

**3<sup>RD</sup> TRAINING AND STUDY TOUR FOR AGRICULTURAL  
MACHINERY MANUFACTURER AND DISTRIBUTORS &  
THE 3<sup>RD</sup> MEMBER MEETING OF ReCAMA**



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**Farmers' Organization Authority,**

**Ministry of Agriculture and Agro-based Industry Malaysia**

**MALAYSIA**



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# Overview of Malaysia

## East Asia



# Location of Malaysia

The Eastern and Western regions of Malaysia





# Map of Malaysia



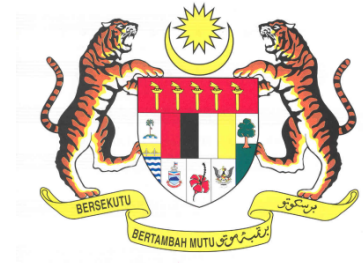
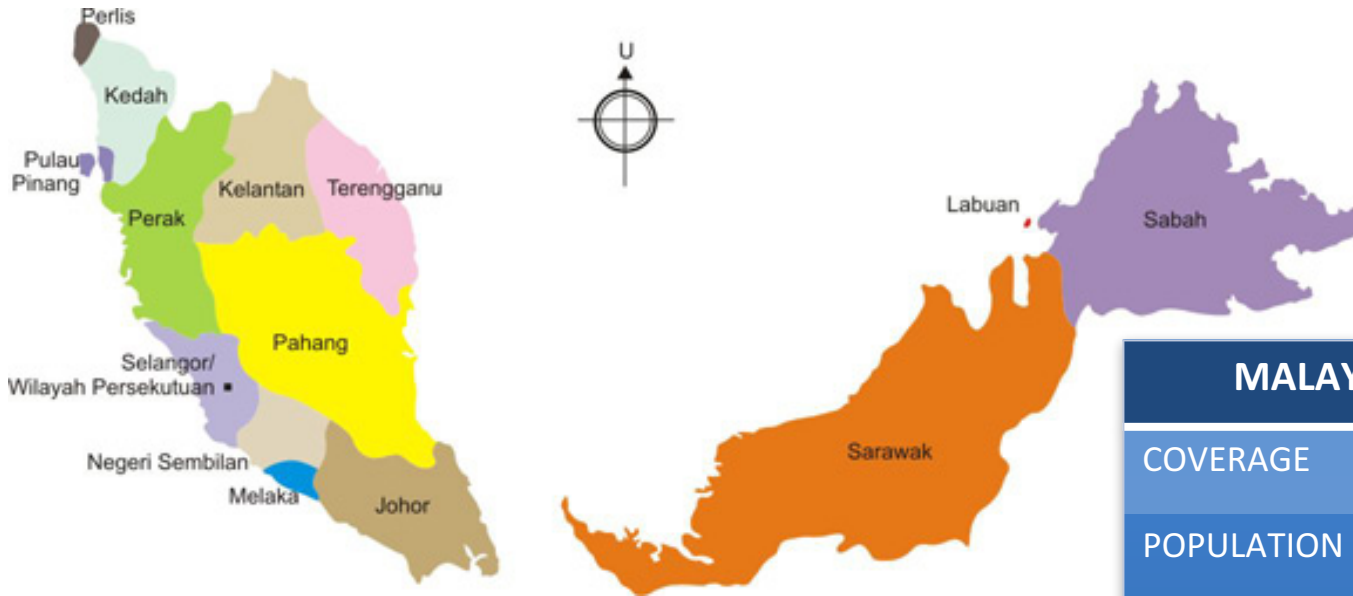
# KLCC

KUALA LUMPUR TWIN TOWER

# ICON OF MALAYSIA



# MALAYSIA AT A GLANCE



**MALAYSIA**

## MALAYSIA AT THE GLANCE

COVERAGE	300,803 KM <sup>2</sup>
POPULATION	31.6 m (Yr 2016)
CAPITAL CITY	KUALA LUMPUR
ADMINISTRATIVE	PUTRAJAYA
NO. OF STATES	14 STATES
RELIGION	ISLAM, BUDDHISM, HINDUSM
RACE	MALAY, CHINESE, INDIAN, OTHERS

\*Source : Department of Statistic Malaysia



# **Overview of Agricultural Sector in Malaysia**





KEMENTERIAN PERTANIAN & INDUSTRI ASAS TANI MALAYSIA

Ministry of Agriculture & Agro-based Industry, Malaysia



**MINISTRY OF  
AGRICULTURE & AGRO-  
BASED INDUSTRY**

**MINISTRY OF PRIMARY  
INDUSTRY &  
COMMODITIES**

1

**Food  
Subsector**

- Crop
- Livestock
- Fisheries

# **Agriculture Sector in MALAYSIA**

2

**Industrial  
Commodities**

- Palm Oil
- Rubber
- Cocoa
- Wood & Timber
- Pepper



# Scenario of the National Agricultural Sector

Total land area - 33 million ha.

