PHILIPPINE COUNTRY REPORT:

POLICY AND STATUS OF HUMAN RESOURCE DEVELOPMENT OF AGRICULTURAL MECHANIZATION

3rd Regional Forum on Sustainable Agricultural Mechanization in Asia and the Pacific
3rd ASEAN Conference on Agricultural and Biosystems Engineering
Co-located with the 12th Engineering Research and Development for Technology in Agriculture
9-11 December 2015, Manila, the Philippines
PRESENTATION CONTENTS

1. Policies on Agricultural Mechanization HRD
2. Philippine Agricultural Mechanization Workforce
3. Agricultural Mechanization HRD Program
1. Republic Act No. 10601 (Agricultural and Fisheries Mechanization Law)

- Human Resource Development as a major component in the National Agricultural and Fisheries Mechanization Program (2015-2022)

- Skills Certification of Agri-Fisheries Machinery Operators and Technicians
Policies on Agricultural Mechanization HRD

1. Republic Act No. 10601 (Agricultural and Fisheries Mechanization Law)

- Required manpower complement of Agricultural Engineers and Agricultural Machinery Technicians and Operators in all agricultural machinery pools and service centers, manufacturing establishments and sales and distribution centers.
2. **Republic Act No. 10659 (Sugarcane Industry Development Act)**

- Formulation and Implementation of Human Resource Development Master Plan for the Sugarcane Industry

- Deployment Program of Agricultural Engineers, Agriculturists and Farm Technicians in sugarcane farms

- Regulates the practice of Agricultural Engineering in the Philippines
- 5-Year BS Agricultural Engineering and must pass the licensure examination of the Board of Agricultural Engineering
- With valid PRC License - authorize to practice the profession
Duties and Responsibilities of Philippine Agricultural Engineer (R.A. No. 8559)

1) Plans, designs, prepares and prescribes technical specifications and manage the construction, operation and maintenance of:

- irrigation and soils conservation systems and facilities;
- agricultural buildings and structures;
- agricultural, fishery and forest product machinery and equipment;
- renewable energy and farm electrification;
- agricultural waste management facilities;
2) Test, evaluate and inspect agricultural, fishery and forest product machinery and other related agricultural engineering facilities and equipment for safe and efficient operation and maintenance; and

3) Conduct feasibility study, research, training and extension, consultancy and marketing services on agricultural engineering projects;
CAREER TRACKS/PATHWAYS OF AGRICULTURAL ENGINEERS

- Employee in Government and Private Firms (Agricultural Engineer 1-V, etc).
- Teaching/ Academe
- Research
- Business/Private Practice

Oath Taking as New Registered Agricultural Engineer
The Philippine Agricultural Mechanization Workers

- 30.9% or 11.74M workers are employed in the agri-fishery sector
- Agri-Fishery Mechanization Workers largely form part in this labor force
## The Philippine Agricultural Mechanization Workers

### AREAS OF EMPLOYMENT

<table>
<thead>
<tr>
<th>Professionals</th>
<th>Professionals (Agricultural Engineers)</th>
<th>Professionals</th>
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</thead>
<tbody>
<tr>
<td>Technicians</td>
<td>Technicians</td>
<td>Technicians</td>
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<tr>
<td>Workers/Laborers</td>
<td>Operators (Low Skilled/Non-TESDA Certified)</td>
<td>Workers/Laborers</td>
</tr>
<tr>
<td>Agri-Fisheries Machinery Manufacturing and Marketing</td>
<td>Farm Production and Post Production</td>
<td>Industrial Agri-Fisheries Processing</td>
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With Established HRD

Largest Group of Agri-Fisheries Mechanization Workers

With Established HRD
The Philippine Agricultural Mechanization Workers

- 8,336 Licensed Agricultural Engineers

  - 46 Higher Educations Institutions with BS Agri Engineering Program, on increasing enrolment

- About 1.2 Million Agricultural Machinery Operators (Non-TESDA certified)
The Agri-Fisheries Mechanization HRD Program

1. Development of Training Regulations (Tech-Voc)
2. Trainings for Agricultural Engineers, and Agricultural Machinery Operators and Technicians
3. Accreditation of Tech-Voc Competency Assessors and Assessment Centers

