



The Republic of the Union of Myanmar
Ministry of Agriculture, Livestock and Irrigation
Department of Agriculture



CURRENT SITUATION AND DEVELOPMENT OF SMART AGRICULTURE IN MYANMAR

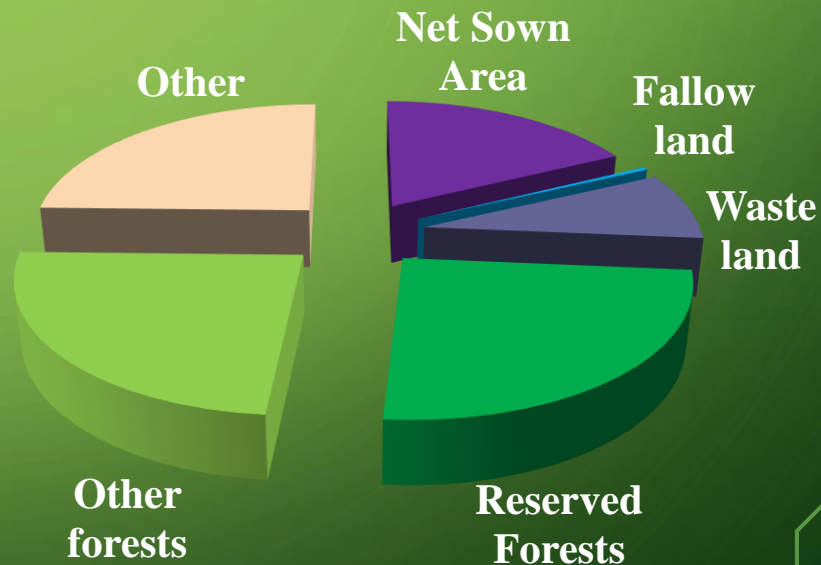
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Staff Officer

INTRODUCTION

<i>Categories</i>	<i>Million Ha</i>
Net Sown Area	12.06
Fallow land	0.46
Cultivable Waste land	5.54
Reserved Forests	18.88
Other forests	14.51
Other	16.21
Total	67.66

Land Utilization



Source: *Myanmar Agriculture in Brief (2018)*

Role of Agriculture in Myanmar

Agriculture including livestock and fishery

- Contribute 25.6% of GDP
- Contribute 24.4% of total export earnings in 2017-18
- Employ 61,2% of the labour force.

Vision and Mission of MOALI

Vision: An inclusive, competitive, food and nutrition secured and sustainable agricultural system contributing to the socio-economic well-being of farmers and rural people and further development of national economy

Mission: To enable rural population and agribusiness enterprises earning profit from production and trade of diverse, safe and nutritious foods and agricultural products using innovative and sustainable production, processing, packaging, logistics and marketing technologies to meet the growing domestic and global demands.

Main Functions of Department of Agriculture


- ❖ Production of good quality seed for main crops cultivated for economic development of farmers and conducting trainings for farmers to produce good quality seed.
- ❖ Organize training on advanced agricultural technologies and cultural practices to facilitate application and innovation of these techniques by farmers.
- ❖ Conduct research on scientific cultural practices to produce and develop good quality and high yielding varieties.
- ❖ Conduct training, field days and demonstration of model farms for systematic application of GAP methods in production.
- ❖ Carry out continuous research activities to develop GAP compatible with various ecological conditions to produce adapted varieties and good quality seed.

Major Crops Production



- ❖ Paddy
- ❖ Maize
- ❖ Groundnut
- ❖ Sesame
- ❖ Sunflower
- ❖ Black gram
- ❖ Green gram
- ❖ Pigeon pea
- ❖ Cotton
- ❖ Sugarcane



The background is a dark green gradient. In the four corners, there are decorative white circuit-like patterns consisting of lines and small circles, resembling a stylized PCB or network diagram.