Agricultural area - 7.9 million ha (24% of total area)

Industrial crops - oil palm, rubber, cocoa, tobacco and pepper – cover about 77% of total agricultural land

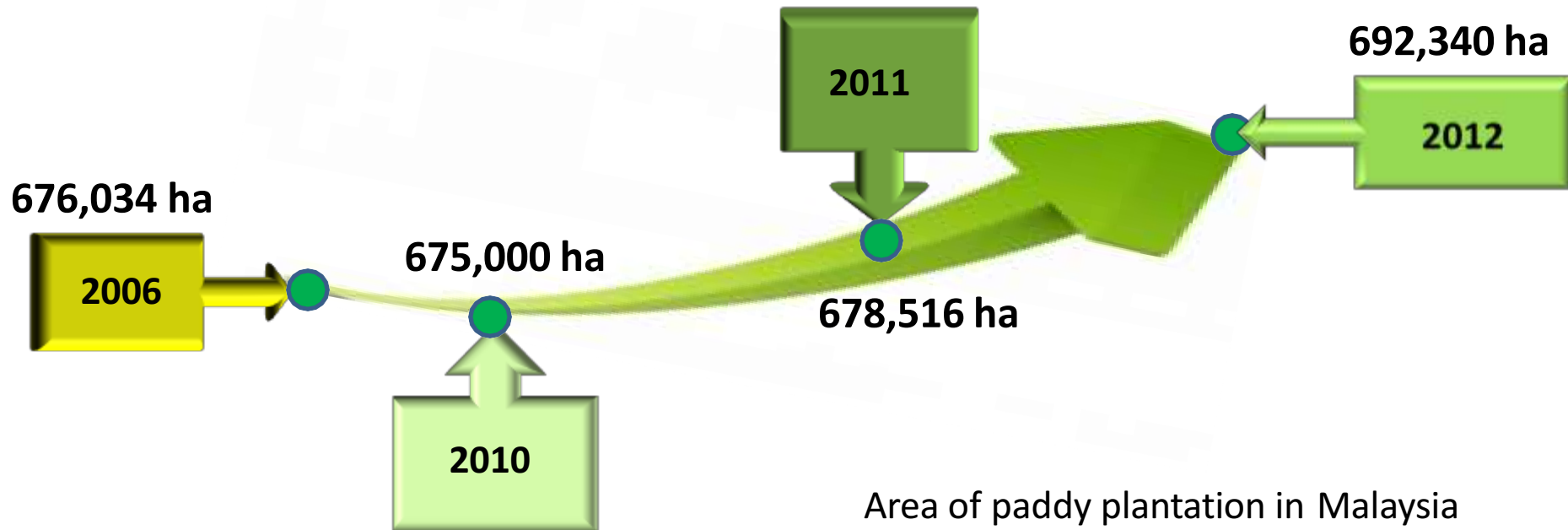
Other crops - paddy, fruits, vegetables & coconut – cover 16% of total agricultural land

## Contribution to GDP

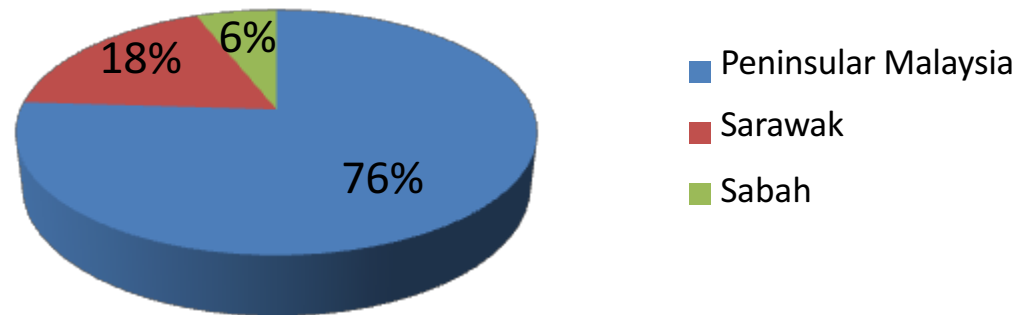
- Manufacturing sector accounts for 28%
- Service sector contributes 57%
- Agricultural sector at 7%



