

Promoting Sustainable Agricultural Mechanization Strategy



Presented by

Zaw Khin

Director

Agricultural Mechanization Department

Ministry of Agriculture , Livestock and Irrigation

5th Regional Forum on Sustainable Agricultural Mechanization in Asia and the Pacific

12-14 December 2017, Kathmandu, Nepal



UNITED NATIONS
ESCAP

Economic and Social Commission for Asia and the Pacific

CSAM



I. Agricultural Mechanization Country Profile



☀ Land Area 676,577 sq. km.

☀ Population 51.41 million

☀ Urban Population 15.66 million

☀ Rural population 35.75 million

☀ Main Exports:

- Agricultural and forestry products
- natural gas
- gems

☀ Main Imports:

- Machinery
- transportation
- construction material
- industrial raw materials
- consumer goods

Land Utilization In Myanmar

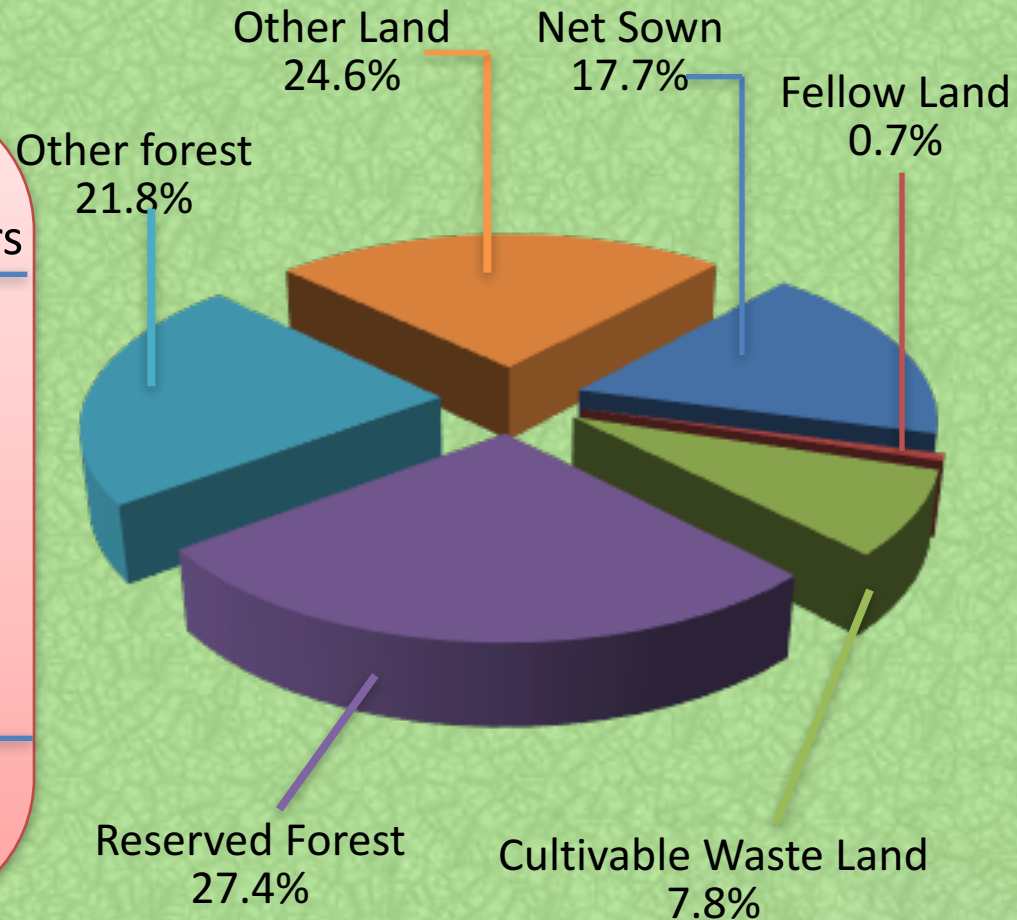
Type of Land

million Hacters

Net Sown Area	12.01
Fallow land	0.45
Cultivable Waste Land	5.25
Reserved Forest	18.55
Other Forest	14.74
Other Land	16.66

Total

67.66



Introduction

- Myanmar is basically an agrarian economy with almost two-third of its 60 million people , approximately 40 million , is dependent upon agriculture in rural areas.
- Myanmar is rich in natural resources and diverse in agro-ecological conditions, opportunities for doing business in agriculture are abundant along each and every segment of supply chain of various agricultural products.
- Farmland Consolidation is basic essential works for Agricultural Mechanization task for improvement of farmers income due to low losses and high quality crops production .
- Agricultural Mechanization Department is performing to transform conventional Agriculture to Mechanized Agriculture.

Agricultural Mechanization

- Utilization of farm machinery and equipment for various activities of agricultural production has been increased in both State and private sectors in attempts to boost the agricultural production.
- Increase cropping intensity has also expended the use of machinery from land preparation to harvesting and post-harvest activities. Required machinery are being produced and assembled local or imported for distribution to the farmers.

Sr.No	Type of machinery	Utilization (Qty)	Sold by AMD (Qty)
1	Tractor	29,531	773
2	Power Tiller	478,034	107,806
3	Combine Harvester	5,538	82



Utilization of Tractor, Power Tiller and Combine Harvester In Myanmar

Agricultural Mechanization

- Efforts are being made to totally eliminate the traditional way of threshing paddy on the threshing ground and to mitigate post-harvest losses through introduction of threshers and combine harvesters.
- Two years installment plan for agricultural machinery distribution to the farmers is being offered by the agricultural Mechanization Department (AMD) in order to have easily access and affordability by farmers. The farmers need only a thirty-five percent down payment of the machine's value. The remaining sixty-five percent will be paid in installments once in every year over the next two years.
- To enable local farmers to buy tractors, Agricultural Mechanization Department is cooperating with farming implement trading companies. The local farmers have to pay 10 % of the total price as a down payment and will be allowed to use the farming implement after making the down payment. The remaining 90 % has to be paid off in six equal installments in three years.

