[DA ADMINISTRATIVE ORDER NO. 04, S. 2010, January 15, 2010]

SEED AND FIELD STANDARDS FOR THE PRODUCTION OF TWO-LINE HYBRID, THERMOSENSITIVE GENETIC MALE STERILE (TGMS) LINE AND POLLEN PARENT

Pursuant to the provisions of the Implementing Rules and Regulations of R.A. 7308, otherwise known as the Seed Industry Development Act of 1992 and upon approval of the National Seed Industry Council, the following standards and procedures for seed certification are hereby adopted and promulgated to ensure the quality of two-line hybrid (F1) and parent seeds (S or TGMS line and P or Pollen parent).

1. The general requirements of seed certification applicable to all crops like hybrid rice (F1) and hybrid rice parental seeds (S and P lines) as adopted by the National Seed Quality Control Services.

2. The production area must have fertile soil and temperature regimes adapted for parent lines (S and/or P), with sufficient irrigation and efficient drainage system, not shaded and has no previous record of serious incidence of insect pests and diseases.

3. The S line shall be produced in areas with relatively low temperature that would meet the critical fertility point of the TGMS line or S line. Production of S x P (F1 hybrid) shall be conducted under warm temperature environment meeting the critical sterility point of the TGMS or S lines.

4. The S x P production area must undergo a series of field inspections which shall be conducted by NSQCS and duly trained deputized seed inspectors (initially assisted by PhilRice) during the seed production process to include the monitoring of prevailing critical high and low temperature conditions from panicle initiation to flowering or starting at 30 days before flowering or heading.

5. Control plots of at least 40 sq.m. should be prepared and planted to the TGMS line or S at 15 x 15 cm spacing and one-seedling-per-hill same day as S in S x P seed production field. The control plot follows isolation required of TGMS lines. The plot should be kept weed and off-type free and managed similar to S in S x P field. At maturity, 1,000 plants sample taken from the inside of the plot shall be harvested and seeds, if any, are weighed. The 1,000 plant samples occupied 22.5 sq.m. while at 3:10 male to female ratio, the female parent occupied 7692 sq.m. in 1.0 hectare SxP. At 4% allowable other varieties (3%) and selfed seeds (1%), harvest from the 1,000 plant samples should not exceed 70.0 gm at 14% MC. Calculation assumed no failure in isolation of the control plots and 600 kg seed yield per hectare of SxP.

If a control plot is planted to serve as control plots for several seed producers in the locality, the site chosen should be representative of the environmental conditions

existing in the production plots (temperature, irrigation water source, etc.)

6. Report of inspection should be submitted not later than one (1) week after each inspection to the National Seed Quality Control Services that has jurisdiction over the area.

7. During processing and storage, proper cleaning and bagging must be observed to maintain general cleanliness/sanitation and prevent mechanical mixtures of varieties.

8. The following field requirements and standards must likewise be met:

a. Production area - at least one hectare irrigated.
b. Isolation - strictly isolated to ensure genetic purity of hybrid seeds and rice parental and avoid pollination from unwanted varieties.

The following isolation methods shall be followed for S and SxP seed production:

i. Distance isolation - an isolation of 100 meters is satisfactory.

ii. Time isolation - adjust planting time to separate flowering of seed parent from other cultivars at least 3 weeks. The difference in heading between S and varieties grown within 100 meters of the seed production field should be at least 21 days.

iii. Barrier isolation - topographic surface features or any physical obstacles, whether (a) natural barrier having a height of at least 2.2 meters and 3 to 4 meters wide or (b) artificial with height of at least 2.5 meters can be used only as remedial measure.

iv. Geographical isolation - select an area that can give natural protection against unwanted cross-pollination. This area is not necessarily forested or mountainous but may be surrounded by other crops such as banana and coconut or an area not planted to any crop.

c. Roguing - sources of undesirable rice plants like volunteer plants, off-types should be removed from S line or P line at any time of the plant stage development and particularly during the maximum tillering, flowering and before harvest stages.

d. Control of weeds, diseases and insect pests - keep weeds, diseases and insect pests under control.

e. Field inspection guidelines and standards - recommended planting practices, isolation, varietal field purity must be met to be eligible for certification; the seed inspector shall certify eligibility based on the guidelines and standards for field inspection of F1 and parental seed production as shown in ATTACHMENT A* hereof.

The following seed standards shall be complied with: