

AGRICULTURAL MECHANIZATION STATUS AND CONTEXT IN MYANMAR

BY

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Presentation

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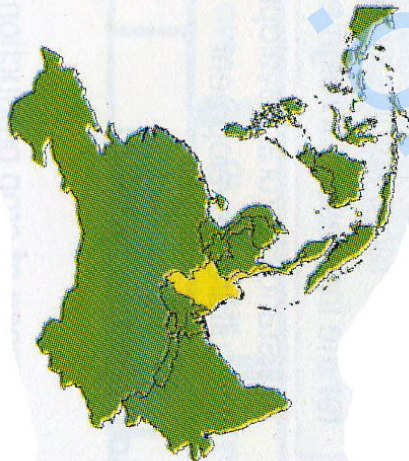


BRIEF INFORMATION OF MYANMAR



Location

Location	
Latitude:	9°32' - 28°31'
Longitude:	92°10' - 101°11'
Land frontier:	2099 km
with Thailand	235 km
with Laos	2227 km
with China	272 km
with Bangladesh	1453 km
Sea frontier:	
Rakhine coastline	713 km
Delta coastline	438 km
Tanintharyi coastline	1078 km



Climate

Tropical, sub-tropical and temperate climates

- **Rainy season (Mid-May → Mid-October)**
- **Dry cold season (Mid-October → Mid-February)**
- **Hot dry season (Mid-February → Mid-May)**

Population

Total Population - 59.13 million(2010)

Growth rate - 1.29 %

Population Density - 87 per sq: km

Urban Population - 18.13 million

Rural population - 41 million

Land Utilization

Type of land	Area (000) ha	Percent
Net sown area of crop land	11980	17.70
Current fallow land	240	0.36
Cultivable waste land	5610	8.29
Reserved forests	16900	24.98
Other forest area	16250	24.02
Unclassified land	16680	24.65
Total	67660	100

STATUS OF MANUFACTURING FARM MACHINERY

Government Sector-Three Ministries :

1. Ministry of Industry II ,
2. Ministry of Agriculture & Irrigation
3. Ministry of Cooperatives

1. Ministry of industry II : Distribution of Farm Machineries by Ministry of Industry II

Sr.No	Farm Machinery	Quantity Distributed					
		2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	
1	Farm Tractor(50hp)	186	253	265	526	425	
2	Power Tiller	315	1031	629	1131	1030	
3	Trailer(4Ton)	130	129	105	118	110	
4	Trailer(2Ton)	-	-	34	58	45	
5	Trailer(1Ton)	-	160	-	-	-	
6	3-Disc Harrow	73	96	59	236	220	
7	3-Disc Plough	72	46	44	-	-	
8	3-Disc Plough	-	-	635	124	100	
9	Water Pump(4")	714	2545	2249	2375	2150	

2. Ministry of Agriculture & Irrigation

Agricultural Mechanization Department (AMD)

-Three farm machinery factories manufacture :

Power tillers , threshers, cultivators, paddy reapers, mono wheel tractors, disc ploughs, disc harrows and farm implements



Farm Machinery Factory No(1) , Yangon



Farm Machinery Factory No(2) ,Kyaukse



Farm Machinery Factory No.(3), Ywa-tha-gyi

Distribution of farm machineries by AMD

Sr. No	Farm Machinery	Quantity Distributed										
		2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011
1	Power Tiller	5500	5826	4027	3657	4309	5867	6643	4610	3757	4144	5118
2	Reaper								82	42	224	155
3	Thresher										357	489
4	Puddler										338	581

Source: MOAI, Agricultural Mechanization Department.

TRACTOR HIRE SERVICE

For Operation and Maintenance of Farm Machinery

- * AMD provides Tractor Hire Service to farmers through 99 Tractor Stations
- * Farmers can rent machinery & implements from the nearest Tractor Station
- * Accomplish land preparation, land tilling, transplanting, harvesting, threshing by machine and operator of AMD
- * Provide agriculture machinery operation, maintenance to local farmers

AGRICULTURAL MACHINERY REPAIR

(2) Base workshops & (8) Medium workshops under AMD

- Provide tractor repair service for tractors from the Tractor Stations in the respected region
- Also provide repair service for farm machineries such as Power tillers, Threshers, Cultivators, Water Pumps, etc. owned by farmers
- Conduct trainings on operation, maintenance and repair for mechanics from the Tractor Stations .
- Disseminate technical know-how to private industries and local farmers

3. Ministry of Cooperative

* Cooperative Industries around Myanmar, manufacture : power threshers, water pumps, seeders, cultivators, oil expeller, threshing equipment

* Distribution to farmers from retail out let.