Agricultural Mechanization

- AMD arranges provision of farm mechanization services on land preparation, transplanting, harvesting, and threshing in paddy cultivation aiming to enhance the farmers' economy and social livelihood by increasing high quality products and mitigating losses.
- Land development activities for the transformation of conventional agriculture into mechanized agriculture and land consolidation process are being undertaken as follow:
 - a)Construction of farm roads
 - b)Construction of irrigation canals and drainages
 - c)Transforming small plots into acre or hectare systematic plots
- Establishment of modern-mechanized farms throughout the country enables farmers to increase their productivity by growing double and multiple crops. It makes farmers to get quick win through increase of crop production as well as per capita income.

Consolidated Mechanized Farmland in Myanmar

➤ 1996~2017 Oct 30



Sr.No	Region/ State	Hectare
1	Kachin State	855
2	Kayar State	442
3	Kayin State	1375
4	Sagaing Region	1193
5	Tanintharyi Region	267
6	Bago Region	5207
7	Magway Region	949
8	Mandalay Region	2246
9	Mon State	902
10	Rakhine State	437
11	Yangon Region	12437
12	Shan State	477
13	Ayeyarwaddy Region	4276
14	Naypyitaw Council Area	4119
	Total	35182

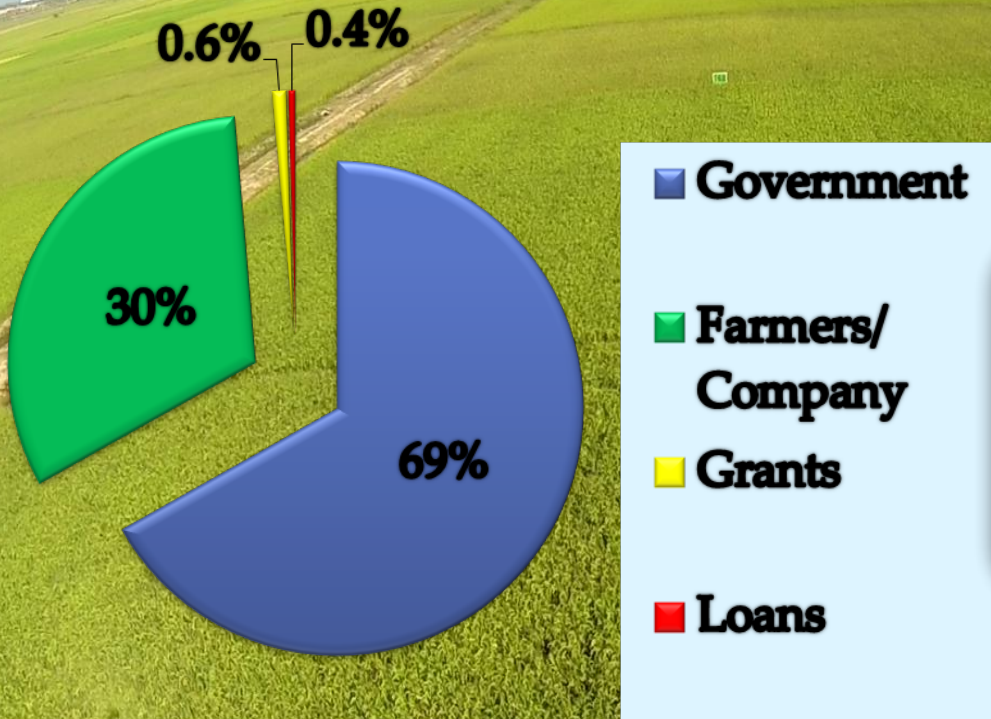
II. Agricultural Mechanization and Input Policy

- (1) To help support the increase use of well adapted quality farm machineries and equipment in an effort to transform into more modern mechanized agricultural system.
- (2) To support the process of transforming agricultural commodity value chains by Introducing machinery and equipment into postharvest and value-added activities , thereby enhancing the production of high quality agricultural products.
- (3) To support capacity building for technological development in agro–base industries in use of modern machineries and equipment in primary and value-added processing.

Agricultural Mechanization Strategies

1. Encourage farmers to consolidate their fields (including farm roads, drainage, irrigation networks, land levelling) to promote mechanization of land preparation, seeding and transplanting, as well as harvesting. In irrigated areas, this action could be promoted by water user associations.
2. Improve utilization of increased number of farm machinery by the public sector and rural farmers
3. Ensure a gradual handover or privatization of mechanization stations currently under the AMD to private sector or farmer organizations.
4. Training Program for farmers and private on proper operation and maintenance of farm machinery
5. Promote emergence of rural workshop for agricultural machinery repair and maintenance.
6. In collaboration with private sector, ensure timely availability of spare parts.
7. Provide financial analysis for use of alternative machinery to guide investment decision of farmers under different agro ecological conditions.

