MINISTRY OF INDUSTRY AND AGRICULTURE

MONGOLIAN AGRICULTURAL MECHANIZATION DEVELOPMENT

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Crop Production Policy Implementation and Coordination Department
COUNTRY PROFILE

Geography: Northern Asia, between China and Russia, landlocked

Territory: 1.566.500 sq. Km

Population: 2.754.685 (as of 2010)

Capital: Ulaanbaatar

GDP: $8.506 billion
Per capita $3,042 (as of 2011)

Terrain: vast semi desert and desert plains, grassy steppe, mountains in west and southwest; Gobi Desert in south-central

Climate: continental (large daily and seasonal temperature ranges: lowest -40°C; highest 38°C)

Precipitation: 200-350 mm in a year

Land use: arable land: 1%
permanent pastures: 80%
forests and woodland: 9%
other: 10%
# WEATHER CHARACTERISTICS

<table>
<thead>
<tr>
<th>Season</th>
<th>Period</th>
<th>Temperature (°C)</th>
<th>Ave. Temp. (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring</td>
<td>Apr.15~Jun.15</td>
<td>0 ~25</td>
<td>8 ~12</td>
</tr>
<tr>
<td>Summer</td>
<td>Jun.15~Aug.31</td>
<td>15 ~40</td>
<td>22 ~30</td>
</tr>
<tr>
<td>Autumn</td>
<td>Sep.1~Oct.15</td>
<td>10 ~0</td>
<td>4 ~6</td>
</tr>
<tr>
<td>Winter</td>
<td>Oct.15~Apr.15</td>
<td>-9 ~-40</td>
<td>-10 ~-20</td>
</tr>
</tbody>
</table>
Mongolia's manufacturing sector of the economy are **AGRICULTURE** and **MINING**.

Agriculture sector is an intensively growing main traditional economic sector.
Agricultural sector produces 21.7% of total GDP.
80% livestock and 20% crop sector.
40% of total working force is worked in agricultural sector.
Main crops are wheat-100%, potato -100%, vegetables-60% / local market total consumption /
Meat, and dairy products -100%
Total livestock at the end of 2012 has reached approximately 44 million herds.
Main agricultural export product: Leather, organic cashmere, meat, sheep and camel wool.
Agriculture:
20.6% of total GDP; 41% of labor force

Crop production:
1% from the total territory; 15% of total agriculture labor force

Animal husbandry:
80% from the total territory; 85% of total agriculture labor force

Cereals (wheat, rye and oats)

Potato, Vegetable, Fruit

Cattle, Sheep, Goat, Camel, Horse
Land use for Crop production,
(Total 1322,8 thous. ha)

- Arable land: 156.2
- Planted area: 330.3
- Fallow: 429.4
- Irrigated: 295.7
- Abandoned: 46.5
## CROP PRODUCTION ENTITIES

<table>
<thead>
<tr>
<th>Field</th>
<th>Number of entities</th>
<th>Land /ha/</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-500 ha</td>
<td>811</td>
<td>127.856</td>
</tr>
<tr>
<td>500-1000 ha</td>
<td>115</td>
<td>78.560</td>
</tr>
<tr>
<td>1000-3000 ha</td>
<td>130</td>
<td>203.656</td>
</tr>
<tr>
<td>3000 and more ha</td>
<td>28</td>
<td>122.457</td>
</tr>
<tr>
<td>TOTAL (as of 2009)</td>
<td>1084</td>
<td>532.529</td>
</tr>
</tbody>
</table>
The general agriculture policies are following:

- Self sufficiency of the stable crop production such as wheat, potato and main vegetable species.
- Sustainable supply of safety food and ecologically pure crop production to the consumers.
- Reduction of the poverty in rural area through income diversification due to engaging small vegetable and fruit farming.
POLICY FOR CROP PRODUCTION SECTOR

