RED rice is the most troublesome weed pest occurring in rice fields. Once harvested with the cultivated rice crop, it cannot be removed by any known machinery. The kernel is often slightly smaller than that of commercial rice varieties and the red seed coat from which it derives its name cannot be entirely removed in the milling process without materially reducing the yield of head rice. Streaks of the red bran which often are left on the milled kernels seriously injure the appearance of the milled rice and lower the grade.

A survey of seed rice used in the states of Louisiana, Texas, and Arkansas was made in the spring of 1929 by W. D. Smith, J. J. Defies, and C. H. Bennett of the Rice Project, Grain Investigations, Grain Division, Bureau of Agricultural Economics, U. S. Dept. of Agriculture. They drew samples from 337 lots of rice seed actually being planted. Of these samples, 54% contained seeds of red rice, the average number per pound being 28. One sample showed 585 red rice per pound. Using 80 pounds per acre, over half of the rice growers were planting on an average about 2,300 red rice seeds per acre or 1 on every 18 square feet.

A similar survey was made in California by the Federal-State Seed Laboratory in the spring of 1932. Samples were obtained from the seed being used in planting approximately one-sixth of the state's rice acreage. Of the samples taken, 42% contained red rice seed ranging from 3 to 57 seeds per pound. The California Federal-State rice inspection service reported in 1932 that of 907,251 sacks of rough rice inspected, 2.0% graded No. 2, 1.9% graded No. 3, 3.2% graded No. 4, and 0.3% graded No. 5 because of red rice.

Red rice is known to volunteer in the rice fields of the South, but just how long the seeds are capable of remaining viable in the soil is not definitely known.

An experiment was planned by the U. S. Dept. of Agriculture to determine the length of time red rice seed will remain viable in the soil under different climatic conditions and was started in the fall of 1930.

PLAN OF EXPERIMENT

Five samples of red and two samples of cultivated white rice were buried on the rice experiment stations at Stuttgart, Ark., October 28, 1930, at Beaumont, Tex., October 31, 1930, and at Biggs, Calif., November 17, 1930. At each station, 12 pits were dug, 6 so located that they would be submerged as is practiced in growing a normal crop of rice, and 6 so located that they would receive natural rainfall only.

Contributions from the U. S. Dept. of Agriculture, Washington, D. C., in cooperation with the State Department of Agriculture, Sacramento, Calif. Received for publication March 20, 1939.

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