Consolidated Farmlands by government and Private sectors



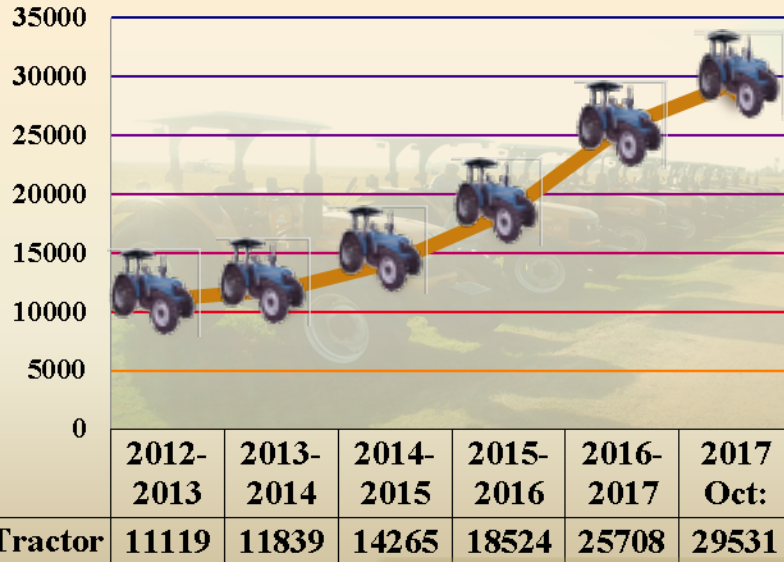
Total consolidated farmlands 35182 Hectares



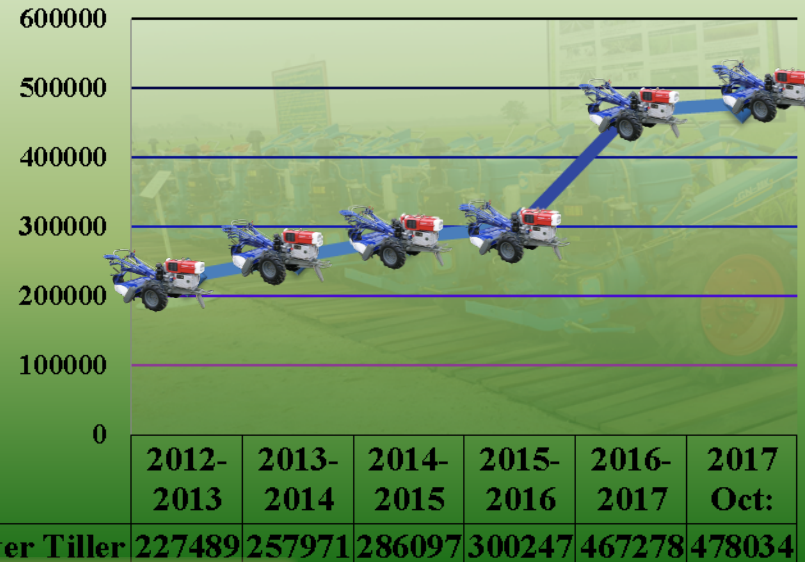
Development Direction Of Agriculture Machinery Utilization In Myanmar

Farm Machinery Owned By The Farmers In Myanmar(Last Five Years)

