

Mongolia

Mongolian Agricultural Mechanization Development

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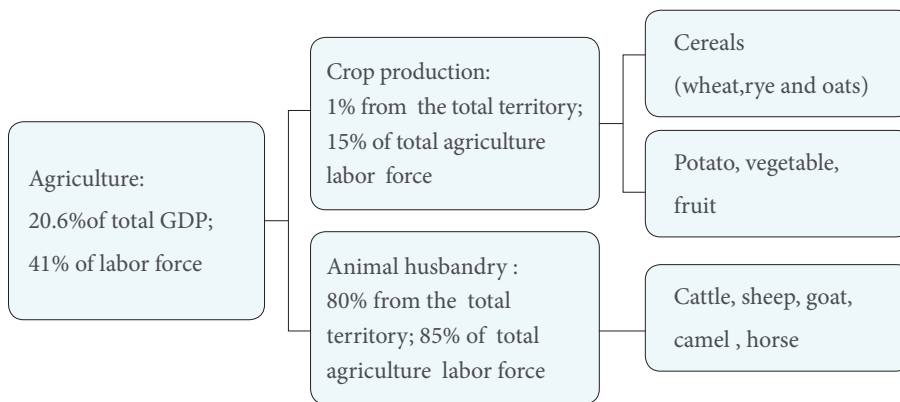
Dr. Davaasuren Yesun Erdene obtained his Bachelor's Degree in Agricultural Engineering at the Mongolian State University of Agriculture in 2000; Master and Ph. D Degree in Horticulture at Kangwon National University of Korea between 2002 and 2008. From 2012 to present, he is the Senior Officer of Crop Production Policy Implementation and Coordination Department, Ministry of Industry and Agriculture of Mongolia. From 2010 to 2012, he held the position of Head of Technique and Technology Division, Ministry of Food Agriculture and Light Industry.

Mongolia is located in Northern Asia, between China and Russia. It is a landlocked country with a total territory of 1,566,500 Km² and 2,754,685 population (as of 2010). Its GDP has reached USD 8,506 billion, while per capita GDP was USD 3,042 in 2011. The terrain in Mongolia includes vast semi desert and desert plains, grassy steppe, mountains in west and southwest and Gobi Desert in south-central. It has continental climate with large daily and seasonal temperature ranges from lowest -40oC to highest 38oC. The precipitation is 200-350 mm in a year. Arable land in Mongolia accounts for only 1%, while 80% are permanent pastures, 9% are forests and woodland and 10% are for other purposes.

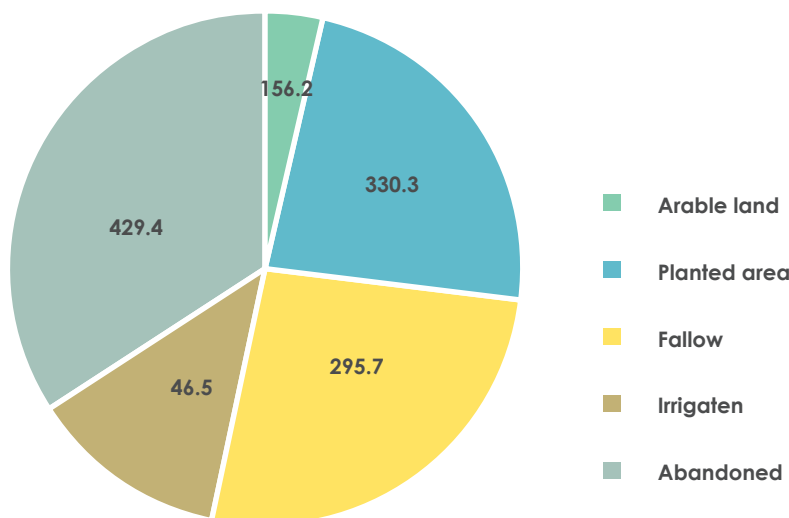


The main manufacturing sectors in Mongolia are agriculture and mining. Agriculture sector is the main traditional economic sector with intensive growth. Agricultural sector produces 21.7% of total GDP, among which livestock constitutes 80%, and crop production accounts for 20% of the total. 40% of total working force is in agricultural sector. The main crops in Mongolia are wheat, potato, and vegetables. The amount of livestock has reached approximately 44 million herds by 2012. And, the main agricultural export products include leather, organic cashmere, meat, sheep and camel wool.