Distribution of farm machineries by Ministry of Cooperative

Sr. No	Farm Machinery	Quantity Distributed							
		2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011		
1	Power Thresher	80	87	108	123	135	164		
2	Thresher	88	265	269	376	60	57		
3	Water Pump(4")	211	238	277	381	165	212		
4	Seeder	368	393	450	510	600	807		
5	Cultivator	350	391	483	575	675	941		
6	Edible Oil Extractor	42	65	77	119	130	161		

Private Sector

- # Private companies and industries import agri- machineries from abroad**
- # Distributes to local farmers at their retail outlets or sale centers throughout Myanmar.**
- # Some private industries produce certain spare parts and assemble with imported engines and other precision parts such as injection pumps and nozzles .**
- # Import and Distribution of farm machinery by private companies during 2011**

Power tillers = 20000 units
Tractors = 200 units

* Nowadays, some farmers enable to operate tractors, power tillers, threshers, cultivators, weeders, trailers, and farm trucks

* They repair their farm machineries at the nearest workshops located at village tract or townships

* Farmers have lack of proper maintenance practices .

* Need to disseminate advance technical know how to farmers



UTILIZATION STATUS OF FARM MACHINERY

IN MYANMAR

2011

Sr. No.	Type of Machine	Quantity
1	Tractor	11479
2	Power Tiller (Hand Tractor)	199668
3	Power Thresher	37678
4	Manual Thresher	2147
5	Inter-cultivator	155487
6	Seeder	40314
7	Reaper	1441
8	Water pump	177032
9	Sprayer	130545

Farm Machineries Widely Used in Myanmar

Farm machineries mostly used in Myanmar for :

- Land preparation works
- harvesting and threshing works.
- Locally manufactured from the government factories and private industries
- Imported farm machineries from the neighboring countries China, Thailand, India.

Land Preparation Machinery



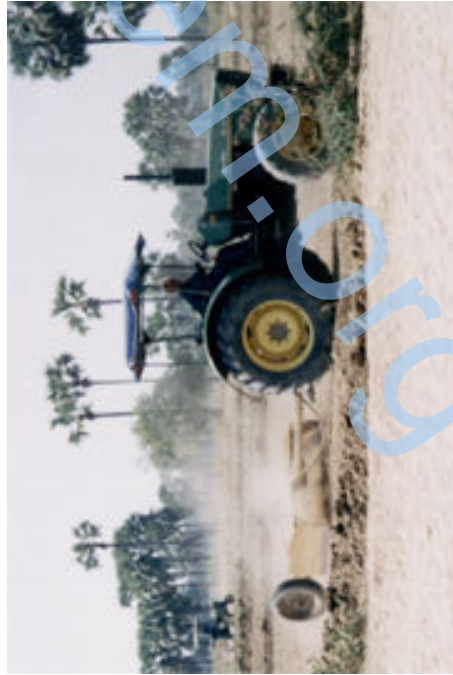
ZWE Tractor (50 HP)
Local Manufactured



SH-50 Tractor (50 HP)
imported From **CHINA**



SH-654 Tractor (65 HP)
imported From **CHINA**



JOHN DEERE-2800 Tractor (100 HP)
imported from **CHECKOSLOVAKIA**



TN-800 Tractor (80 HP)
imported from **CHINA**



Zetor-7011 Tractor (70 HP)
imported from **CHECKOSLOVAKIA**



Ly-16 Power Tiller (16HP)
Local Manufactured



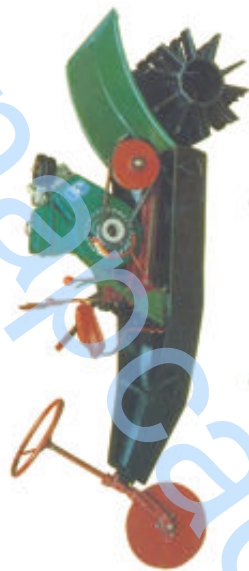
Ly-22 Power Tiller (22HP)
Local Manufactured



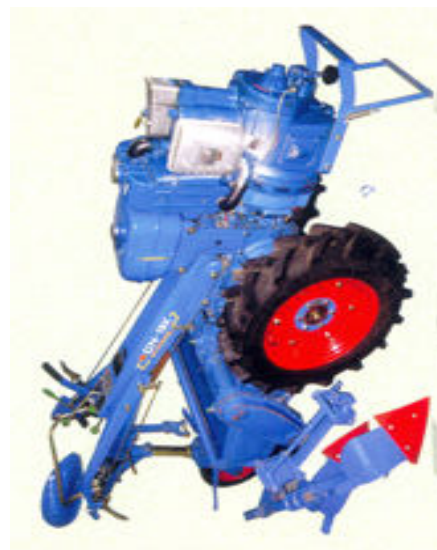
Iron Buffalo Power Tiller (8 HP)
import from Thailand