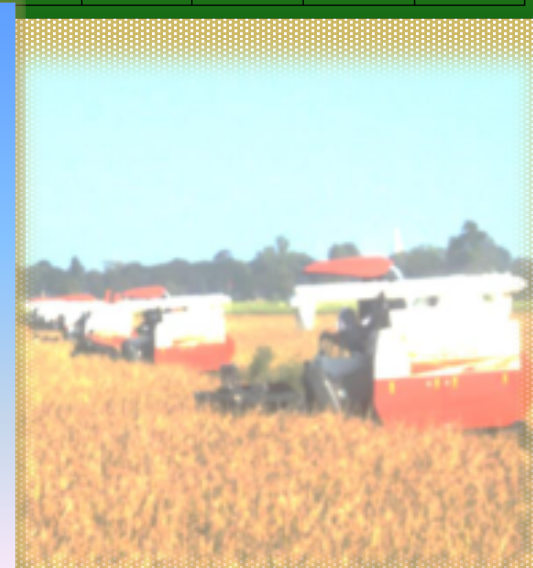
Tractor



Power Tiller

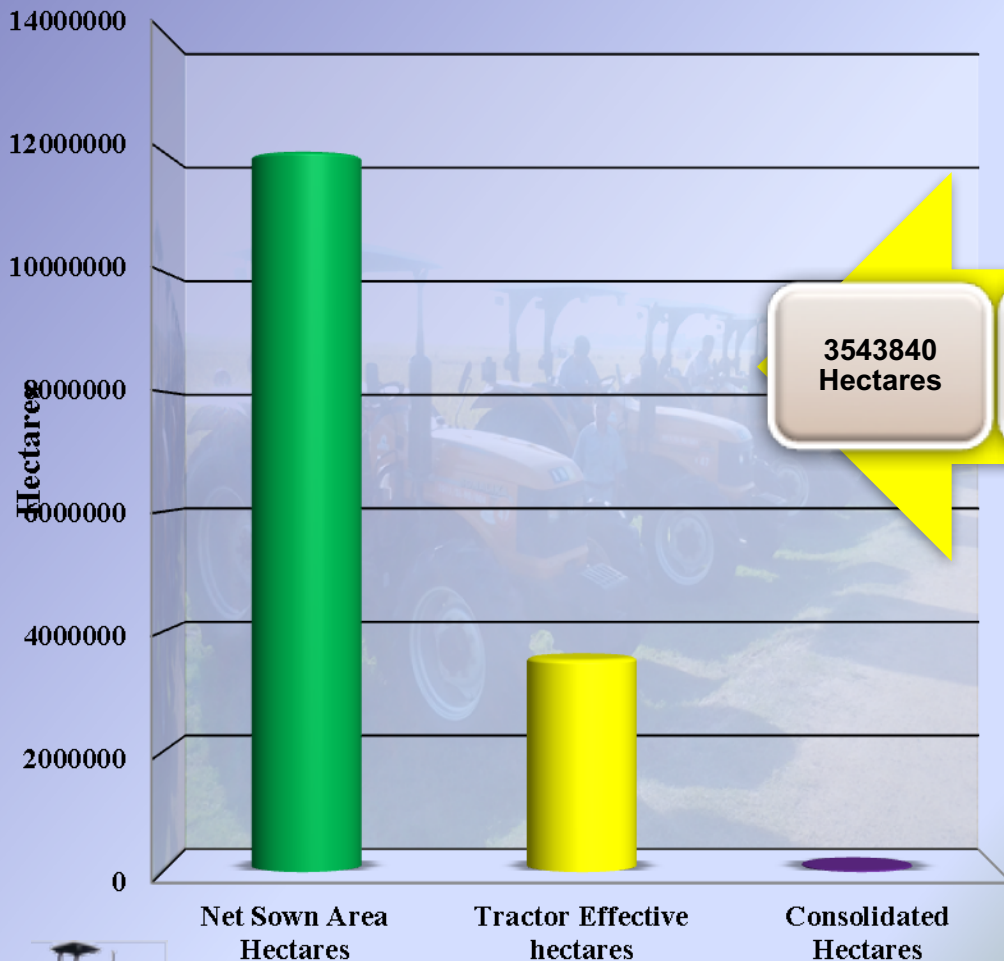


Combine Harvester



Machinery Effective Area Status In Myanmar

Tractor



Net Sown Area Hectares

Tractor Effective hectares

Consolidated Hectares

Net Sown Area Hectares

Tractor Effective hectares

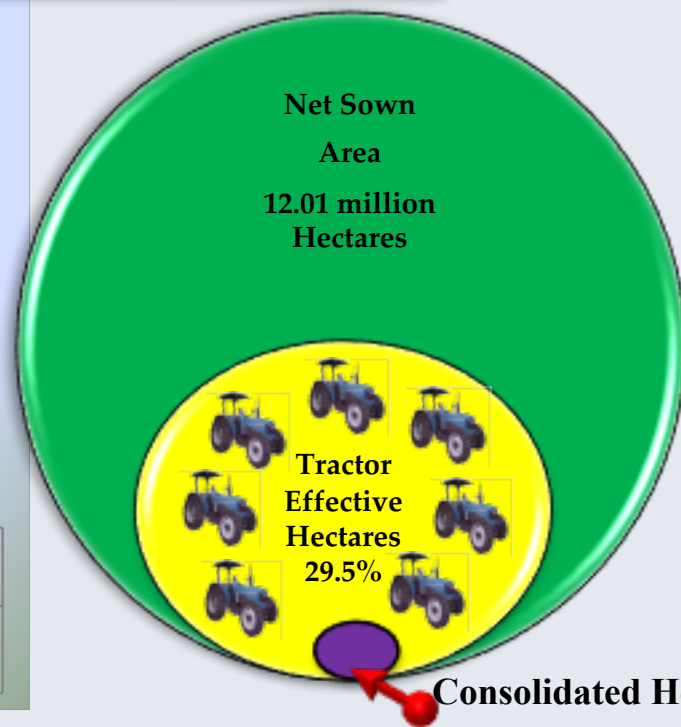
Consolidated Hectares

Tractor 29532 units

12010000

3543840

35182



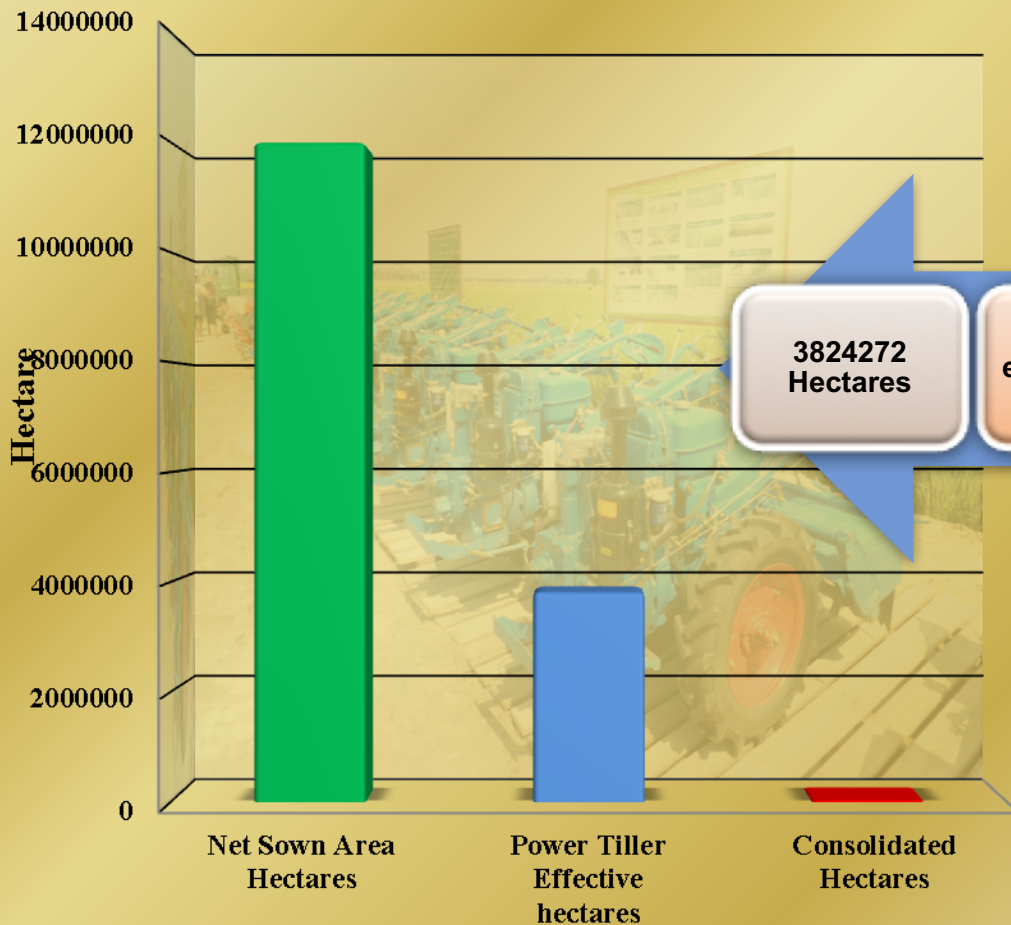
