



Human Resource Development for Sustainable Agricultural Mechanization in Indonesia

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Ministry of Agriculture**

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Outline

1

Role of Agriculture in National Development

2

Strategies, policies, and national program to achieve national agricultural development

3

Human resources development in agriculture

4

Government strategy to achieve agricultural mechanization in Indonesia

5

National training program for sustainable agricultural mechanization

ROLE OF AGRICULTURE SECTOR ON NATIONAL DEVELOPMENT

1



Provides food for 250 million Indonesian People

Provides industrial raw materials (FOOD, FEED, FIBRE, BIO ENERGY) for 87% of small and medium enterprises

Contribute 14,72% GNP

Income-producing countries U.S. \$ 43.37 M

Absorbs >27% of total worker

Provides income source for 70% of rural household

TARGET OF INDONESIA AGRICULTURE DEVELOPMENT



SUSTAINABLE FOOD SELF SUFFICIENCY & SECURITY



INCREASE ADDED VALUE, COMPETITIVENESS EXPORT



INCREASE FOOD DEVERSIFICATION AND



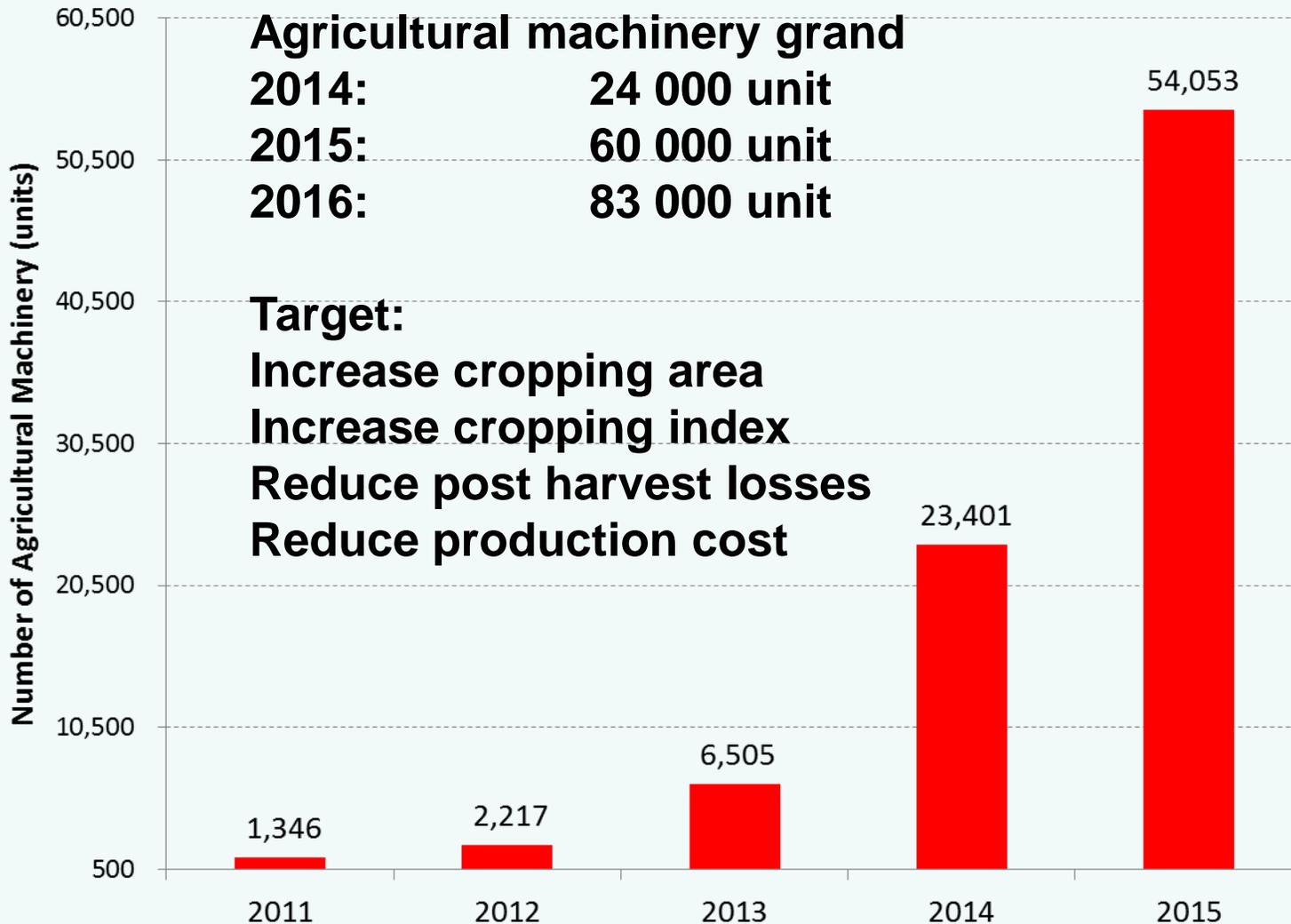
INCREASE FARMER WELFARE

2

Strategies, Policies, and National Programs to Achieve National Target in Agricultural Development