Mono Wheel Tiller (6HP)
Local Manufactured



Cultivating Roller Boat (6HP)
Local Manufactured



Gongnong (16 HP)
imported from CHINA



Sifang Power Tiller (16 HP)
imported from CHINA



Dongfeng Power Tiller (16HP)
imported from CHINA

Planting Machinery



Drum Seeder
Local Manufactured



YAMAR Transplanter
imported from **Japan**



Kuje Transplanter
imported from **Korea**

Harvesting & Threshing Machinery



AMR 994 Power Reaper
Local Manufactured

4GL Power Reaper
Import From **CHINA**



CH-1200 Combine Harvester
Local Manufactured



Thresher TH-60-U
Local Manufactured

Farm Transport Machinery



Farm Truck



Farm Trailer



Farm Trailer

www.unapcaem.org

POLICY AND INSTITUTIONAL ASPECTS

Basic Principles of the Union

Article 29:

The Union shall provide inputs, such as technology, investments, machinery, raw materials, so forth, for changeover from manual to mechanized agriculture.

Article 35:

The economic system of the Union is market economy system.

POLICY AND INSTITUTIONAL ASPECTS (Continued).....

**Government Encouragement to Agricultural
Mechanization Development**

- ◆ **Selling the farm machinery to the farmers on credit and installment payment systems**
- ◆ **Distributing farm machinery on agricultural loan from the Myanmar Agricultural Development Bank under the Ministry of Agriculture & Irrigation**
- ◆ **Custom duty and commercial tax exemption on agricultural machinery import.**

CONSTRAINTS

1. Technical inefficiencies

- Farmers' lack of proper knowledge for agricultural mechanization

2. Low adoption of proven facilities

- Many farmers still using cattle for land preparation, threshing
- Manual transplanting, harvesting and processing such as cleaning and drying

CONSTRAINTS

3. Inadequacy of capital of farmers

- Many farmers just started to transform from self-sufficiency to commercial farming
- A few rice specialization companies and contract farmers grow rice for commercial production
- Low investment leads to low income and low capital investment and inputs
- Due to inadequacy of loans and credits , farmers can not afford to buy appropriate agricultural machinery and implements

CONSTRAINTS

4. Insufficient extension activities

- Government agency(MOAI) provides extension service to village level by performance of extension workers
- Number of extension workers and facilities are limited due to governmental budget
- Extension activities can not cover entire change of agricultural production
- Still need private sector participation in this regard

CONSTRAINTS

5. Weak Information Systems

- Lack of delivery of information : new technologies, prices of machinery and implements, commodity prices, etc,
- Not accessible to farmers directly
- Only rely on government services & medias
- Public journals contains a few extent of agricultural information

CONSTRAINTS

6. Small Land Holding Size

- Most of farm holding size are small scales
- Narrow ; irregular shape ; fragmented plots
- No accessible farm road ; lack of drainage systems
- Need to carry out land development by land consolidation to reform mechanized farms

BEST PRACTICES

1. **Realization of benefits of practicing agricultural mechanization by farmers themselves**
 - Dissemination of technical know how to farmers
 - Demonstration on usage of farm machineries and implements in fields by technical agencies
 - Setting up accessible network for operation, repair and maintenance of machineries



2. Land Development works to reform mechanized farm

- Organizing neighboring farmers to cooperate land consolidation works
- Carrying out land development initially by government services, then participation by private sector
- Field demonstrations for expansion
- Provision of subsidies and long term loans to farmers for land development by themselves



3. Technical Cooperation among ASEAN, ESCAP members countries

- Exchange expertise, consultants and skill workers
- Technical cooperation programs : Training , Study tour, visit to outstanding adoptable areas
- Establish regional network for agricultural mechanization development like ANTAM

CONCLUSION

- Proper capacity building on agriculture machinery operation , maintenance and repair is critically needed for development of farm mechanization .
- The present capacity of the Government's departments are limited .
- Myanmar's growing private sector needs exposure to the latest technological development.
- Enhancing the capacity of both sectors and public-private partnership will assist to mechanize the agricultural sector.
- Collaboration among various sustainable agricultural mechanization (SAM) stake holders will strengthen and ensure the sustainable development contributing toward national and regional food security.

THANK YOU.