

Hybrid Rice Production Technology

Three hybrid rice varieties have been developed, namely: PSB Rc26H (Magat), PSB Rc72H (Mestizo), and PSB Rc76H (Panay). However, only Mestizo is currently available and recommended for nationwide planting. This variety is soft when cooked, aromatic, and is comparable to or better in eating quality than IR64.

CHARACTERISTICS						
Variety Released	Year (t/ha)	Ave. Yield (t/ha)	Max. Yield (t/ha)	Growth Duration (days)	Height (cm)	Milling Recovery (%)
PSB Rc72H (Mestizo)	1997	5.4	9.9	123	97	68.7

1. Use new seeds every season and follow recommended seeding rate

- Use 20 kg new seeds per hectare. Do not use seeds harvested from previous hybrid crop
- Owing to hybrid vigor, there is rapid root and greater leaf area development, leading to increased number of spikelets per unit area. This means greater yield even with only 20 kg seeds.
- Soak seeds for 12-24 hours in clean water. Change water every 6 hours. Then remove from water, wash the seeds, and incubate for 12-36 hours or until a white dot (this is the root) has been observed to come out of the seeds. Keep seeds warm and moist during incubation.

Note: Hybrid rice seeds may be discolored, are lighter in weight, partially filled, and slightly opened.

2. Raise healthy seedlings

- While the seeds are being soaked, prepare land and make a 400 m² seedbed for every 20 kg seeds to be sown. Prepare raised seedbeds 1m wide and of any convenient length.

Note: Seedbeds must be far from sources of light so as not to attract insects; has water supply; free from the previous crop's disease; and can be easily drained. If drainage is a problem, raise seedbed up to 5 cm.

- Apply 10-15 bags of organic materials (e.g. compost, carbonized rice hull, decayed chicken manure) for every 400 m² seedbed to make soil loose and friable. This will facilitate pulling of seedlings and minimize root damage.
- Sow the incubated seeds on the seedbed at a rate of 50 g/m².
- Control weeds immediately. Weed growth is expected in plots with materials not fully decomposed and with sparsely sown seeds. Protect also the young rice seedlings from rats and golden snails.

- If nutrient deficiency is observed, apply ammonium phosphate (16-20-0) or complete (14-14-14) fertilizer at the rate of 5-10 g/m² 10 days after seedling.
- Maintain 1-2 cm of water. Too much water produces tall and weak seedlings.

3. Prepare the land early and properly

- Field should be prepared 3 weeks before transplanting. Repeatedly plow and harrow the field to decompose and incorporate all weeds, rice straw/stubbles, and animal manure. If needed, apply basal fertilizer during the last harrowing.

4. Transplant seedlings then replant empty hills

- Transplant 20-25 day-old seedlings at 1-2 seedlings/hill and at a distance of 20 cm x 15 cm during dry season and 20 cm x 20 cm during wet season.
- Replant empty hills not later than 3-5 days after transplanting to avoid uneven maturity of the crop

Note: Too close planting space results in mutual shading, less tillers, smaller panicles, and in tall and weak plants that are susceptible to lodging.

5. Apply the right kind and amount of fertilizer at the right time.

- It is best to have your soil analyzed to know the right kind and amount of fertilizer to apply. Consult the agricultural technologist in your area to know the recommended time and method of applying fertilizer.

6. Maintain the right amount of water

- Maintain 2-3 cm water depth 2 days after transplanting. Increase this to 5 cm during late vegetative and reproductive stages.
- Drain water 2 weeks before harvest during wet season. During dry season, gradually drain to saturation point, preventing drying up of the soil as this will affect grain quality.

Note: Insufficient water results in wilting, thus reducing the capacity of the plant to produce and transport its food.

7. Manage the pests

- **Insects**. Practice synchronous planting - plant within a month of the regular planting time in the community. Within 40 days after transplanting, it is not necessary to apply insecticides against leaf-feeding insects.
- **Weeds**. Apply pre-emergence herbicides 2-5 days after transplanting. Hand weed, if needed.
- **Golden snails**. Herd ducks in the field after harvest, handpick snails and their eggs; and control water; put screen wires along water outlets.

- **Diseases.** Destroy all infected plants before the disease spreads. Practice synchronous planting.
- **Rats.** As a community, destroy all breeding sites of rats before the cropping season starts.

8. Harvest on time

- Harvest the crop when 80-85% of the grains are mature.
- Thresh immediately to minimize field losses and deterioration of grain quality.
- Dry palay to 14% moisture content to maintain quality during storage.
- Clean seeds before storage. Ensure that the storage area is clean and well-ventilated.

Note: Delay in harvesting may lead to grain shattering. On the other hand, harvesting too early produces immature, chalky grains that break easily during milling.

What makes hybrid rice production different from farmers' usual practices:

1. Use of 20 kg hybrid seeds per hectare
2. Application of 10-15 bags of organic materials in a 400 m² seedbed
3. Sowing of 20 kg seeds in 400 m² seedbed
4. Transplanting of 1-2 seedlings/hill
5. Use of new hybrid rice seeds every season.

For more information, write, visit or call:

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