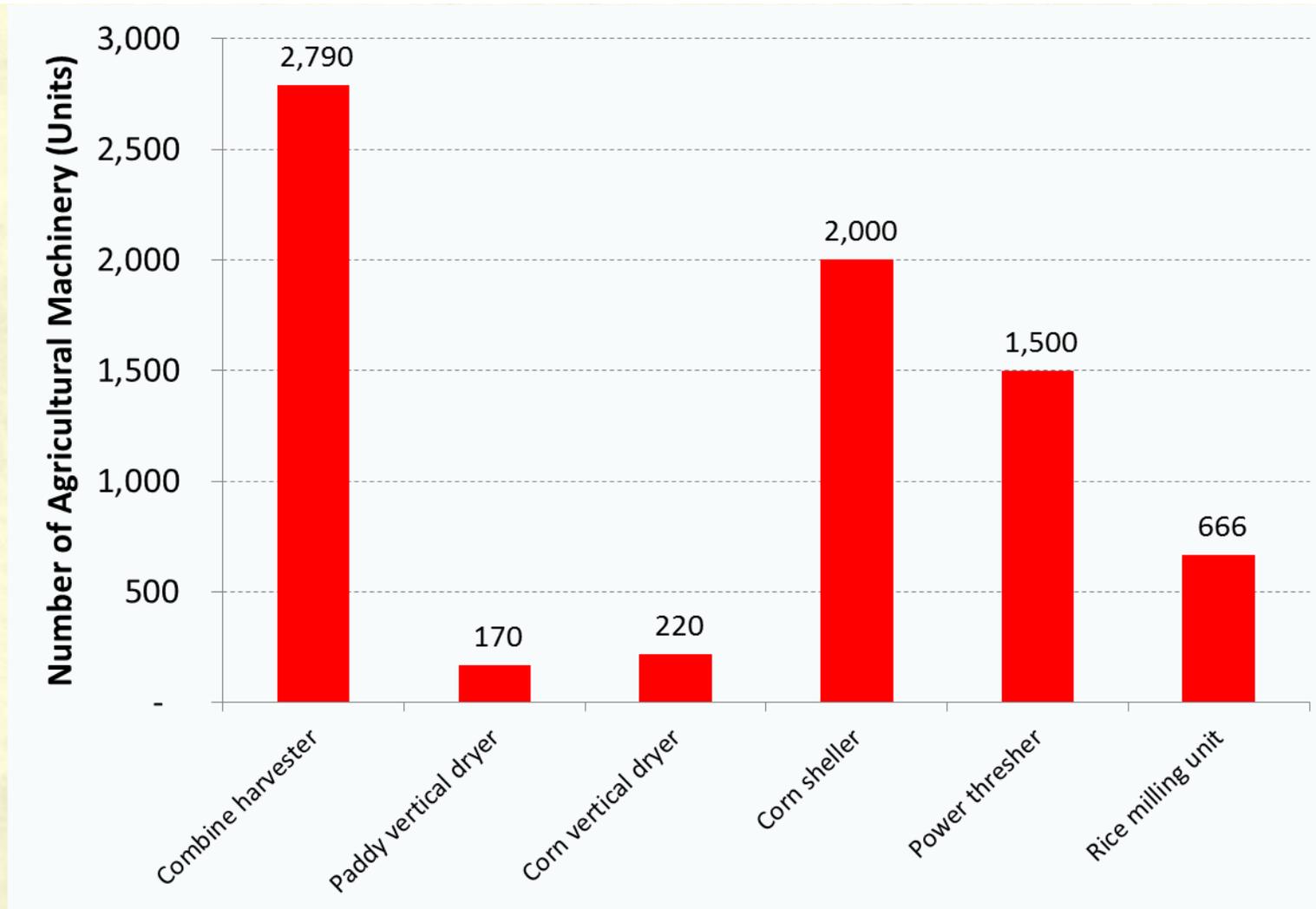
Government support for Farm Machinery