Net Sown Area
12.01 million Hectares

Tractor Effective Hectares
29.5%

Consolidated Hectares 0.29%

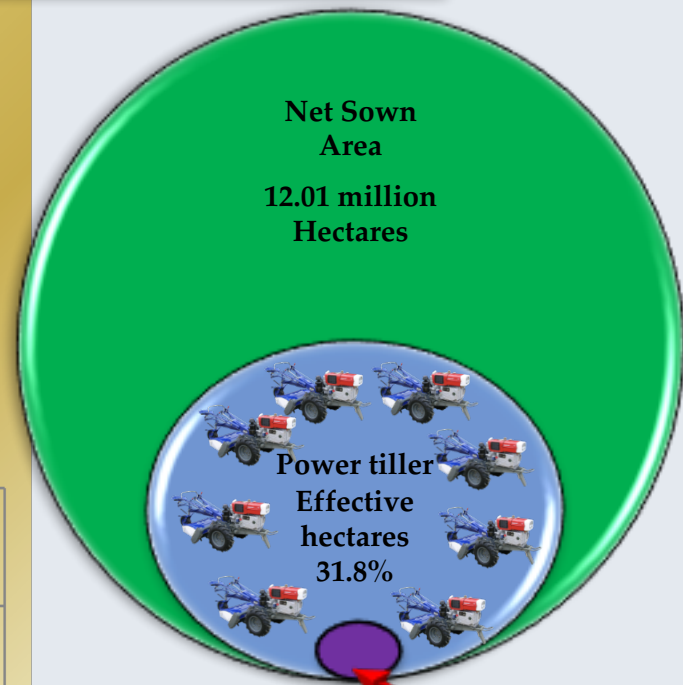
Machinery Effective Area Status In Myanmar


Power Tiller



8 Hectares effectiveness Power Tiller one unit

3824272 Hectares effectiveness Power Tiller 478034 unit

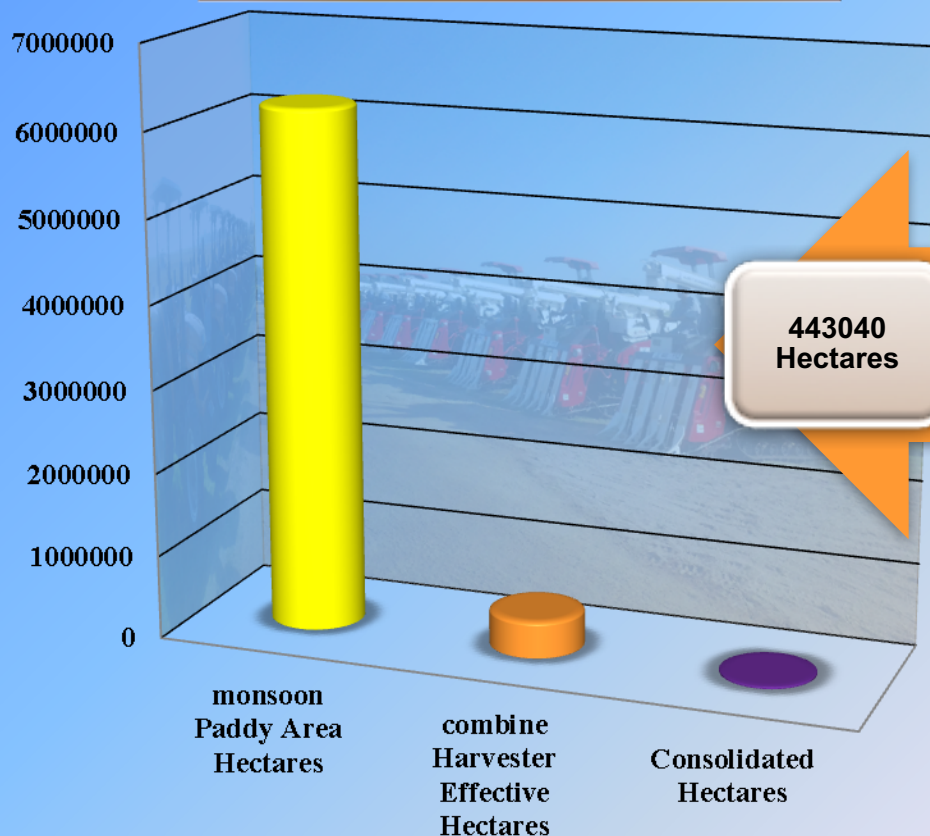


	Net Sown Area Hectares	Power Tiller Effective hectares	Consolidated Hectares
Power Tiller 478030 units	12010000	3824272	35182

