

RICE MECHANIZATION



Table of Contents

Introduction	1
Hand Tractor	2
4wd Tractor	3
Floating Tiller	4
Rice Transplanter (Walk Behind)	5
Rice Transplanter (Riding Type)	6
Drum Seeder	7
Rice Combine Harvester	8
Rice Thresher	9
Pump & Engines	10
Qualified Recipient	11



The Rice Program of the Department of Agriculture provides one of its key intervention to support the farmers and make rice farming easier through farm mechanization.

Rice mechanization is the efficient application of modern rice farm technologies to increase, produce and preserve the quality of produce and to reduce postharvest losses. It maximizes land and labor productivity thereby increasing the economic returns to rice farmers. In general, mechanization allows easier and timely production and postharvest operations. It reduces drudgery of field work and lowers production and postharvest costs.



HAND TRACTOR



FEATURES

- Walking agricultural tractor for wet/dry land tillage.
- Designed primarily to pull and propel trailed or mounted agricultural implements and machinery.
- Used for plowing and harrowing.
- Minimum of 1.5-2 has./ day capacity.

Php 130,000.00
estimated cost

30 hectares
(minimum area requirement)



SPECIFICATIONS

1. Prime mover
 - a. Engine: diesel, minimum 5.22 kW (7 Hp)
 - c. Cooling system: water cooled
2. Transmission system: minimum, chain and sprocket #50
3. Hexagonal axle
4. With cage wheel and brand new pneumatic tire
5. With basic tools and accessories as indicated in PAES.
6. Menu of Implement/Attachment
 - a. Moldboard plow
 - b. Comb harrow
 - d. Trailer
 - i. Riding type attachment
7. With One (1) year warranty
8. With AMTEC test result
9. Includes Testing & Training/Orientation of the Operator
(all expenses to be incurred during testing shall be shouldered by the supplier)

4WD TRACTOR



FEATURES

- Self-propelled, designed to carry, pull or propel agricultural implements and machines
- Good for dry land tillage
- Minimum of 4 has./day capacity

P 1,000,000.00
estimated cost

50 ha (minimum
area requirement)



SPECIFICATIONS

1. Engine: diesel, minimum, 3 cylinder
2. Rated power: minimum, 26 kW (35 hp)
 - With basic tools and accessories as indicated in PAES.
 - Attachment: compatible with the power and size of tractor
 - Menu of Implement/Attachment
3. Disc harrow
4. Disc plow
5. Rotary tiller
6. One (1) MT heavy duty trailer capacity
 - With AMTEC test result and with one (1) year warranty
 - Must conform to PAES
 - Includes Testing & Training/Orientation of the Operator (all expenses to be incurred during testing shall be shouldered by the supplier)
 - With DA logo (painted)
 - Delivery on site

FLOATING TILLER



FEATURES

a special type of walking-type agricultural tractor with a front-mounted tilling wheel and equip with a flotation structure commonly used in waterlogged fields

- used for wet land tillage
- minimum of 2 has/day capacity

P 100,000.00
estimated cost

30 ha (minimum
area)



SPECIFICATIONS

1. Prime mover:
 - a. Rated power: minimum, 6.71 kW, (9 hp)
 - b. Diesel engine (air cooled)
2. Engine: single cylinder, weighing not more than 50 kg
3. Forward speed range: 2.5 kph to 4 kph
4. With basic tools and accessories as indicated in PAES
 - a. three (3) pieces open wrenches
 - b. one (1) piece each of Philips and flat screw driver
 - c. one (1) piece adjustable wrench.
8. With AMTEC test result
9. Must conform to PAES
PAES 124:2002, Walking-type Agricultural Tractor Specifications
Part 3: Special Type (Float-Assist Tiller)
10. Includes Testing & Training/Orientation of the Operator
(all expenses to be incurred during testing shall be shouldered by the supplier)

RICE TRANSPLANTER (Walk-Behind)

FEATURES

- A specialized machine for transplanting rice seedlings in the field
- 1.5-2 ha/day (minimum capacity)



P 370,000.00
estimated cost

30 ha (minimum
area requirement)