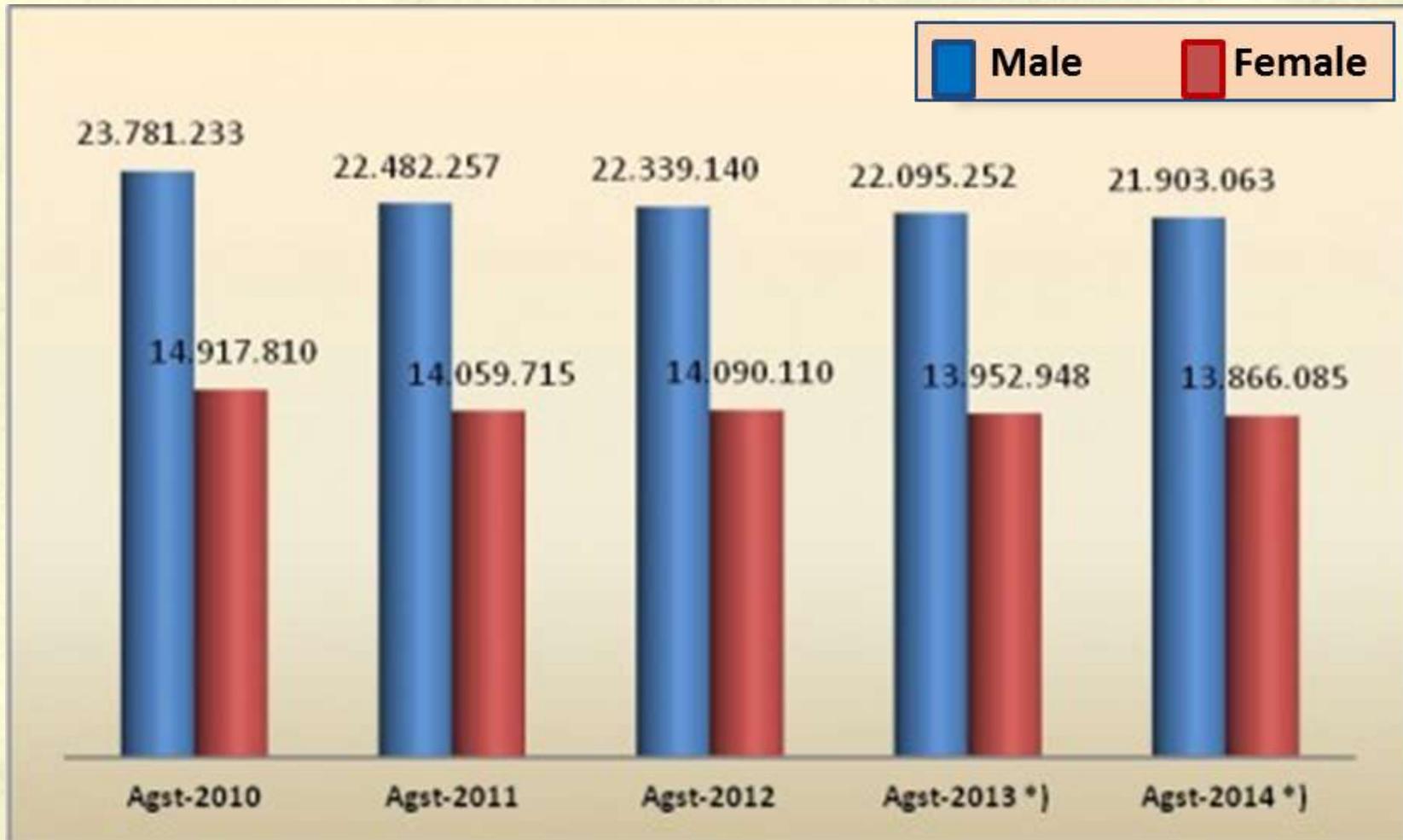
Pre-harvest machinery:

1. Four wheel tractor
2. Two wheel tractor
3. Pump
4. Rice Transplanter
5. Chopper
6. Cultivator

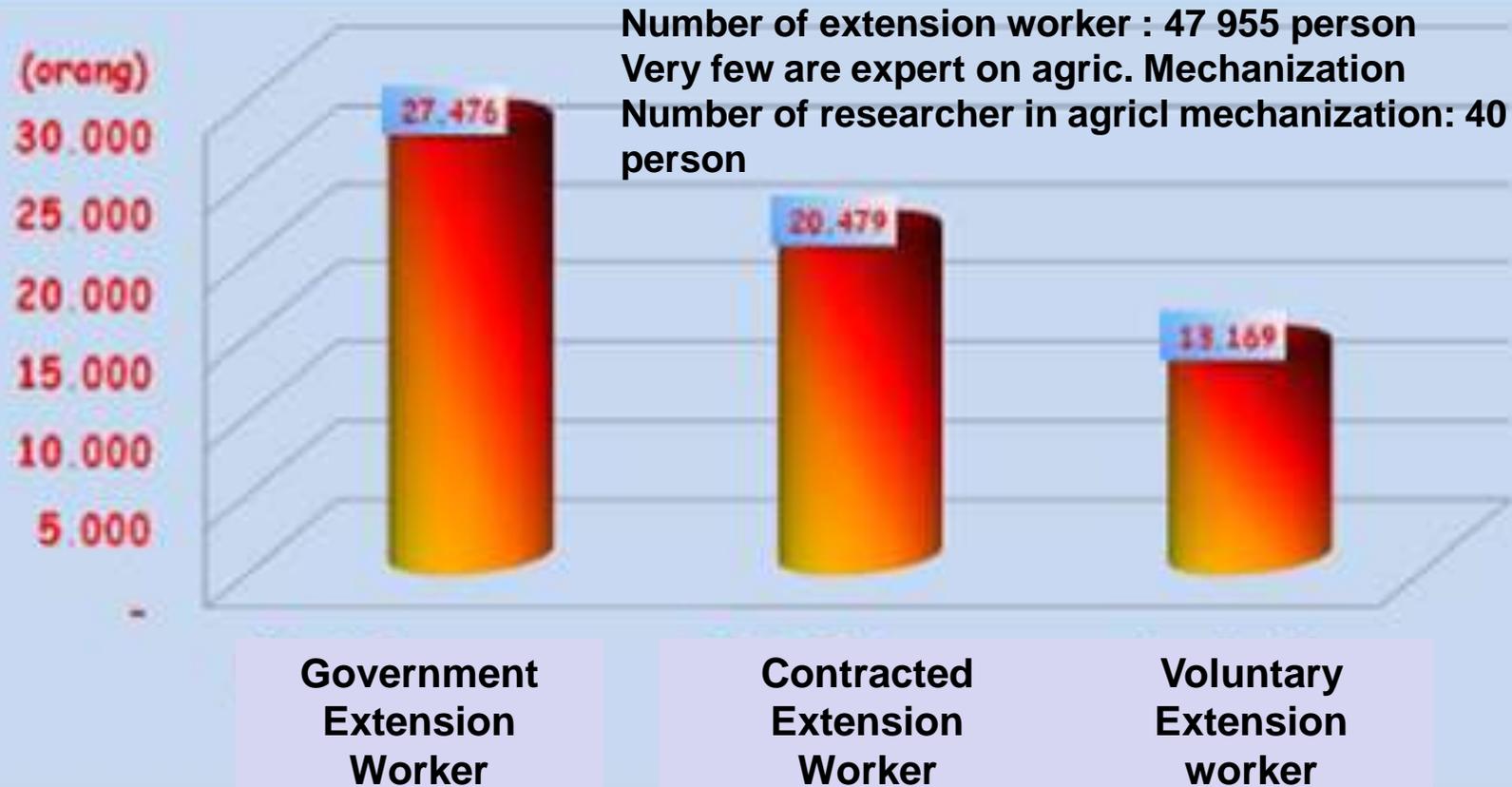
Government subsidies and grand for harvesting and post-harvesting machinery in 2015