# Paddy in Malaysia



Area of paddy plantation in Malaysia

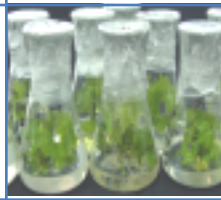
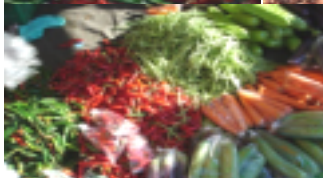


# **National Agro-food Policy**





# NATIONAL AGRO-FOOD POLICY (2011-2020)



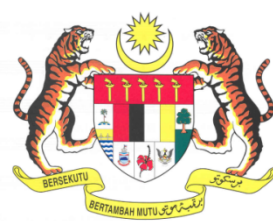
# NATIONAL AGRO-FOOD POLICY (2011-2020)

## NAP

Will be a reference and guideline in the transformation of national agro food industry.

### GENERAL OBJECTIVES

- To ensure adequate food security that is safe to eat;
- To make agro food industry as a competitive and sustainable industry
- To increase agro based entrepreneur's level of income.



# NATIONAL AGRO-FOOD POLICY (2011-2020)

ST 1: ENSURING FOOD SECURITY / SUPPLY

ST 2: INCREASING AGRO-FOOD INDUSTRIES CONTRIBUTION

ST 3: FOCUSING ON VALUE CHAIN DEVELOPMENT

ST 4: STRENGTHING CAPACITY BUILDING

ST 5: SUSTAINING INNOVATION, R&D AND TECHNOLOGY BASED APPROACH

ST 6: SUPPORT PRIVATE SECTOR LEAD BUSINESS ENVIRONMENT

ST 7: ENHANCING DELIVERY SYSTEM SERVICES

# **Overview of Farmers' Organization Authority (FOA)**



# MINISTRY OF AGRICULTURE AND AGRO-BASED INDUSTRY

*Agriculture is Business*

*Pertanian Suatu Perniagaan*

KEMENTERIAN PERTANIAN DAN INDUSTRI ASAS TANI MALAYSIA



DEPARTMENT OF  
AGRICULTURE

DEPARTMENT OF  
VETERINARY  
SERVICES

DEPARTMENT  
OF FISHERIES

MALAYSIA  
AGRICULTURE  
BANK (BPM)

**FARMERS'  
ORGANIZATION  
AUTHORITY (FOA)**

MALAYSIAN  
FISHERY  
DEVELOPMENT  
BOARD (LKIM)

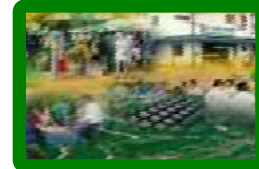
MALAYSIAN  
PINEAPPLE  
INDUSTRY  
DEVELOPMENT  
BOARD (MPIB)

MALAYSIAN AGRI.  
RESEARCH &  
DEVELOPMENT  
INSTITUTE  
(MARDI)

FEDERAL AGRI.  
MARKETING  
AUTHORITY  
(FAMA)

MUDA AGRI.  
DEVELOPMENT  
AUTHORITY  
(MADA)

KEMUBU AGRI.  
DEVELOPMENT  
AUTHORITY (KADA)



# FARMERS ORGANIZATION AUTHORITY MALAYSIA



# **FUNCTIONS OF FOA**

1. To boost, encourage and strive for economic and social progress of Farmers' Organisations (FO)
2. To register, control and supervise FO and making provision to related matters
3. If a declaration was made through announcement under section 10, to design and implement any agricultural development in FO of those are, and
4. To control and coordinate the implementation of the activities

# VISION AND MISION

## **Vision**

To be the Leader in the Transformation of the Farmers' Organisation and Productive Farmers in the Agriculture Sector.

## **Mission**

To Develop Farmers's Organisation as and Effective Service Provider in the Creating Productive Farmers.

## FARMERS ORGANIZATION AUTHORITY [REGISTRAR]

Functions of Farmers Organization Authority (FOA)  
- Under Act 110 (established 14 February 1973)