Current Status of Agriculture in Myanmar

1. Good Quality Seed Production

Availability

- ❑ Govt. Farms (DoA, DAR)
- ❑ Private Companies
- ❑ Seed Growers' Associations
- ❑ Farmers save seed

Accessibility

- ❑ Information sharing
- ❑ Village Seed Bank
- ❑ Seed Networking

Seed Production (RS to CS)

No.	Crops	Unit	DOA farm	SGA farmer	Private	Total
1.	Rice	kg	3,236	115,771	5,659	124,666
2.	Maize	kg	11,595	88,675	-	100,270
3.	Wheat	Basket	2200	-	-	2200
4.	Oil seed crop	Basket	2922	21981	6727	31630
5.	Pulses	Basket	21462	36716	245	58423
6.	Sweet Potato	shoot	530000	-	-	530000
7.	Casava	branch	680000	-	-	680000
8.	Sugarcane	ton	11,325	982,615	-	993,940
9.	Coffee	kg	998	-	-	998
10.	Cotton	kg	98,076	100,753	-	198,829
11.	Rubber	seedling	326000	1536000	-	1862000

2. Research & Development

Crop Management Practices

- Variety improvement under diverse agroecosystem
- Soil nutrient and water management
- Integrated pest management
- Production cost per unit
- Climate Smart Agriculture

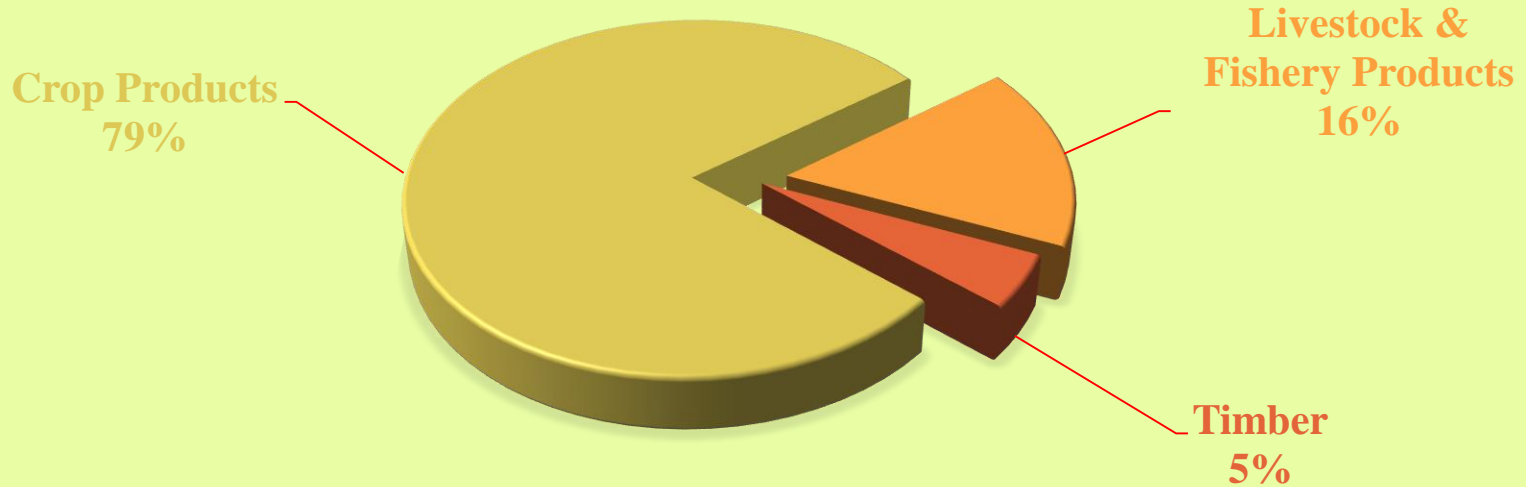
Product Quality Improvement

- Upgrade and establish laboratories
- Post-harvest technology
- Model farms

3. Market and Quality assurance on Products

- ❖ Provide market information in both domestic and international
- ❖ Promotion of value chain of the produces under diverse agroecosystem
- ❖ Adaptability for new crop varieties to support food security
- ❖ Enhancement of Contract Farming and PPP for smallholder farmers
- ❖ Improvement of community interest through smart agriculture solutions
- ❖ Creating market opportunities in terms of quality assurance

EXPORT OF AGRICULTURAL COMMODITIES (2017-2018)



Agriculture contributes 24.4% of total export earnings in 2017-18 (*Source: Myanmar Agriculture Sector in Brief 2018*)