Consolidated Hectares 0.29%

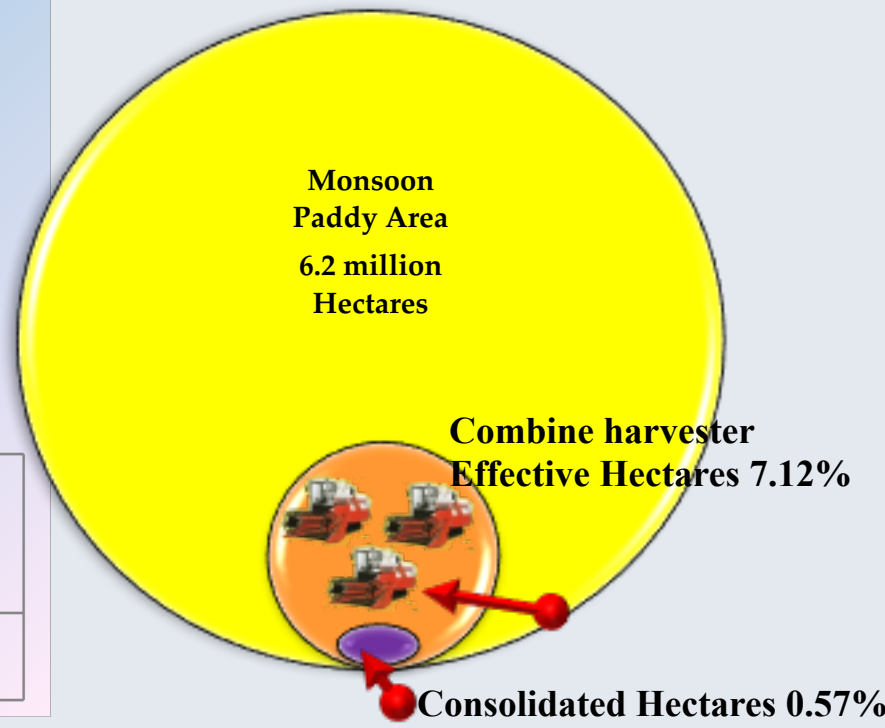
Machinery Effective Area Status In Myanmar


Combine Harvester



80 Hectares effectiveness
Combine Harvester one unit

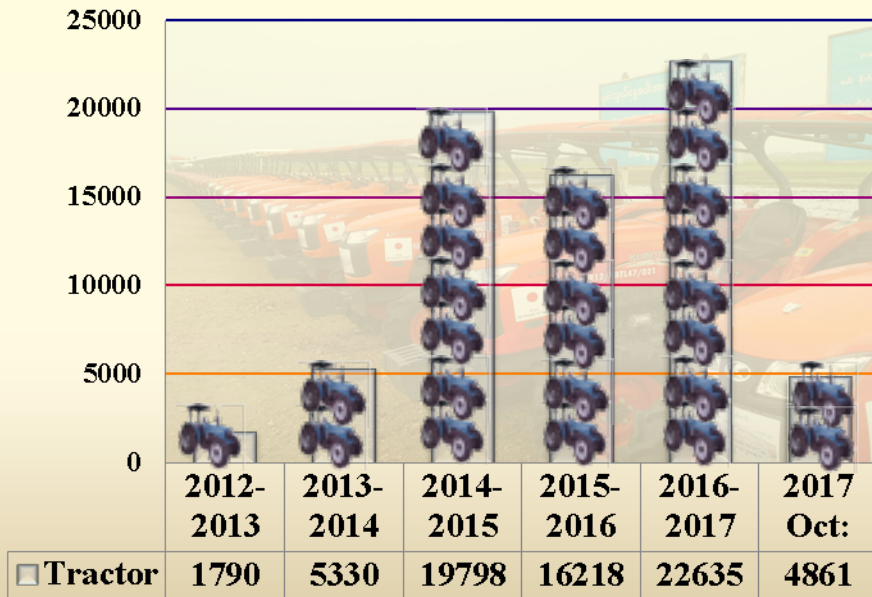
443040 Hectares effectiveness
Combine Harvester 5538 unit



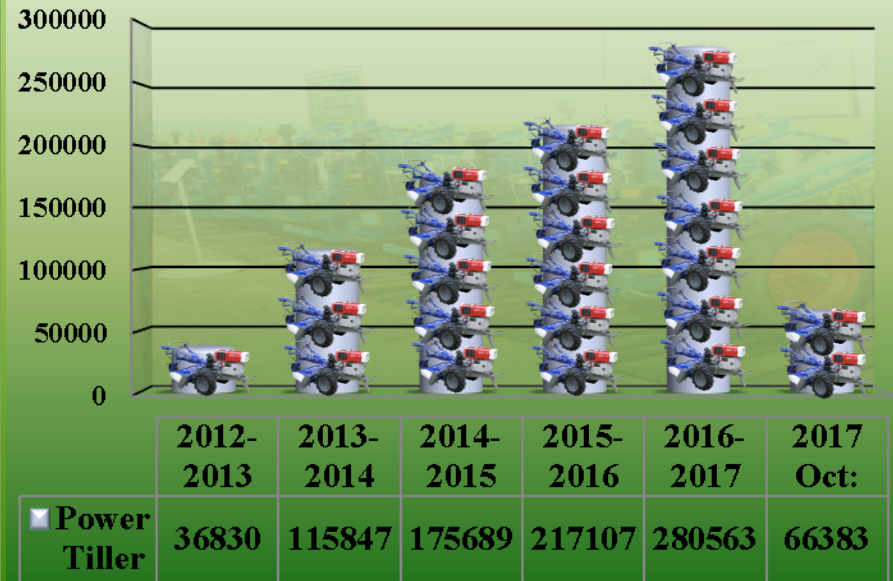
	monsoon Paddy Area Hectares	combine Harvester Effective Hectares	Consolidated Hectares
 ■ Combine Harv; 5538 units	6218234	443040	35182