**NFO**

**1**



**SFO**

**14** State Farmers Organization

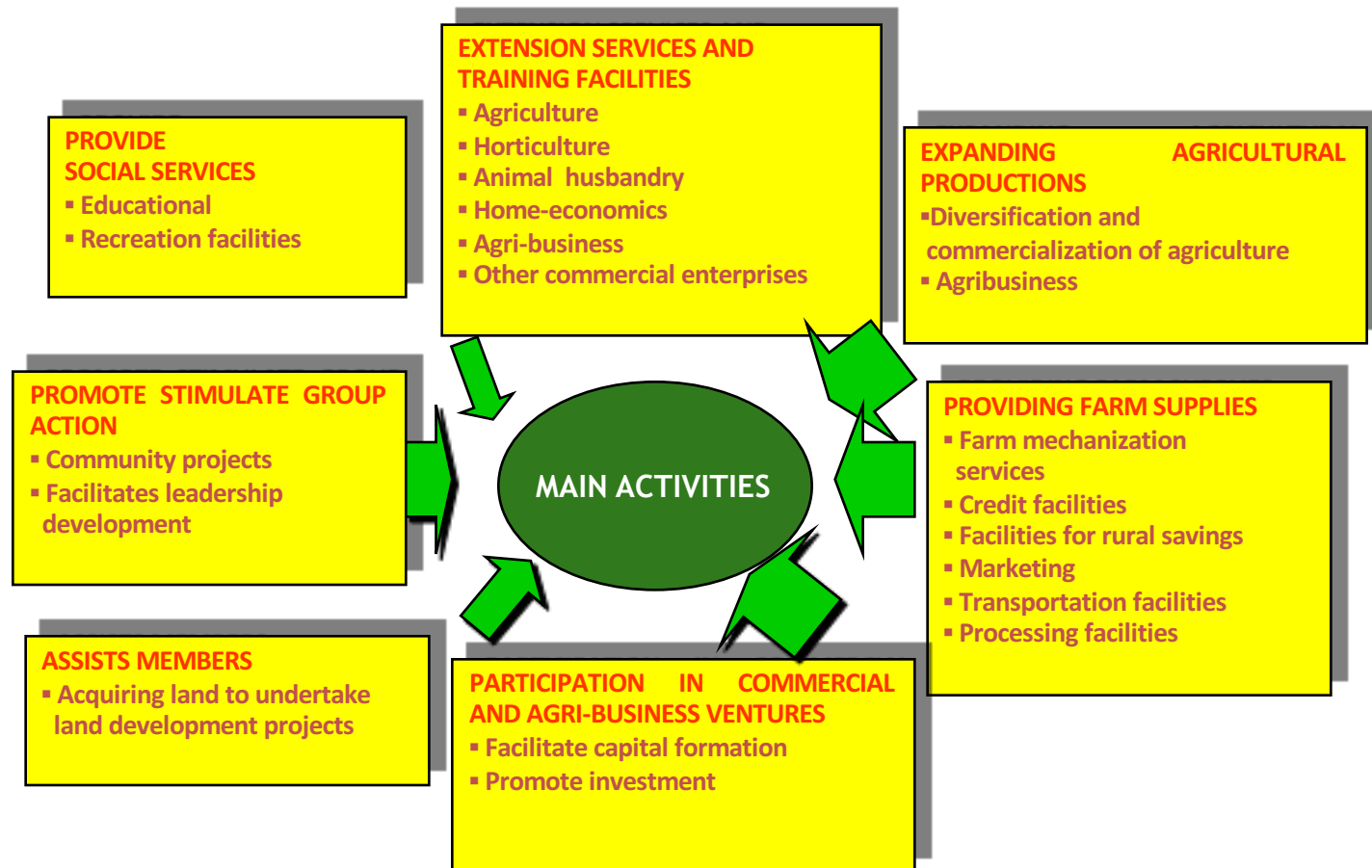
**AFO**

**278** Area Farmers Organization  
(905,424 Members)

FO'S Three Tiers Structure  
- Under Act 109

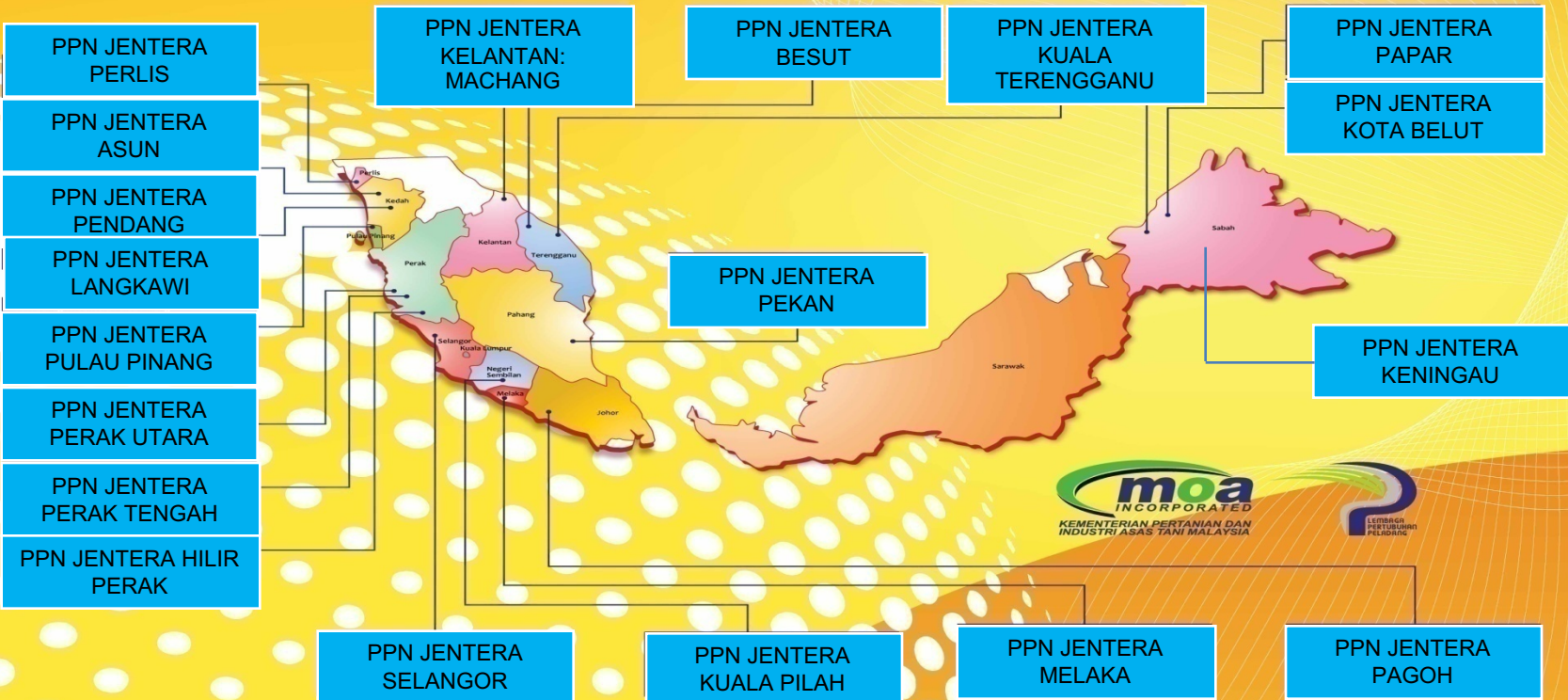


