

COMPREHENSIVE RESEARCH ON RICE

PROGRAM AREA: Rice Biology

PROJECT NUMBER AND TITLE: Project No. 70-7

Production of haploid plants from pollen culture and by other methods.

PROJECT LEADER: J. N. Rutger

PERSONNEL: J. N. Rutger and Scott Trees

OBJECTIVES:

- 1) To develop techniques for producing haploid plants from pollen culture.
- 2) To explore other methods of producing haploids.

WORK IN PROGRESS:

Some work is continuing on objective 2.

EXPERIMENTS COMPLETED:

Five basic culture media, which literature reports indicated might be suitable for pollen culture, were studied to determine which would be best for rice. With one medium (Nhzeki and Oono's) it was possible to induce callus from rice seed tissue. Although this tissue proliferated on the culture medium, the tissue failed to differentiate into plantlets.

Pollen culture was attempted on these five media with anthers from four rice varieties, but no callus production was observed.

WORK PLANNED: None

MAJOR ACCOMPLISHMENTS: None

IMMEDIATELY APPLICABLE RESEARCH RESULTS: None

EVALUATION OF PROJECT:

This undertaking was known to be a high-risk project; consequently, no funding was requested from the Rice Research Board. After nine months of intensive effort by a graduate student, Mr. Scott Trees, it was concluded that the project should be terminated. Rice pollen culture work would require much more manpower and laboratory facilities than are presently available.

PUBLICATIONS OR REPORTS: None