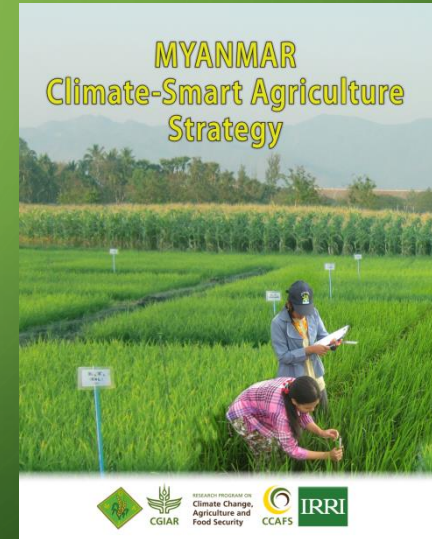
Export of Principal Agricultural Commodities (000' MT)

SN	Particulars	2013-14	2014-15	2015-16	2016-17	2017-18
1	Rice	1192.3	1822.8	1562.3	1748.0	3579.0
2	Maize	933.6	1356.2	1188.6	1288.7	1437.0
3	Black gram	644.2	625.9	482.8	559.0	527.6
4	Green gram	339.9	378.1	341.9	397.9	352.2
5	Pigeon pea	187.8	306.2	226.6	183.9	227.1
6	Gram	3.5	17.4	35.3	35.5	43.8
7	Other Pulses	125.5	131.7	105.4	132.0	97.0
8	Sesame seeds	172.3	91.8	96.7	106.8	123.1
9	Onion	57.3	35.3	47.5	66.9	23.0
10	Tamarind	12.5	23.2	15.5	20.9	20.4
11	Raw rubber	86.5	76.1	93.1	143.1	149.9
12	Sugar	78.8	30.2	581.4	1233.8	404.0
13	Hide and Skin	8.6	6.2	7.0	6.9	13.1
14	Fresh & dried Prawns	20.6	18.7	18.2	25.2	39.6
15	Fish & Fished Product	270.8	250.4	312.4	369.7	444.6
16	Crab	16.8	17.0	17.0	19.2	21.3

Source: Myanmar Agriculture Sector in Brief 2018

4. Myanmar Climate Smart Agriculture

- Weather Forecasting & Information Sharing; Early warning system
- Varieties Change
- Crops Change
- Biodiversity; Crop Diversity & Integrated farming
- Community based Agriculture
- Reducing agricultural risk to climate change for farmers
- Resource management and Public health in term of food safety



5. Human Resource Development

Number of Training and Workshop done in 2018

No.	Subject	Training	Workshop	Total
1.	Seed production	619	1527	2218
2.	Plant Protection	979	4266	5245
3.	Plant Nutrition	656	3100	3756
4.	Coffee Production	4	7	11
5.	Perennial Crop Growing	64	168	232
6.	Rice farming	473	2496	2969
7.	Law and Act Awareness	47	182	229
8.	Good Agriculture Practice	1412	12190	13602
Total		4326	23936	28262

*14 State
Agricultural
Institutes (SAI)
under
Department of
Agriculture*

S.A.I (Shwe Bo)



S.A.I (Loan Pi)



S.A.I (Pwint Phyu)



S.A.I (Kyaut Taw)



S.A.I (Pyinmana)



S.A.I (Tharyarwady)



S.A.I (Myaung Mya)



S.A.I (Dawei)



S.A.I (Myit Kyi Nar)



S.A.I (Patheingyi)



S.A.I (He Ho)