# THE MAIN ACTIVITIES UNDERTAKEN BY FOs TO PROVIDE SERVICES TO MEMBERS



**FOA – Farm Machinery Centre**

**FARMERS' ORGANIZATION AUTHORITY (FOA)  
FARM MACHINERIES SERVICES**



# SERVICES POLICY

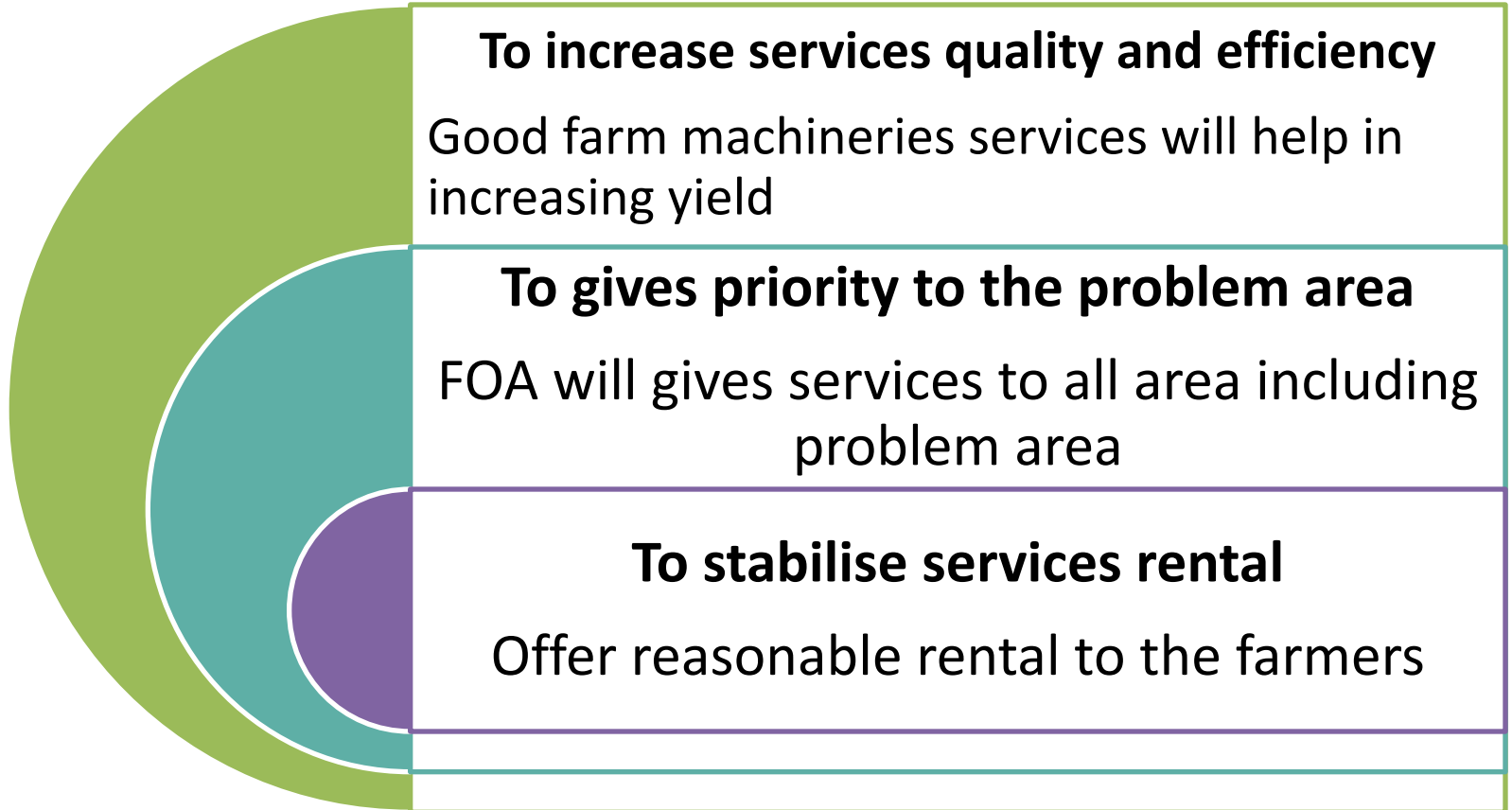
To provides basic services such as land preparation, crop establishment & maintenance and harvesting