Farm Machinery imported by the private sector in Myanmar(Last Five Years)

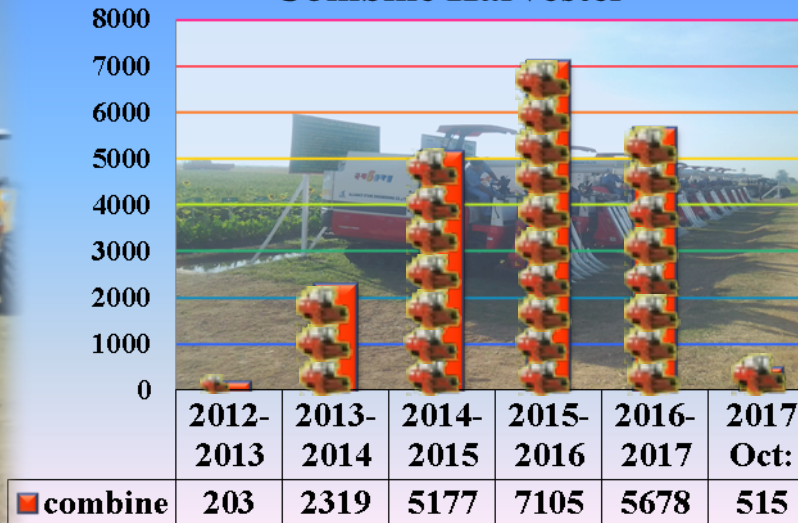
Tractor



Power Tiller



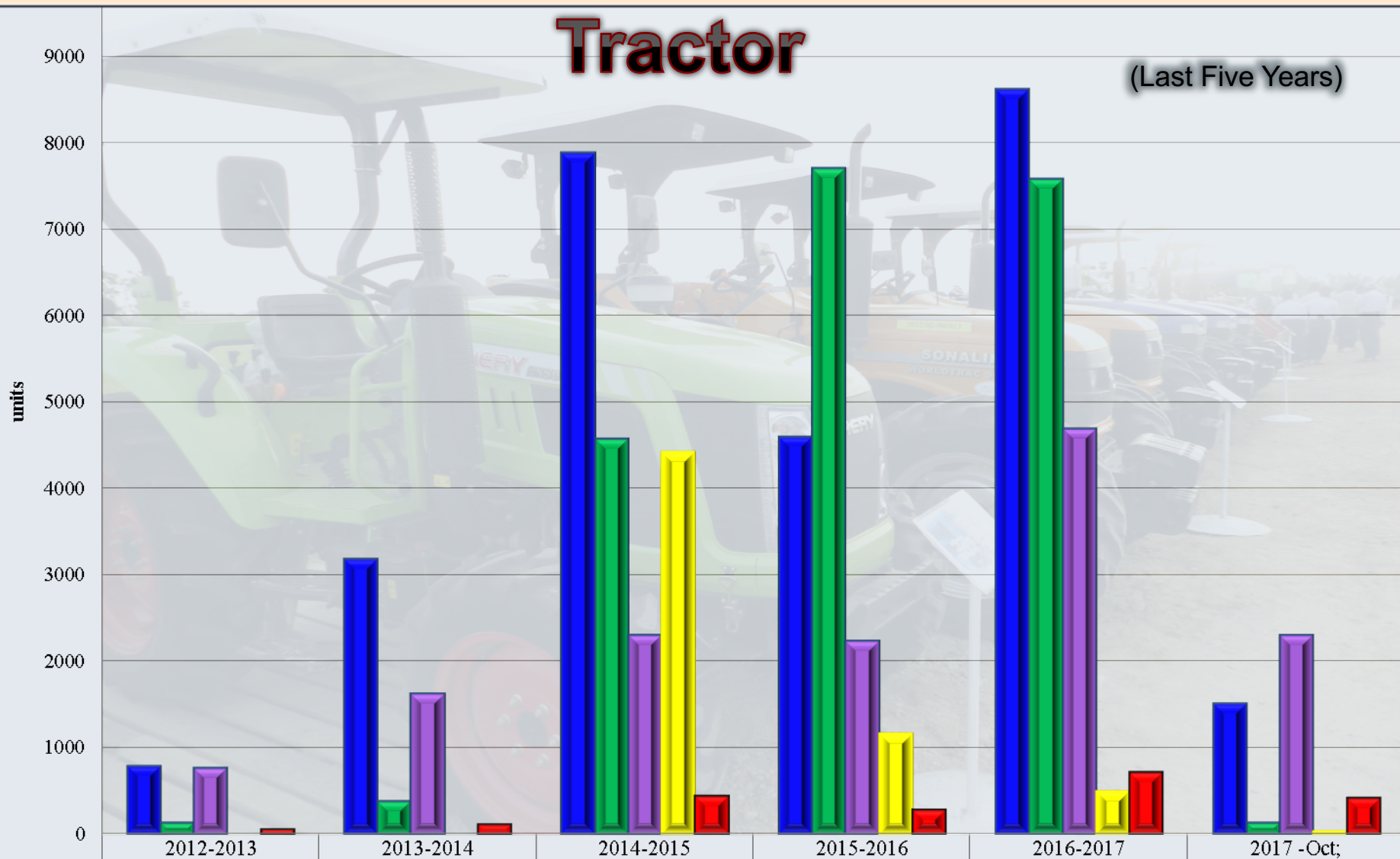
Combine Harvester



Import Status Of Farm Machinery Which Are Widely Used In Myanmar

Tractor

(Last Five Years)



	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017 -Oct;
China	792	3193	7893	4599	8617	1522
Thiland	141	383	4583	7703	7586	136
India	768	1635	2305	2239	4688	2303
Korea	3	4	4423	1170	502	42
japan	55	115	445	282	716	424

Import Status Of Farm Machinery Which Are Widely Used In Myanmar

Combine Harvester

(Last Five Years)



	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017 -Oct;
Thailand	76	0	2219	4402	3122	55
China	86	1046	1622	2295	2523	438
Japan	41	844	1032	64	15	18
Korea	0	419	256	234	0	0
India	0	1	18	1	16	4

Training & Education

Training to not only departmental staffs also farmers for farm machinery operation and maintenance in AMD training centers (Meikhtila,Bago,Naypyitaw-Yezin) and regional AMS. 1980 to 2017 October, a total of 38,096 trainees of departmental staffs 20,327 and farmers 17,769 are trained.



Good Practices in Agricultural Mechanization

Land Preparation



Seedling and Transplanting



Good Practices in Agricultural Mechanization

Harvesting ,Threshing



Drying



Suggestion

Myanmar has immense potential for food and agricultural to become the major “food basket” of the region. The technologies and cooperations are required to adopt in agricultural through use of farm machineries and need to sustainable agricultural mechanization in Myanmar.

With the view to develop sustainable agricultural mechanization, following suggestions related with above mentioned reasons should be undertaken;

- ❖ Establishment of agricultural machinery manufacturing factories with foreign direct investment (FDI).
- ❖ Approval to private sector import of agricultural machinery only when quality is classified by a testing body.
- ❖ Selling the farm machinery to the farmers on credit and installment payment system.

Suggestion

- ❖ Easy availability of spare parts for agricultural machinery manufactured locally with the FDI and imported from other countries.
- ❖ Foreign and local private sector of farm machinery hire service investments are widely needed for small scale farmers who cannot effort to buy expensive farm machinery.
- ❖ Conducting farmer training programs on operation, maintenance and repair of farm machinery and equipment organized by manufacturers.