- "Green Revolution" national programme /1998~2012/
- State policy toward food and agriculture /2003~/
- "Third crop rehabilitation campaign" national programme for development of crop production /2008~2010/
- "Seabuckthorn" programme /2010~2016/
GOVERNMENT SUBSIDIES IN CROP PRODUCTION SECTOR, 2009-2013

- 50% off from the price of new and advanced technique (tractors, combines)
- Import and VAT tax free for new and advanced technique
- Loan for seed and fuel, fertilizer
- Financial incentives for wheat (appr. $50-70 per tn) per year
- Final product purchase
- Construction and rehabilitation of Irrigation system (30% free)
- Construction of water reservoir and dams (free)
- Soil analysis of cropping area (579,300 ha)
- 50% off for greenhouse
- Tools and seeds for vegetable and potato (free from charge)
- All type of short time trainings (free from charge)
- Agricultural Exhibitions and Field Demonstrations (no charge to participate and visit)
<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat supply</td>
<td>27.5%</td>
<td>105.6%</td>
</tr>
<tr>
<td>Potato supply</td>
<td>88.7%</td>
<td>152.0%</td>
</tr>
<tr>
<td>Vegetable supply</td>
<td>48.8%</td>
<td>62.6%</td>
</tr>
<tr>
<td>Technical renovation</td>
<td>40%</td>
<td>70%</td>
</tr>
<tr>
<td>Arable land usage</td>
<td>260,800 ha</td>
<td>672,500 ha</td>
</tr>
<tr>
<td>Irrigated area</td>
<td>20,350 ha</td>
<td>46,548 ha</td>
</tr>
</tbody>
</table>
TOTAL HARVEST /2008-2012* ESTIMATED/

Cereals, thous. tn

- 2008: 212.8
- 2009: 391.6
- 2010: 355.0
- 2011: 446.0
- 2012: 481.0

Potato, thous. tn

- 2008: 142.1
- 2009: 156.0
- 2010: 169.0
- 2011: 199.2
- 2012: 208.9

Vegetables, thous. tn

- 2008: 80.6
- 2009: 81.4
- 2010: 90.3
- 2011: 105.2
- 2012: 99.4

Fruits, tn

- 2009: 384.1
- 2010: 599
- 2011: 881
- 2012:
AGRICULTURAL MACHINERY

Current  40 %
Future goal  5 %

40 %  55 %  20 %
40 %  40 %
RESULTS

- Overall capacity of tractors and combines reduced planting time to 12-14 days and harvesting and cultivating fallow are in 35-38 days.
- The quality of fallow is improved and the productivity from each hectar increased by 0.6 tn in the last 2 years.
- Transferred into no tillage technology from plowing technology. As a result, soil erosion decreased.
- Reduced operation costs
Opportunity is created to assist to small farmers without any techniques for running their businesses by installing public equipment. For example, public service units which provide technical services were established in 54 soums of 14 provinces.

Interest to invest in crop production sector is increased (food and flour processing etc)

Advanced technologies are being transferred from World leading brands such as John Deere, Challenger, Sun Flower, Class, Morris and some companies opened their dealer companies.
FUTURE OBJECTIVES

- Technical renovation and advanced technology
- Develop irrigated agriculture
- Improve quality of seeds and its supply
- Increase the capacity of storing facilities and elevators
- Develop vegetable and fruit production
- Capacity building of the sector
- Attain self sufficiency with wheat, potatoes, vegetable and develop crop production for export purpose.
- Develop export oriented crop production
FUTURE OBJECTIVES

- Improve the legal environment on crop land usage, ownership
- Improve the legal condition to protect cropping area and harvest from livestock, to set up border area for integrated crop and livestock production
- Create appropriate crop insurance system
- Increase crop production through investment from the profit of mining sector
GRAIN PRODUCTION DEVELOPMENT, DIRECTION

