as compare to market price.
- The non-institutional lenders including (friends, relatives, etc.) have numerous benefits over the institutional sources of credit.
Sources of Agricultural Credit

INSTITUTIONAL CREDIT SOURCES

**Long-Term Credit:** purchase of tube wells, reclamation of land, building, purchase of machinery, farm implements: Period 5 – 7 Years.

**Credit Lending Institutions:** 26

- 05 commercial banks: ABL, HBL, MCB), NBP, and UBL
- Two specialized banks, ZTBL and Corporative Bank Limited (CBL).
- 14 Domestic private banks, and
- 05 Microcredit banks.

**ZTBL Loans:**

- Production, Development, and Agricultural Loans;
- Off-farm Income generating loans; and
- Cottage industry loans to enable farmers to buy modern inputs and technologies.
State Bank of Pakistan historical role in Agricultural Financing to ensure flow of enough, timely and cost-effective funds.

**Old Rural Finance Paradigm:**
- Interventions advocated under old paradigm:
  - Lending quotas on banks and other financial institutions;
  - Loans at preferential interest rates;
  - Credit guarantees; and
  - Targeted lending by development finance institutions (DFIs).

**New Paradigm:**
- Increase rural lending by reducing costs and risks to lenders;
- It made loans preferable to rural clients and sectors; and
- Loan waivers or write-offs especially followed by natural calamities such as floods, droughts, and periods of low farm prices.
Paradigm Shift in State Bank Policy (2)

**New RF Paradigm based on Principles:**
- Financial services part of interactive system of financial infrastructure and social and cultural norms.
- Government role in creating enabling policy environment:
  - Supervisory structures to facilitate the smooth functioning of rural financial markets.

**Value Chain Approach:**
- Emerging economic globalization and commercialization of agriculture
- Value-chain approach as tool to establish production and marketing relationships
- Considers economic activities, clusters, and subsectors as continuous chain
- Helps analyze value added at each chain link that convert raw materials into finished products and then market them.
Credit Disbursement to Farm and Non-Farm Sectors

Source: Economic Surveys 2014-15 to 2018-19
# ZTBL Financing for Farm Machinery & Equipment

<table>
<thead>
<tr>
<th>Year</th>
<th>2016-17</th>
<th>2017-18</th>
<th>2018-19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tractors</td>
<td>9177</td>
<td>7149</td>
<td>5376</td>
</tr>
<tr>
<td>Implements/Attachments/Farm Equipment</td>
<td>978</td>
<td>839</td>
<td>851</td>
</tr>
<tr>
<td>Tube wells/Turbines</td>
<td>796</td>
<td>620</td>
<td>507</td>
</tr>
<tr>
<td>Open Wells/Lift Pumps</td>
<td>116</td>
<td>83</td>
<td>98</td>
</tr>
<tr>
<td>Improvement of Irrigation Facilities</td>
<td>93</td>
<td>71</td>
<td>78</td>
</tr>
<tr>
<td>Land Development/Land Leveling (Laser/Scraper)</td>
<td>225</td>
<td>160</td>
<td>170</td>
</tr>
</tbody>
</table>
Punjab-Agriculture Profile (1)

- Geographical Area: 20.63 Mha
- Forest area: 0.49 Mha
- Not available for cultivation: 2.91 Mha
- Culturable: 1.60 Mha
- Total Cultivated area: 12.51 Mha
- Total population (2017): 110 Million
- Rural Population: 40.4 Million
Punjab-Agriculture Profile (2)

- Punjab contributes major share in agricultural economy of Pakistan by providing
  - 83% of cotton;
  - 80% of wheat;
  - 97% fine aromatic rice;
  - 63% of sugarcane; and
  - 51% of maize.
- Among fruits:
  - Mango accounts 66%,
  - Citrus more than 95%,
  - Guava 82% and
  - Dates 34%
- Pakistan’s total export’ \( \frac{3}{4} \) share is agriculture and 60% of this share comes from Punjab
## Provision of Farm Machinery on 50% Subsidy by Government

<table>
<thead>
<tr>
<th>Year</th>
<th>Machinery</th>
<th>Amount (PKR*Million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008-10</td>
<td>Rotavator, Disc Harrow, Chisel Plough, M. B. Plough, Coulter Drill, Rota Drill, Groundnut Digger, Reaper-windrower, Potato Planter, Potato Digger, Sugarcane Planter, Sugarcane Ridger, Vegetable Ridger, Maize Sheller, Citrus Sprayer and Dogger Cutter</td>
<td>459.000</td>
</tr>
<tr>
<td>2010-11</td>
<td>Wheat Straw Chopper-cum-blower</td>
<td>31.500</td>
</tr>
<tr>
<td>2015-17</td>
<td>Rotavator, Disc Harrow, Chisel Plough, Seed Drill and Sugarcane Ridger</td>
<td>1,145.000</td>
</tr>
<tr>
<td>2017-21</td>
<td>Establishment of Hi-Tech Mechanization Service Centers</td>
<td>2030.205</td>
</tr>
</tbody>
</table>
Subsidy on Agricultural Mechanization: Punjab Province (2)

**Concept:**
- Establish Mechanization Service Centers--Machinery Pools
- Collaborate with Private Sector on cost sharing basis @ 50:50
- Incentivize private sector investments to Tackle Mechanization gap