SPECIFICATIONS

1. Prime mover
 - a. Minimum, 2,611 kW (3.5 hp)
 - b. Engine: gasoline, 4 stroke cycle
2. Number of planting rows: minimum, 4 rows
3. Adjustable hill spacing
4. Row distance: 30 cm, minimum
5. Seedling tray: minimum, 300 pcs
6. With manual seeder for seedling preparation
7. With basic tools and accessories as indicated in PAES.
8. With Original Equipment Manufacturer Manual (OEM)
9. With AMTEC test result
10. Must conform to PAES
 - a. PAES 151:2015, Mechanical Rice Transplanter
 - Includes Testing & Training/Orientation of the Operator (all expenses to be incurred during testing shall be shouldered by the supplier)

RICE TRANSPLANTER (Riding-type)



FEATURES

- A specialized machine for transplanting rice seedlings in the field
- Riding type
- 3.60 ha/day (minimum capacity)

P 1,400,000.00
estimated cost

200 ha (minimum
area requirement)

Requirements for Manufacturing; Safety, Workmanship and Finish; Warranty for Fabrication and Durability; Maintenance and Operation; and Marking shall conform with PAES

SPECIFICATIONS

1. Prime mover:
 - a. minimum, 13.06 kW (17.5 hp)
 - b. Engine: diesel/gasoline
 - c. Starting system: Electric starter
 - d. Four wheel drive
 - e. Steering system: power steering
2. Number of planting rows: minimum, 6 rows
3. Row distance: 30 cm
4. With manual seeder for seedling preparation
5. Seedling tray: minimum, 300 pcs
6. With basic tools and accessories as indicated in PAES
7. With AMTEC test result
8. Must conform to PAES
 - a. PAES 151:2015, Mechanical Rice Transplanter
9. Includes Testing & Training/Orientation of the Operator (all expenses to be incurred during testing shall be shouldered by the supplier)
 - With DA logo (painted)

DRUM SEEDER

FEATURES

- A planting equipment for depositing seeds in the soil
- 1.0-1.5 ha/day (minimum capacity)
- 1.0-1.5 ha/day (minimum capacity)



P 8,000.00
estimated cost

**3-5 ha (minimum
rice area
requirement)**



SPECIFICATIONS

1. Seed capacity: 2kg/drum
2. Seeding output: minimum, 0.033 (ha/h) per row
3. Seeding rate: 20 – 60 kg/ha
4. Number of rows: 8 – 12
5. Spaced at 20 cm between rows
6. Drum made of plastic or its equivalent
7. With AMTEC test result
8. Must conform to PAES
 - a. PAES 143:2005, Rice Drum Seeder
9. With basic tools and accessories as indicated in PAES

RICE COMBINE HARVESTER

FEATURES

- A self-propelled, combines harvesting, threshing, cleaning and bagging in one operation
- 3 ha/day (minimum capacity)



P 2,000,000.00
estimated cost

100 ha (minimum area)



SPECIFICATIONS

1. Prime mover
 - a. Rated power: minimum, 44.76 kW (60 hp)
2. Drive system: rubber crawler track
3. With brand new transport- trailer
4. With basic tools and accessories as indicated in PAES
5. Sacked or auto unloading
6. Total machine loss: maximum, 3%
7. Mechanically damaged (broken) grain: maximum, 2%
8. With basic tools and accessories as indicated in PAES
9. With AMTEC test result
10. Must Conform to PAES
 - a. PAES 204:2015, Rice Mechanical Thresher
11. Includes Testing & Training/Orientation of the Operator (all expenses to be incurred during testing shall be shouldered by the supplier)

RICE THRESHER

FEATURES

- Machine used to detach and separate the paly from the panicles
- 2-3 tons/hr. minimum capacity
- Can be trailer mounted, towed by a carabao or hitched to power tiller



P 130,000.00
estimated cost

50 ha (minimum area)



SPECIFICATIONS

- Engine: Diesel: 7.46 kW, (10 hp), minimum
 - Cooling system: aircooled
 - Weighing not more than 60 kg
- Threshing cylinder**
 - type: open cylinder
 - peg tooth round/knife bar mild steel
 - Threshing Recovery, minimum 97.0%**
 - Threshing efficiency: minimum, 99.8%**
 - Total machine loss: maximum, 3%**
 - Purity: minimum, 97%**
 - With basic tools and accessories as indicated in PAES**
 - With Original Equipment Manufacturer Manual (OEM)**
 - With AMTEC test result**
 - Must Conform to PAES**
 - PAES 204:2015, Rice Mechanical Thresher
 - Includes Testing & Training/Orientation of the Operator (all expenses to be incurred during testing shall be shouldered by the supplier)**