NUMBER OF AGRICULTURE LABOR IN INDONESIA



Agricultural Extension Worker in Indonesia



Number of agricultural extension worker in Indonesia in 2014

Constrain in developing sustainable agricultural mechanization

- 1. Low capability of custom hiring manager, operator and technician of agricultural machinery**
- 2. Lack of agricultural mechanization training program**
- 3. Limited number of agricultural mechanization extension worker**
- 4. Lack of agricultural mechanization expert including engineer and researcher**
- 5. Limited number of agricultural machinery workshop**

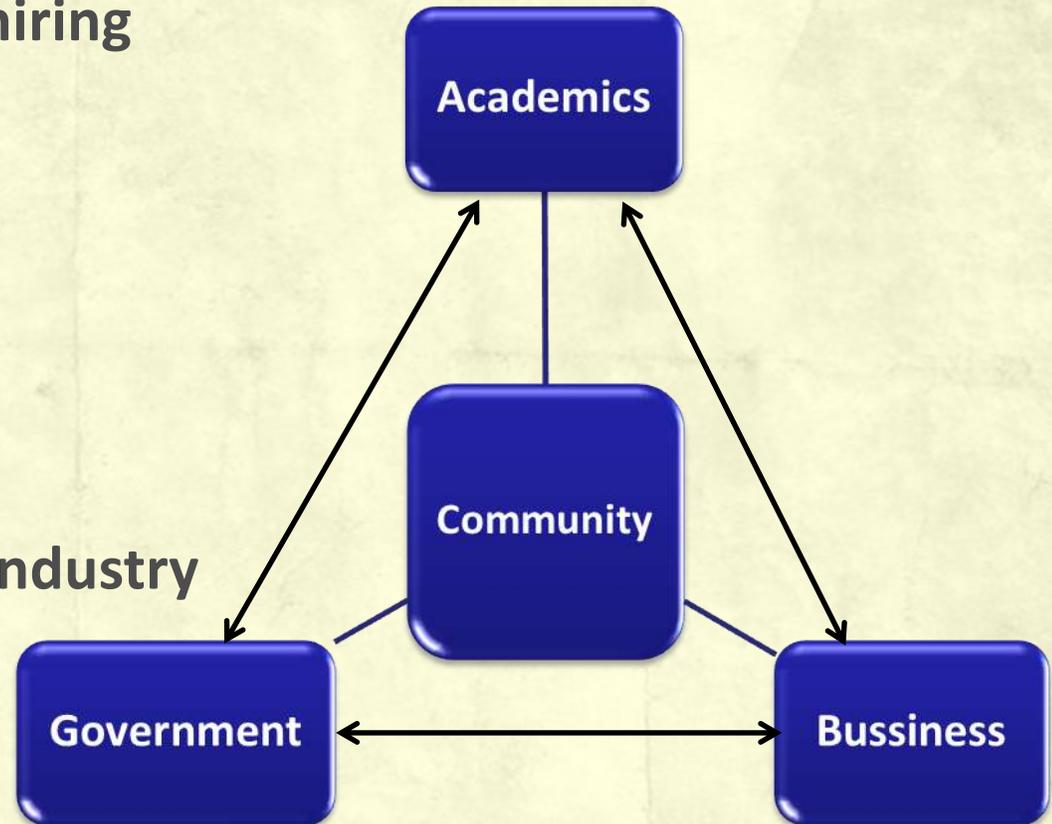
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Government strategy to achieve sustainable agricultural mechanization