To provides repair and maintenance services for farm machineries and implements

To gives emphasizes on paddy area due to large paddy area and to increase paddy yield

FOA gives farm machineries services to only 40% of total paddy area.

# FOCUS





# NO. OF AGRICULTURAL TRACTOR OWNED BY PPN JENTERA 2017

BIL	PPN(J)	AGE (YEAR)		
		1-5	5-10	> 10
1	PERLIS		25	5
2	ASUN	-	10	-
3	PENDANG	-	1	-
4	LANGKAWI	2	-	-
5	PULAU PINANG	9	33	5
6	PERAK UTARA	-	32	5
7	PERAK TENGAH	-	9	
8	HILIR PERAK	-	68	36
9	SELANGOR	-	31	2
10	NEGERI SEMBILAN	-	19	9
11	MELAKA	-	9	4
12	JOHOR	-	32	-
13	PAHANG	-	30	5
14	BESUT	-	30	19
15	KUALA TERENGGANU	-	25	10
16	MACHANG	-	62	29
17	KOTA BELUD	15	25	-
18	PAPAR	9	13	-
19	KENINGAU	7	7	-
JUMLAH		42	461	129

## NO. OF PADDY COMBINE HARVESTER OWNED BY PPN JENTERA 2017

BIL	PPN(J)	AGE (YEAR)		
		1-5	5-10	> 10
1	PERLIS	2	9	8
2	ASUN	1	23	9
3	PENDANG	1	26	15
4	LANGKAWI	3	-	-
5	PULAU PINANG	8	13	9
6	PERAK UTARA	2	9	6
7	SELANGOR	2	13	6
8	NEGERI SEMBILAN	1	2	-
9	MELAKA	-	2	-
10	JOHOR	1	4	-
11	PAHANG	-	7	3
12	BESUT	2	9	12
13	KUALA TERENGGANU	1	7	3
14	MACHANG	3	8	1
15	KOTA BELUD	1	10	-
16	PAPAR	-	6	-
17	KENINGAU	-	3	-
JUMLAH		28	151	72

# Machinery Usage



Land Preparation



Transplanting



Land Levelling



Crop maintainance



harvesting

# Machinery Usage



Bulk handling



High Contact Pressure Prime Mover





# LAND PREPARATION FOR PADDY – Tractor



New Holland 7066S



Fiat 7066S



New Holland TD90



Kubota



# PADDY HARVESTING – Harvester

Combine



Dashmesh M7000



New Holland 8060



New Holland 1545S



New Holland 8080

## PADDY CROPS – Impliment



FeLeSe

Rotary  
Tiller

Lime  
Sower

Plastering  
Machine

Box  
Leveller



# Issue and Challenges



# Irrigation infrastructural density for the granary areas in Malaysia

Comparison of canal density between various rice granary area in Malaysia

Granary	Canal density (m/ha)
MADA	18
KADA	24
KERIAN	31
KEMASIN SEMARAK	33
TRANS PERAK	36
PULAU PINANG	39
SUNGAI MANIK	40
BARAT LAUT SELANGOR	43
BESUT	48





# Status Of Farm Infrastructure

*issues & challenges*

*major infrastructural support*

*Result / achievement*

1

Low density of farm road, irrigation & drainage of paddy field



Continuous improvement & maintenance



rice double cropping & PH - bulk handling

2

Soft soil in paddy field



Research on soft soil issues is on going



??

