SUGGESTIONS FOR THE CARE AND TESTING OF RICE STRAINS SUPPLIED BY THE INTERNATIONAL RICE RESEARCH INSTITUTE

The International Rice Research Institute
Los Baños, Laguna, Philippines
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The Institute is supplying interested institutions and agencies with seeds of a limited number of improved strains of rice for observational testing in different areas of tropical Asia. These are selections from breeding material developed elsewhere as well as early-generation selections from the Institute's breeding program which was started in late 1962. As the IRRI breeding program progresses, a larger number of selections will be made available.

The Institute releases these seeds to obtain information on varietal performance in experimental plots under a wide range of conditions. The strains being distributed on this basis may have certain genetic limitations and may not be suitable for immediate commercial use. These limitations include disease and insect susceptibility, a lack of seed dormancy, or questionable cooking quality. When these strains are not damaged by diseases and insects and are grown under favorable conditions, valuable information on their inherent yielding ability may be obtained.

As a group, these strains are early maturing, short in stature, medium to low in tillering, and responsive to added nitrogen. They are not expected to produce their full yield potential without good water management, adequate fertilization, and effective control of weeds, insects and diseases.

The suggested practices included here to serve as guides may be modified to suit local conditions. For instance, closer spacings and higher levels of fertilization may be used in the sunny dry season than in the cloudy rainy season. Increased fertilizer rates should be used on soils with low

fertility. Areas with special soil problems may require special formulation of fertilizers or soil ameliorants.

The Institute welcomes inquiries, comments, or reports on these experimental materials and methods.

SUGGESTED CULTURAL PRACTICES

I. Seedbed

Use any ordinary wet seedbed method. The upland type of seedbed may also be used except in areas where the rice blast disease is prevalent.

Seed at a rate of about 70 grams per square meter of wet seedbed. Distribute seeds evenly on the wet soil surface. Maintain water at the soil level or slightly below.

Fertilizer may be added to the soil prior to seeding at the rate of 5 grams of nitrogen (24 grams of ammonium sulfate) per square meter of seedbed. Control insects with an appropriate chemical, such as endrin, folidol, DDT or gamma-BHC.

Lift seedlings from the seedbed at about twenty days following seeding (or at the 5-leaf stage). Complete transplanting as promptly as possibly after removal from the seedbed and never later than the following day. Leaf or root pruning is not recommended for young seedlings of early maturing varieties.

II. Main field

Flood the field at 2-3 weeks before transplanting. Plow under rice stubble and weeds at least 2 weeks before planting. Harrow the field immediately after plowing, and again at 2-3 days before transplanting.

Apply 50 kg. each of N, P_2O_5 and K_2O (238 kg. of ammonium sulfate, 250 kg. of ordinary superphosphate, and 83 kg. of potassium sulfate) at the final puddling. Mix the fertilizers with the soil thoroughly by passing the harrow several times across the field.

Space hills at 25 x 20 cm. or 30 x 15 cm. Plant 3 seedlings to each hill. Save extra seedlings for replanting the missing hills at a later date.

For direct-seeded plots, drill or dibble at a rate of 80-100 kg. of seed per hectare. Broadcast at a rate of 100-120 kg./ha. Flush the field and drain it immediately. Keep the soil moist, but do not maintain a continuous flood at this stage.

Maintain shallow water following transplanting, or for direct-seeded plots, after seedlings have emerged from the soil. The water level may be gradually increased as seedlings grow taller. Maintain water (not exceeding 10 cm. in depth) in the field continuously up to the hard-dough stage, except for weeding, mid-season drainage, and top-dressing.

Top-dress with 30 kg./ha. of N (143 kg. of ammonium sulfate) between the panicle initiation and booting stage. Most of these varieties mature in about 120-125 days and should be top-dressed at about 65 days following seeding. Drain the field, apply fertilizer and incorporate into the soil, then reflood immediately.

Control weeds by hand or rotary cultivators. Control rats with poisoned bait and by trapping. If possible, protect the maturing crop from birds with nets.

Control stem borers with gamma-BHC at 3 kg. active ingrediant per ha. (15 kg. of 20% "lindane" or 50 kg. of 6% "dol granules") per application. Apply BHC in the irrigation water at 50 and 80 days after seeding. In areas with distinct broods, apply BHC to coincide with peak periods of moth activity. For areas with heavy borer infestations, apply BHC at 10 days after transplanting and reapply at monthly intervals.

Whenever the leafhopper population becomes noticeably large, control leafhoppers with "sevin 85" at 3 kg. active ingredient per ha. (3.53 kg. of "sevin 85" wettable powder) as a systemic (spray at the base of plants

and water surface) or apply as foliar spray at 1 kg./ha. (1.2 kg. of "sevin 85"). Reapply "sevin 85" at 30-day intervals.

Harvest the plants when more than 80 percent of the grains on the panicle have fully ripened. The upper leaves and culms of many improved varieties may remain green while the grains are fully ripe.

III. Collection of Data

For observational purposes, 4-row plots are preferred to 1-row plots. They may be unreplicated.

For yield data, plot size should be not less than 10 square meters. Plots should be replicated at least twice. Do not harvest plants that are grown along the borders of the plot.

The International Rice Research Institute would appreciate receiving data from cooperators on the following items: date of seeding, date of transplanting, number of tillers per hill (average of 10 hills), plant height (from ground surface to tip of the tallest panicle), number of days from seeding to heading, incidence of specific diseases and insects, grain yield (dried to 13% moisture content), and other pertinent information related to cultural management, prevailing weather, and grain yield.

Please mail such information to:

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TTC:gaf