- 1. Increase the capacity of agricultural machinery custom hiring from beginner to advance through national training program**
- 2. Increase the number and capacity of extension worker (10 000 new extension worker in 2016)**
- 3. Increase the number of farm machinery workshop up to district level**
- 4. Improve extension program of agricultural machinery for: Extension worker, manager of custom hiring, farmer group and operator of agricultural machinery and technician for repair and maintenance**
- 5. Improve the capacity of engineers, researchers & lecturers**

Agencies/institutions involved in agricultural mechanization development

- Farmers, Farmer group, custom hiring business unit
- Extension worker
- The main agent (agricultural machinery dealer)
- Importer
- Local machinery and spare part industry
- Research institutions
- University



National and Regional Training Program in Agricultural Engineering - 2015

No	District	Number Participans (person)	Duration (hours)
1	Aru	60	30
2	Merauke	40	84
3	Timor Leste	20	84
4	South Kalimantan	12	42
5	West Sumatera	20	42
6	North Sulawesi	20	24
7	Eastern Nusa Tenggara	40	24
8	a	20	12
9	Banten	40	24
10	Medan	61	60
11	National (TOT)	40	24
12	West Java	40	180
	West Kalimantan		
	TOTAL	413	630

5

National training program

1. Training for Trainer (TOT):

- University lecturer : 15 people
- Extension worker : 25 people
- Agricultural extension officer : 21 people

1. Time:

15 – 24 October 2015

3. Topic of Training : operation, repair and maintenance of various agricultural machinery and management

- Two wheel tractor
- Four wheel tractor
- Pump
- Rice transplanter
- Power weeder
- Rice combine harvester
- Power thresher
- Rice milling unit



National training program

1. Training for Operator

- University Student : 5 people
- Vocational school student : 10 people
- Operator : 6 people

2. Time:

20 – 24 October 2015

3. Location: Sukamandi - West Jawa

4. Topic of Training

Operation of rice Transplanter and
Combine harvester



National program

Regional Training and Supervision:

- Technical supervision for seeding for rice transplanter, operation and maintenance of rice transplanter, power weeder and combine harvester
- Integrated farming system
- Custom hiring and farming business

Time and location:

September 15 – November 29, 2015



National program

Regional Training and Supervision

- Training and technical supervision for design and fabrication of rice direct seeder
- Training and technical supervision for operation and maintenance of rice transplanter

Time and location:

30 Nov – 5 Des 2015

Merrauke, Papua



FUTURE NATIONAL TRAINING PROGRAM

- 1. Increasing training program for agricultural mechanization by DG of Agricultural Human Resources Development, Ministry of Agriculture**
- 2. R&D and Planning:**
 - **Need assessment of agricultural mechanization**
- 3. Technical Aspects:**
 - Agricultural machinery & equipment design and manufacturing
 - Production, storage, processing, packaging techniques
 - Cultivation
 - Pest control
- 4. Management Aspects:**
 - Agricultural machinery & equipment and management
 - Farming management
 - Marketing, human resource and information management



THANK YOU VERY MUCH