The agriculture profile of Mongolia is showed below:



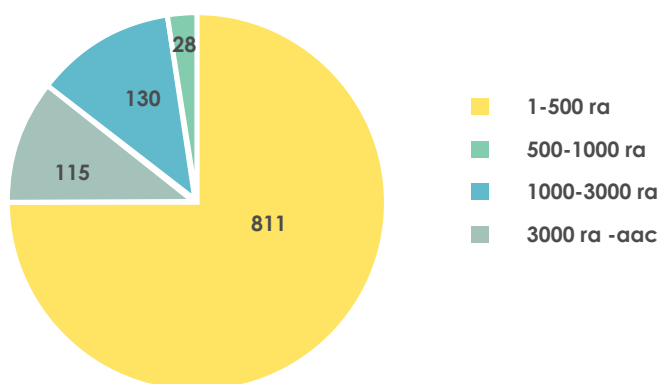
The diagram below illustrates the condition of land use for crop production in Mongolia:



Land use for Crop production, (Total 1322,8 thous. ha)

The crop production entities in Mongolia are showed below:

Field	Number of entities	Land / ha /
1-500 ha	811	127.856
500-1000 ha	115	78.560
100-3000 ha	130	203.656
3000 and more ha	28	122.457
TOTAL (as of 2009)	1084	532.529



Crop Production Entities

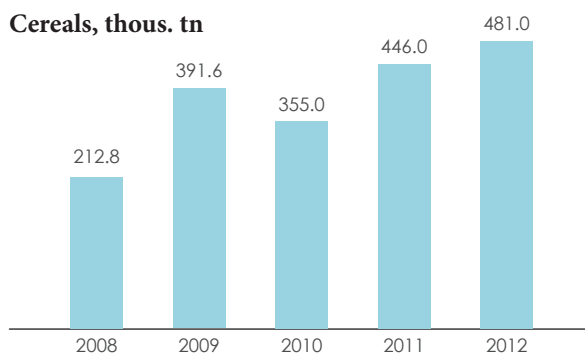
The main purposes of the agriculture policies applied in Mongolia are to ensure self sufficiency of the stable crops such as wheat, potato and main vegetables, to supply safe food to the consumers and maintain ecological crop production, and to reduce poverty in rural area through income diversification. Policies adopted in Mongolia for crop production sector include “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), and “Seabuckthorn” programme (2010~2016). Mongolian government provides the following subsidies in crop production sector:

- 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, and fertilizer;
- financial incentives for wheat (appr. USD 50-70 per ton) per year;
- final product purchase;
- construction and rehabilitation of Irrigation system (30% free);
- free construction of water reservoir and dams;
- soil analysis of cropping area (579 300 ha);
- 50% off for greenhouse;

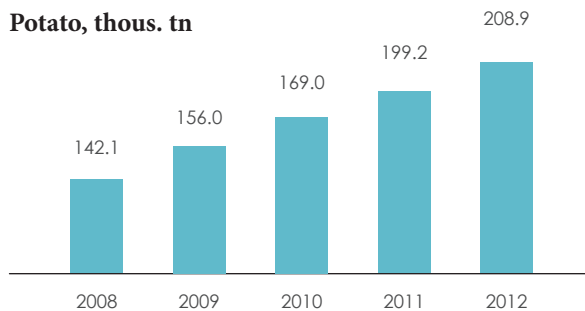
- free of charge of tools and seeds for vegetable and potato;
- free of charge of all type of short time trainings; and
- no charge to participate and visit agricultural exhibitions and field demonstrations.