Social Protection
1. Health and Occupational Safety
2. Livelihood and Skills Training for Displaced Labor

Welfare and Benefits
1. Wages, Benefits and Compensation
2. Career Progression

Manpower Supply and Employment Planning
1. Skills Inventory/Mapping
2. Manpower Production and HRD Planning
3. Career Guidance & Advocacy

Training and Development
1. Skills Inventory/Mapping
2. Manpower Production and HRD Planning
3. Career Guidance & Advocacy

Productive and Competitive Agri-Fisheries Mechanization Workforce

1. Development of Training Regulations (Tech-Voc)
2. Trainings for Agricultural Engineers, and Agricultural Machinery Operators and Technicians
3. Accreditation of Tech-Voc Competency Assessors and Assessment Centers
Training Regulations (TR) for Agri-Fisheries Mechanization

Existing: Rice Machinery Operation- National Certificate (NC)-2

On-going Development:

1. Farm Machinery Operations (NC-2)
2. Farm Machinery Servicing
3. Drying and Milling Processing Plant Servicing – NC2
4. Irrigation System Installation and Maintenance,
5. Biogas Systems Installation and Maintenance, and
6. Dairy Processing
7. Aquaculture NC III (Mechanization);
Agricultural Machinery Operation NC-2
(On-going development with TESDA)

QUALIFICATION DESCRIPTOR

It consists of competencies that an Agricultural Machinery Operator, Tractor Operator, Post-harvest machinery operator or Production Machinery Operator must have in order to operate agricultural small production machinery and equipment, operate agricultural large production machinery and equipment and operate agricultural post-production machinery and equipment.
THE PHILIPPINE AGRICULTURAL ENGINEERING & MECHANIZATION CAREER PROGRESSION PLAN

**LEVEL**
- L8
- L7
- L6
- L5
- L4
- L3
- L2
- L1

**BASIC EDUCATION**
- Grade 10
- Grade 12

**TECH VOC EDUCATION**
- NC I
- NC II
- NC III
- NC IV

**HIGHER EDUCATION**
- Diploma
- Baccalaureate
- Post Baccalaureate
- Doctoral and Post Doctoral

**NON-FORMAL EDUCATION**
- ETEAP/CPD
- RPL
- ALS

**EXECUTIVE/MANAGERIAL/HIGHLY SPECIALIZED**
- CEO, Director, Manager, Scientist, Chief AE Specialist, etc.

**AGRICULTURAL ENGINEER**
- AE Practice in Teaching & Research (Instructor I to Professor; Research Specialist 1 to Chief Research Specialist)

**AGRICULTURAL ENGINEERING TECHNICIAN**
- On-going with TESDA

**AGRICULTURAL ENGINEERING OPERATOR**
- On-going with TESDA

**PHILIPPINE QUALIFICATION FRAMEWORK**

**Acronym:**
- ETEAP: Expanded Tertiary Education Equivalency and Accreditation Program
- CPD: Continuing Professional Development
- RPL: Recognition to Prior Learning
- ALS: Alternative Learning Scheme
- AE: Agricultural Engineering

**CAREER PATH**
AGRICULTURAL ENGINEERING CAREER PROGRESSION PLAN
IN AGRI-FISHERIES MACHINERY SERVICE CENTER
EXAMPLE: RICE MILL – SINGLE/MULTI PASS

Pursuant to Agricultural and Fisheries Mechanization Law and
Philippine Agricultural Engineering Law

On-going with TESDA

Continuing Professional Development

OWNER
(Individual, Partnership, Corporation, Coop, Association, etc.)

AGRICULTURAL ENGR
(As Drying and Milling Plant Operation Manager/ Supervisor)

DRYING AND MILLING PLANT TECHNICIAN
(NC III-V)

OTHER STAFF/PERSONNEL
(ADMIN, FINANCE, ETC.)

OTHER SUPPORT OPERATORS: MECHANIC AND ELECTRICIAN NC-2

MILLING PLANT OPERATOR NC-2

DRYING PLANT OPERATOR (NC-2)
Thank you