- ❖ Exchange of view and information on research and development of agricultural machinery carried out by government agencies and private institutions.
- ❖ Delivering information on high quality and long service duration of agricultural machinery and equipment on brand, country of origin, model and dealer via local network in the region.

A photograph of two hands shaking in a firm grip, symbolizing agreement or partnership. The hands are wearing dark business suits. The background is a bright, multi-colored starburst shape, transitioning from yellow at the top to green on the sides and red at the bottom. The text is overlaid on the lower part of the image.

**THANK YOU
FOR
YOUR
KINDLY ATTENTION**

Imported Farm Machinery

30.9.2017

Sr. No.	Type of Machinery	2013-14	2014-15	2015-16	2016-17	2017-18 (30.9.17)	Total
1	Tractor	5330	19798	16218	22635	4861	68842
2	Power Tiller	115847	164059	237506	280563	66383	864358
3	Mono Wheel Tractor	10686	22428	9130	11885	3660	57789
4	Cultivating Roller Boat	6625	8425	4490	5210	-	24750
5	Transplanter	25	237	73	77	150	562
6	Paddy Reaper	3176	7562	10406	10491	821	32456
7	Combine Harvester	2319	5177	7105	5678	515	20794
8	Paddy Dryer	4	10	24	25	9	72
9	Thresher	392	4430	442	186	250	5700

Country of Origin of Imported Tractors

30.9.2017

Sr. No.	Imported Country	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 (30.9.17)	Total
1	Japan	55	115	445	282	716	424	2307
2	Korea (South)	3	4	4423	1170	502	42	6144
3	Thailand	141	383	4583	7703	7586	136	20532
4	China	792	3193	7893	4599	8617	1522	26616
5	India	768	1635	2305	2239	4688	2303	13938
6	Others(Italy,Brazil, Czech,Mexico)	31	-	149	225	526	434	1365
	Total	1790	5330	19798	16218	22635	4861	70632

Country of Origin of Imported Combine harvesters

30.9.2017

Sr. No.	Imported Country	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 (30.9.17)	Total
1	Japan	41	844	1032	64	15	18	2014
2	Korea (South)	-	419	256	234	-	-	909
3	Thailand	76	-	2219	4402	3122	55	9874
4	China	86	1046	1622	2295	2523	438	8010
5	India				10	16	4	58
6	Others(Vietnam, Belgium)				100	2	-	132
	Total				7105	5678	515	20794



Agricultural Mechanization

- AMD arranges provision of farm mechanization services on land preparation, transplanting, harvesting, and threshing in paddy cultivation aiming to enhance the farmers' economy and social livelihood by increasing high quality products and mitigating losses.