Current extent

<table>
<thead>
<tr>
<th>Entity</th>
<th>Distribution Fieldi</th>
<th>Cropi</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>39 Entity</td>
<td>171.8 thousand hectare</td>
<td></td>
<td>171.8 thousand hectare</td>
</tr>
<tr>
<td>130 Entity</td>
<td>202.3 thousand hectare</td>
<td></td>
<td>373.8 thousand hectare</td>
</tr>
<tr>
<td>115 Citizen, Entity</td>
<td>78.6 thousand hectare</td>
<td></td>
<td>86.2 thousand hectare</td>
</tr>
<tr>
<td>811 Citizen, Entity</td>
<td>127.8 thousand hectare</td>
<td></td>
<td>272.8 thousand hectare</td>
</tr>
<tr>
<td>Citizen-431 Entity-660 Total-1091</td>
<td>≤ 500 hect.</td>
<td>501-999 hect.</td>
<td>1000-2999 hect.</td>
</tr>
</tbody>
</table>

Goal

<table>
<thead>
<tr>
<th>Distribution Fieldi</th>
<th>Cropi</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>765.0 thousand hectare</td>
<td>610.0 thousand hectare</td>
<td>1375.0 thousand hectare</td>
</tr>
</tbody>
</table>

- Adapt advanced technology for over 40%
- Include in renewal of High Performance technology
- Include in renewal of Medium performance technology
- Include and develop into a cooperative for technology renewal on a voluntary base
Current Supply - 52%.
Mission: Supply 100% the domestic needs of vegetable by 2016.
/2012-2016 Government Action Plan, Article 6/
MISSION TO INCREASE POTATO AND VEGETABLE PRODUCTION

<table>
<thead>
<tr>
<th>Performance</th>
<th>2012</th>
<th>2016</th>
<th>Results to Reach 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population needs, thousand ton</td>
<td>134,7</td>
<td>165,7</td>
<td>140,4</td>
</tr>
<tr>
<td>Domestic Production</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>thousand ton</td>
<td>191,9</td>
<td>98,9</td>
<td>191,9</td>
</tr>
<tr>
<td>percentage</td>
<td>142,7%</td>
<td>52%</td>
<td>136,6%</td>
</tr>
<tr>
<td>Import, thousand ton</td>
<td>3,2</td>
<td>48,5</td>
<td>0</td>
</tr>
<tr>
<td>thousand ton</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>percentage</td>
<td>2,3%</td>
<td>29,2%</td>
<td>0</td>
</tr>
<tr>
<td>Potato excess processing requirement, thousand ton</td>
<td>57,2</td>
<td>0</td>
<td>65,5</td>
</tr>
<tr>
<td>Current capacity of potato, vegetable processing industry, thousand ton</td>
<td>0</td>
<td>15,4</td>
<td>5,5</td>
</tr>
</tbody>
</table>

Mongolian population demands 165.0 thousands of tones potato, 187.6 thousands of tones vegetable in a year. Currently, we harvest more than 35.0 thousands of potato demands of a year.
Following summarizes the background, economic estimates and benefit of procurement of small scale tractors with match implements under soft loan from the Government of China.

<table>
<thead>
<tr>
<th>FOTON FT-200</th>
<th>FOTON FT-250</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>20 hp</td>
</tr>
<tr>
<td></td>
<td>Hay raker and mover</td>
</tr>
<tr>
<td>Origin</td>
<td>China</td>
</tr>
<tr>
<td>Capacity</td>
<td>25 hp</td>
</tr>
<tr>
<td>Set</td>
<td>Plow</td>
</tr>
<tr>
<td>Origin</td>
<td>China</td>
</tr>
</tbody>
</table>
MECHANIZATION OF VEGETABLE PRODUCTION
PROCESS

20 ХУВИЙН УРЪДЧИЛГАА ТӨЛБӨРТЭЙ ЗЭЭЛЭЭР ОЛГОЖ БАЙНА.

Тымсний р, ухагчийн иж б рдэл
5,0 сая

рсэлгээ суулгагч машин 7,4 сая төгрөг
MECHANIZATION OF POTATO PRODUCTION PROCESS

Planting  Hilling  Harvesting  Sorting
GREEN HOUSE MECHANIZATION
THANK YOU FOR YOUR ATTENTION