3

Peat soil



No mechanization activities



??





# Issues on paddy production

## 1. Soft soil: **Total area of soft soil is 8,107 ha**

- factors contribute to soft soil:

- » unsuitable farm machinery utilization
- » low drainage density
- » climate change
- » in adherence to paddy planting schedule.



## 2. Grain losses during harvesting: **3.5% to 13.5%** as reported by MARDI, 2007

- Efficiency of threshing mechanism is the main factor that influencing the percentage of grain losses.

## 3. High capital investment and production cost faced by small-scale & aging farmers

# Effects of Soft Soil



**Moving Forwards**

# 1. ENCOURAGE INSTALLATIONS OF AUTO GREASING SYSTEM TO THE FARM MACHINERIES



**Interlube  
Multiline  
Automatic  
Centralised  
Lubrication  
System**



A systemic problem

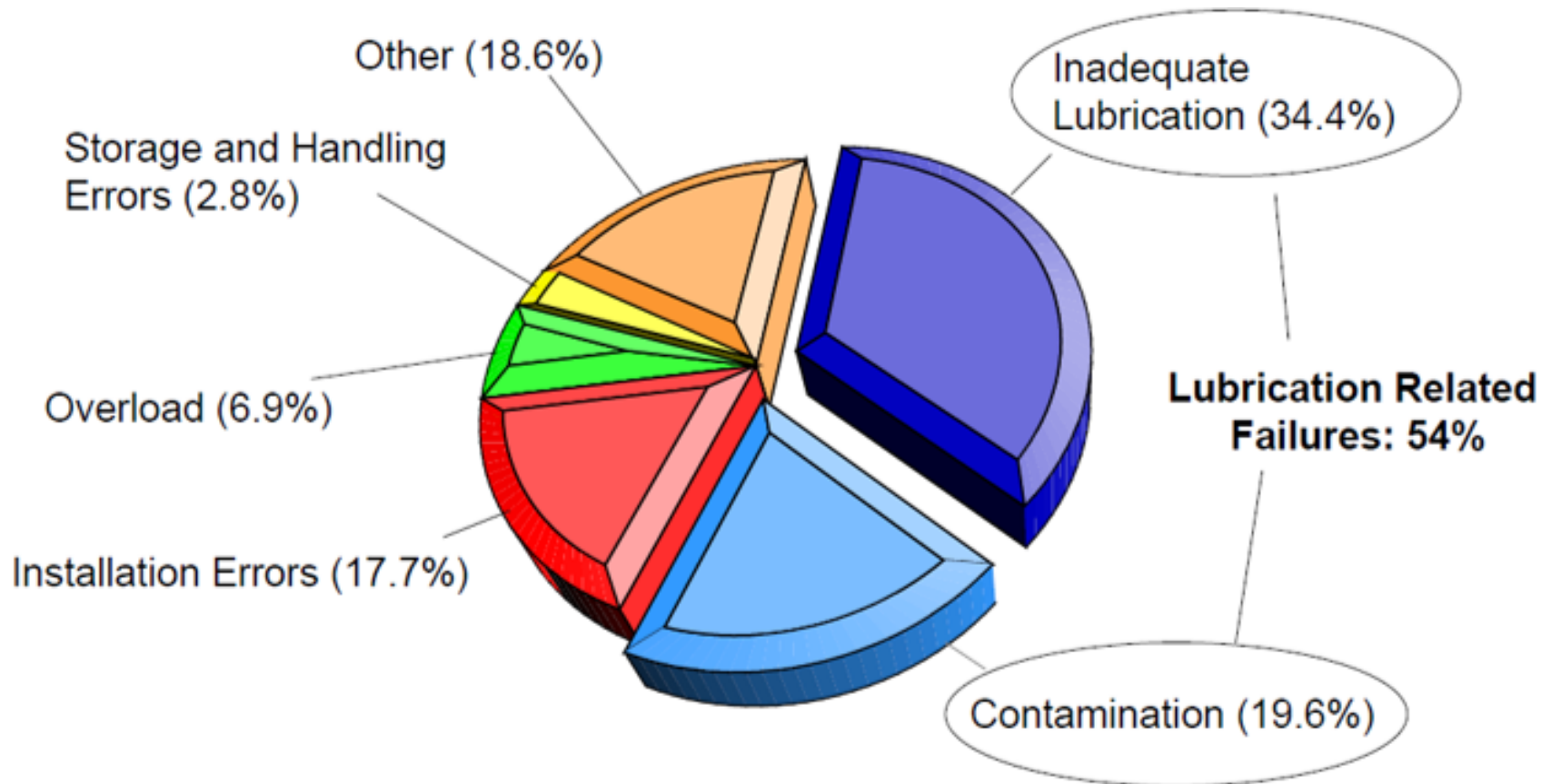
When lubrication is done inconsistently or done incorrectly, it negatively impacts machine condition and reliability plant wide. Major studies and independent sources prove this.