**Conditions:**
- JVs be preferred for selection of Service Providers
- Center to purchase hi-tech machinery from pre-qualified firms.
- Center provides in-demand [Machines](#) except [Negative list](#) on rental basis
- Operate Center at least four years
- Performance guarantee@ 10% of Private share for 04 years.
- Operating/maintenance cost be borne by Service Provider
Sustainability--Subsidy : Punjab Province (3)

- Conduct Survey to ensure Stakeholders’ participation
- Create awareness in farming community about Hi-Tech Machinery
- Build Service Providers’ Capacity on operation and maintenance.
- Prefer Firms already Providing Agricultural Services in area.
- Regulate Service Provision & Renting Mechanism
- Provide Technical Support after Project Period
- Create Success Stories Stimulating Private Sector to Establish such Centers without Govt. support
Sindh Bank Tractor Subsidy Scheme (2012 & Till Date)

- Tractor Price 0.9 million: subsidy 0.200 million
- Tractor Price over 0.9 million: subsidy 0.300 million
- Balloting process for selection of beneficiaries
- Locally manufactured Tractors are offered
- Sindh province resident Farmers having more than 25 acres are eligible
- Subsidized tractors cannot be sold or transferred for at least three (03) years
- More than one thousand farmers get tractors’ subsidy p.a.
- Application form for availing tractor Subsidy
Thank you
Specimen Application Form for Availing Subsidy
Application Form Sindh Tractor Subsidy Scheme
# List of Suggested Machinery and Equipment

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Description</th>
<th>Estimated price (Rs. In million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Tractor 85 HP (4WD)</td>
<td>1.700</td>
</tr>
<tr>
<td>2.</td>
<td>Sugarcane whole stalk harvester (tractor mounted)</td>
<td>6.00</td>
</tr>
<tr>
<td>3.</td>
<td>Groundnut planter (imported)</td>
<td>1.000</td>
</tr>
<tr>
<td>4.</td>
<td>Reaper binder (tractor mounted)</td>
<td>0.750</td>
</tr>
<tr>
<td>5.</td>
<td>Silage baler (Tractor pulled)</td>
<td>1.500</td>
</tr>
<tr>
<td>6.</td>
<td>Hay baler (tractor pulled)</td>
<td>2.500</td>
</tr>
<tr>
<td>7.</td>
<td>Wheat chaff straw (Bhoosa) baler (mobile unit)</td>
<td>0.700</td>
</tr>
<tr>
<td>8.</td>
<td>Reversible MB Plow (3 bottom)</td>
<td>1.000</td>
</tr>
<tr>
<td>9.</td>
<td>Hydraulic disc harrow (18 discs)</td>
<td>0.500</td>
</tr>
<tr>
<td>10.</td>
<td>Combine harvester</td>
<td>20.000</td>
</tr>
</tbody>
</table>
## Negative List of Implements

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Implement</th>
<th>Implementation Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Laser Leveler (Japanese)</td>
<td>25</td>
</tr>
<tr>
<td>2</td>
<td>Land Leveler (Rear Blade)</td>
<td>26</td>
</tr>
<tr>
<td>3</td>
<td>Land Leveler (Front Blade)</td>
<td>27</td>
</tr>
<tr>
<td>4</td>
<td>M. B. Plow</td>
<td>28</td>
</tr>
<tr>
<td>5</td>
<td>Chisel Plow</td>
<td>29</td>
</tr>
<tr>
<td>6</td>
<td>Disc Harrow</td>
<td>30</td>
</tr>
<tr>
<td>7</td>
<td>Rotavator</td>
<td>31</td>
</tr>
<tr>
<td>8</td>
<td>Spring tine Cultivator</td>
<td>32</td>
</tr>
<tr>
<td>9</td>
<td>Cultivator with Crumbler</td>
<td>33</td>
</tr>
<tr>
<td>10</td>
<td>Disc Plow</td>
<td>34</td>
</tr>
<tr>
<td>11</td>
<td>Double Coulter Drill with Fertilizer</td>
<td>35</td>
</tr>
<tr>
<td>12</td>
<td>Seed Drill with Fertilizer Attachment (Rabi)</td>
<td>36</td>
</tr>
<tr>
<td>13</td>
<td>Zero Tillage Drill</td>
<td>37</td>
</tr>
<tr>
<td>14</td>
<td>Kharif Drill for Cotton Sowing</td>
<td>38</td>
</tr>
<tr>
<td>15</td>
<td>Band Placement Drill</td>
<td>39</td>
</tr>
<tr>
<td>16</td>
<td>Zone Disc Tiller Drill</td>
<td>40</td>
</tr>
<tr>
<td>17</td>
<td>Bed &amp; Furrow Shapper Planter</td>
<td>41</td>
</tr>
<tr>
<td>18</td>
<td>Sugarcane Planter</td>
<td>42</td>
</tr>
<tr>
<td>19</td>
<td>Bed &amp; Furrow Drill (Wheat &amp; Maize, Cotton)</td>
<td>43</td>
</tr>
<tr>
<td>20</td>
<td>Sugarcane Ridger</td>
<td>44</td>
</tr>
<tr>
<td>21</td>
<td>Cotton Ridger with Fertilizer</td>
<td>45</td>
</tr>
<tr>
<td>22</td>
<td>Bed Intercultural Equipment</td>
<td>46</td>
</tr>
<tr>
<td>23</td>
<td>Sugarcane Stubble Shaver</td>
<td>47</td>
</tr>
<tr>
<td>24</td>
<td>Knapsack Sprayer (Hand Operated)</td>
<td>48</td>
</tr>
</tbody>
</table>