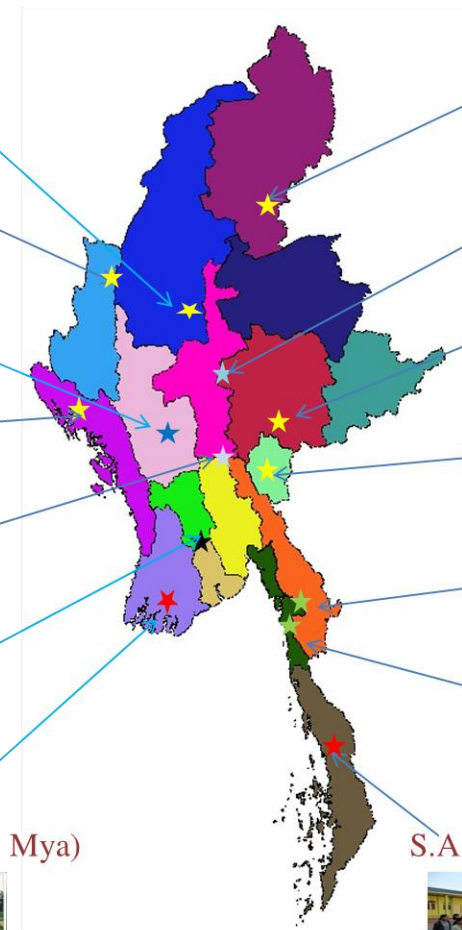
S.A.I (Dee Maw So)



S.A.I (Zew Ga Bin)



S.A.I (Tha Htoan)



Training Centers under Department of Agriculture

No	Training Center	Numbers of Trainee		
		2016	2017	2018
1	CARTC	1614	2306	2258
2	PHTC	505	716	420
3	Bago 10-mile	-	120	160
4	AERDTC	305	188	424
	Total	2424	3330	3262



Postharvest Training Center



The background is a dark green gradient with decorative white circuit-like lines in the corners. The lines consist of straight segments connected by small circles, resembling a printed circuit board layout.

Challenges in Technology Transfer towards Smart Agriculture in Myanmar



Challenges in Technology Transfer

- Limited technical skills and knowledge of extension staff,
- Limited budget and weak logistic support in the extension net work
- Limited extension materials for the farmers
- Limited access to ICT tools
- Limited investment in capacity building, research, development and extension
- Limited awareness of farmers on ICT tools (money, time,..)

Current Solutions

- Radio ,Television,
- Newspaper, Posters,
- Leaflets, Pamphlets,
- Circulars, bulletins,
- agricultural shows,
- writing news articles for the press



- Meeting, Group Discussion,
- Method / result demonstrations
- Contest, Field trip, Field day,
- Lecture, Seminars, Workshops

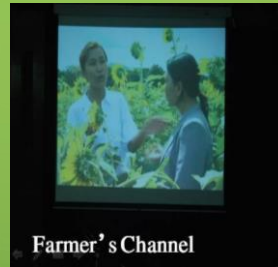


- Media Combination and use of audio-visual aids
- Use of Information and Communication Technology (ICT)

- **Call center** - hotline- 012399555, 067410139)
- **Website** - www.doa.gov.mm
- **Facebook page** - www.facebook.com/doamoali

- **Viber** - 09764000841
- **e-library**
- **Accounting softwares**

- **Farmer channel**



Farmer Channel



Server

- **Mobile applications**
- **Information section**
- **User** of Electric Document Management System (EDMS)
- **User** of Government Personnel Management System (GPMS)

Possible Collaboration Ideas with Korea

Collaboration possibly in:

- Training and Education on smart farming practices
- Research & demonstration for possible smart farming solutions
- Implementation of projects localized and advanced technologies towards smart agriculture in Myanmar

1. TRAINING AND EDUCATION ON SMART FARMING PRACTICES

- Effective use of ICT tools to staffs and farmers
- Sharing ICT for agricultural extension staffs unda DOA
- Success stories on smart farming solutions, especially in Korea
- Possible solutions to existing farming practices in Myanmar
- Providing market information in both domestic and international

2. RESEARCH & DEMONSTRATION FOR POSSIBLE SOLUTIONS

- Conduct collaborative researches between Korea and Myanmar
- Developing mobile applications on intensification of crop production through finding updates
- Need assessments on market assurance of agricultural products for small holder farmers in Myanmar
- Establishing appropriate model farms under DOA to demonstrate how smart agriculture solutions work

3. PROJECTS FOR SMART AGRICULTURE IN MYANMAR

Projects focused on:

- Seed production on specific varieties
- Post-harvest handling practices
- Improving processing plants for agricultural products
- Market accessibility improving product quality
- Smart farming services



THANK YOU VERY MUCH