PUMP & ENGINE SETS

with complete accessories



FEATURES

- Device used to lift or transfer water from one source to another
- Provided with suction hose and duct hose

P 100,000.00
estimated cost

**3-5 ha (minimum
rice area
requirement)**



SPECIFICATIONS

1. Engine: Water-cooled diesel engine, 7 Hp minimum
2. Pump: 4x4 self-priming centrifugal pump with hose adaptor at the suction/inlet & direct elbow with hose adaptor at the discharge/outlet
3. Accessories:
 - 20 ft plastic corrugated suction hose with plastic strainer and hose clamps/clips and 100 m duct hose
 - complete set of pulleys and v-belts and manual
4. AMTEC Tested on pump and engine sets
5. Mounted on common base plate
6. With 1 year warranty
 - Includes Testing & Training/Orientation of the Operator (all expenses to be incurred during testing shall be shouldered by the supplier)
7. With basic tools and accessories as indicated in PAES
 - Two (2) pieces open wrenches
 - One (1) piece adjustable wrench
 - One (1) piece each of Philips and flat screw-driver

Memorandum Order No. 25 series of 2016 provides general guidelines of agricultural production, postharvest and processing facilities under the Regular Program of the Department.

Memorandum Order No. 26 series of 2016 provides general guidelines of agricultural production, postharvest and processing machinery and equipment under the Regular Program of the Department.

QUALIFIED RECIPIENT

Guidelines from M.O No. 25 series of 2016

1. Must be an organized Farmer's Group or other related groups engaged in agricultural production and production duly registered at SEC/CDA/DOLE/DTI;
2. Must be currently engaged in rice, corn, high-value crop, organic farming, livestock and poultry production;
3. For facilities intended for business operation, the recipient must be currently engaged in trading consolidating or any activity necessary to sustain be operation of the facility;
4. Must be willing and able to provide the prescribed equity. Land equity shall be upported with proof of ownership/ possession such as copy of Title/ Tax declaration (in the name of the recipient) or Deed of Donation (with copy of Title/ Tax Declaration) or copy of Usufruct Agreement for at least 25 years with copy of Title/Tax Declaration, and not in a way subject to pawned;
5. Must be willing to shoulder the cost of operation and maintenance starting from the date of turn-over and beyond warranty period; and
6. Must be willing to participate in training courses.

Guidelines from M.O No. 26 series of 2016

1. Must have existing shed or willing to provide shed for the machinery and equipment;
2. Must have a service area equivalent to the capacity of the requested machinery and equipment.
3. Must have the capacity to operate and maintain the machinery and equipment.

Eligibility of proposed site:

1. The size of the proposed area or volume of production must be equivalent or more than the capacity of the requested facility;
2. For postharvest and processing facilities, the proposed site shall have an existing power and water supply that conforms to the facility requirement or the prospective recipients has a pending application ton electric/ water cooperative/ company;

3. Accessible to all types of transport/ hauling vehicle;
4. No peace and order issue;
5. No right-of-way issue;
6. Environmental-compliant; and
7. Proposed site should not be located in geo-hazard and flood prone area.

List of minimum requirements:

The qualified recipients shall submit the following documents:

1. Letter Of Intent
2. Board Resolution of FO/FA/IA/RBO stating the need for the facility and the capacity of the applicant/ prospective recipient to manage the facility signed by all members of Board of Directors;
3. SEC/CDA/DOLE/DSWD certificate of registration
4. Certificate Of Good Standing or equivalent certification from the DA-RFO;
5. FA/FO/IA/RBO Profile
6. MAO/CAO Endorsement
7. PAO Endorsement
8. Farm Equipment Proposal
9. Geotagged photos of proposed area (provided by the APCOS after the site validation)
10. Geotagged photos of machinery shed (provided by the APCOS after the site validation)
11. Signed business plan for processing equipment. The recipient may seek technical assistance in the preparation of business plan from DA-RFO-AMAD.

Other Requirements

1. AFC endorsement (municipal level)
2. List of Farmers-members with signature and Area
3. MOA
4. Sketch



“A food-secure Philippines with prosperous farmers and fisherfolk”

Produced & Distributed by:



DEPARTMENT OF AGRICULTURE - CARAGA REGION

Regional Agriculture and Fishery Information Section
Capitol Site, Butuan City

In Support to:

Rice Program
Caraga Region

 www.facebook.com/darfo13

 da13caragainfo@gmail.com

 (085) 815-2009

 (085) 341-2114