The estimated total harvest of major crops in Mongolia between 2008 and 2012 are showed below:

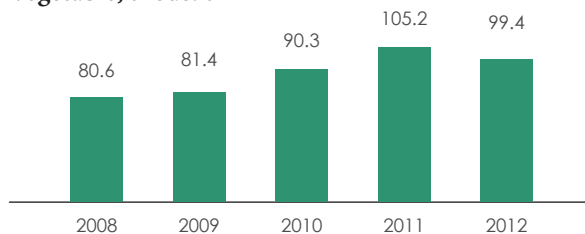
Cereals, thous. tn



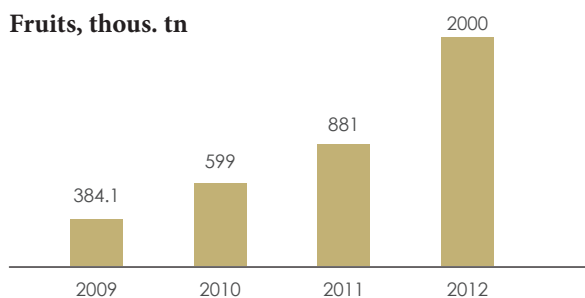
Potato, thous. tn



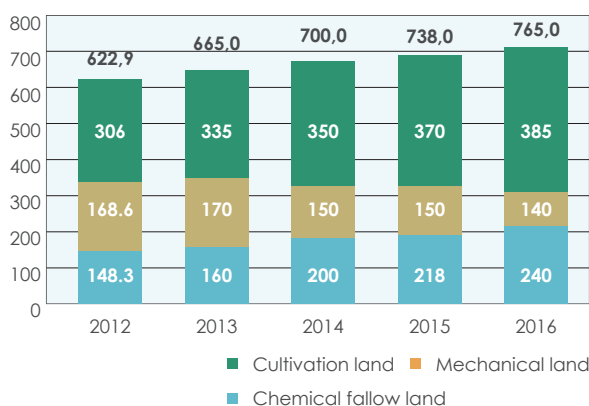
Vegetable, thous. tn



Fruits, thous. tn



And the current condition and designated development goals in terms of cultivation land, mechanical fallow land, and chemical fallow land are showed below:



Due to the various policies adopted including the subsidies provided, agricultural mechanization in Mongolia has developed rapidly, which helped to improved the performance and efficiency of agriculture significantly. For example, using tractors and combines helped to reduce the working time for planting to 12-14 days, and harvesting and cultivating fallow to 35-38 days. The quality of fallow is improved and the productivity from each hectare increased by 0.6 ton in 2011 and 2012. Technology has been transferred into no tillage technology from plowing technology. As a result, the soil erosion has decreased. The operation cost of crop production has been reduced. Soil moisture has been improved through making straw cover by using wheat combine and straw spreader at the same time. In addition, opportunity is created to assist the small farmers to run their businesses by installing public equipment. For example, public service units which provide technical services were established in 54 soums (equivalent to township) of 14 provinces. Return on investment in crop production sector is increased (food and flour processing etc). And advanced technologies are being transferred from World leading brands such as John

Deere, Challenger, Sun Flower, Class, and Morris, and some of them opened their dealer companies in Mongolia.

In terms of the future development of agriculture in Mongolia, the following objectives and areas are designated:

- technical renovation and advanced technology;
- developing irrigated agriculture;
- improving quality of seeds and its supply;
- increasing the capacity of storing facilities and elevators;
- developing vegetable and fruit production;
- capacity building of the sector;
- attaining self sufficiency with wheat, potatoes, vegetable and developing crop production for export purpose;
- developing export oriented crop production;
- improving the legal environment on crop land usage, ownership;
- improving the legal condition to protect cropping area and harvest from livestock, to set up border area for integrated crop and livestock production;
- creating appropriate crop insurance system; and
- increasing crop production through investment from the profit of mining sector.

Currently, the country can supply 52% of the vegetable consumption. The 2012-2016, Government Action Plan/ Article 6 aims to supply 100% of the vegetable needs by 2016.

Performance		2012			Results to Reach 2016	
		Potato	Vegetable	Potato	Vegetable	
Population needs, thousand ton		134,7	165,7	140,4	173,2	
Domestic Production	thousand ton	191,9	98,9	191,9	198,4	
	percentage	142,7%	52%	136,6%	115%	
Import, thousand ton	thousand ton	3,2	48,5	0	0	
	percentage	2,3%	29,2%	0	0	
Potato excess processing requirement, thousand ton		57,2	0	65,5	25,2	
Current capacity of potato, vegetable processing industry, thousand ton		0	15,4	5,5	47,5	