**The Society of Tribologists and Lubrication Engineers report more than 50% of all bearings failures are due to lubrication practices that don't measure up.** In addition, **Kenneth Bannister states 60% of all mechanical failures stem from inadequate or improper lubrication.**

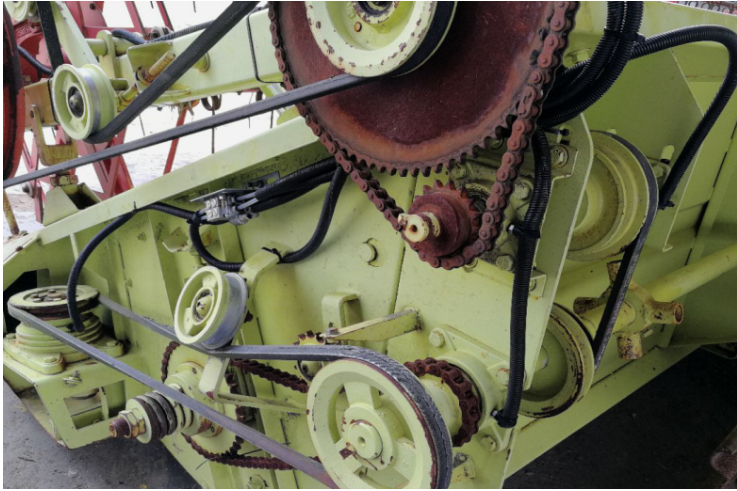
The bill for wear and tear and the resulting loss of production is \$240 billion annually – and that's just in the U.S.



# REASON'S FOR BEARING FAILURE:







## 2. REDUCING POST-HARVEST LOSSES

ACTIVITIES	PERCENTAGE OF LOSSES		
	1985 (Baseline)	2015 MADA & KETARA	2016
1. Harvesting	9.00	4.90	1.38
2. Transport	6.00	1.10	0.63
3. Drying	3.50	0.37	0.12
4. Milling	6.00	2.40	3.05
5. Storage	4.00	1.20	2.71
Losses (%)	28.50	9.97	7.89
Paddy production (million ton)	1.95	2.60	2.60
Paddy losses (thousands ton)	555.75	259.22	205.14
Paddy Price (RM/ton)	496.00	1,200.00	1,200.00
Losses (RM million)	276.00	311.00	246.00

### 3. INVEST IN NEW ACTIVITIES

## GRAIN CORN

Mobile Dryer



Seeder/Planter



Harvester







# CASAVA CROPS

Kubota



Harvester



Champ

Seeder/  
Planter



SAM





## ENCOURAGE ZERO-WASTE MANAGEMENT





# MAHA 2018

## An Event For Everyone

MAHA IS A BIENNIAL EVENT WHICH BE HELD ON NOVEMBER IN MAEPS, SERDANG, SELANGOR.

MAHA STANDS FOR **MALAYSIA AGRICULTURE, HORTICULTURE & AGROTOURISM** AND IT IS THE LEADING AGRICULTURAL SHOW OF ITS KIND IN MALAYSIA AND INDEED IN THE REGION.

This **11-day event** is filled with showcases and activities that will appeal to those involved in agriculture, business owners and investors as well as the general public, including:

- Main event areas/state pavilions
- Business seminars and workshops
- Networking opportunities
- Product presentations and launches
- Agriculture technological and innovation demonstrations and competitions
- Agro bazaar
- Competitions and award presentations
- Field demonstrations
- Agrotourism activities
- Agro-product promotions
- Cultural performances
- Traditional cuisines and cooking demonstrations
- Pet shows, fishing contests, wellness programmes and many more



“ One of the largest exhibition complexes in Asia, MAEPS boasts a total floor space of 42,000 square metres spread across several exhibition halls. Its comprehensive range of facilities and services includes various agricultural showgrounds and park attractions. ”



KEMENTERIAN PERTANIAN & INDUSTRI ASAS TANI MALAYSIA

*Ministry of Agriculture & Agro-based Industry, Malaysia*



# Thank you