

Rice-Wheat Information Sheet

No.7

Happy New Year

The report of the Regional Technical Coordination Committee (RTCC) Meeting has been distributed to RTCC participants and Steering Committee members. The proceedings of the Meeting were summarized in the last RWIS. The Strategic Plan from the report's Executive Summary is given here, as it provides useful new information.

Strategic Plan

The outlines of a Strategic Plan were developed during the final part of the RTCC Meeting by matching the 'demand' with the 'supply'. The issues and activities of the Plan were divided into three major groups:

Soil Fertility

Nutrient dynamics and simulation modeling

- Identify consultant(s) to take stock of existing long-term R-W experiments (6 months).
- Organize a workshop of the scientists involved in these experiments to discuss ways to standardize data collection and analysis and produce publication(s).
- Identify necessary modifications to the existing set of experiments.
- Develop, at one or two chosen sites, suitable models to explain production trends and key indicators of sustainability.
- Test the models at other sites.

Organic matter recycling and enrichment

- Convene a workshop to develop innovative approaches to study soil organic matter in R-W based cropping systems including the dynamics of organic matter content, options for animal and crop residue use, and farmer management systems and recycling methods.
- Research on inclusion of legumes, green manures, and other break crops is also needed. Such research will be strengthened by farmer participation to identify reasons and solutions for enhanced adoption.

Micronutrients

- Identify cultivars and, if necessary, breed plants that are more tolerant of micronutrients in their seeds.
- Use systems diversification.
- Apart from increasing yields, improved micronutrient efficiency can also enrich the nutrition of poor people.

Soil testing and analysis

- Develop a methodology to calibrate fertilizer use to meet target yields and share the data at a workshop.
- Monitor soil fertility trends on station and in farmers' fields using benchmark sites and standardized methods.
- Organize an on-farm methods course for scientists.
- Upgrade facilities and human resources in laboratories for soil/plant/water analysis.

General

- Link the four fertility activities to overall productivity and sustainability across the ecoregion using GIS.
- Farmer participatory techniques need to be improved to define problems more clearly and identify adoption rates of solutions.

Water Management

- Identify and measure indicators of productivity and sustainability in relation to progress and impact of existing irrigation schemes, water tables, salinity and sodicity, waterlogging, and water distribution.
- Improve water-use efficiency at crop, farm, and system level.
- Determine the value of efficient drainage in relation to crop establishment after rice and on the system's productivity.
- Initiate trials on permanent ridge-and-furrow systems.
- Study the effects of policy issues on water management efficiency at selected sites.

Integrated Pest Management (IPM)

The focus of IPM is on the interaction between pests (diseases, insects, rodents, weeds, and other biological organisms) and IPM interventions. The aim is to provide pest control with minimum chemical use and minimum impact on the environment. Activities include:

- Special characterization of pest complexes.
- Assessment of pest problems in long-term trials
- Diagnostic monitoring of farmers' fields to provide hypotheses for testing the effect of cropping patterns on pest levels.
- On-farm experiments to identify pest carryover between crops.
- Identify IPM components.
- Propose rational pesticide policies to help prevent pesticide resistance or contamination of the environment.

Ongoing Activities

The research to reduce the turnaround time between crops involves continuing the work on crop establishment methods (reduced and zero tillage) and developing varieties that complement the system. These ongoing activities are focused on R-W problems and strongly interact with the three major thrusts listed above.

Next Step for the Strategic Plan

It was agreed that the three major thrusts of the Strategic Plan would need to be developed as funding proposals by groups meeting in designated countries. Possible national and international actors and sites for the three groups of issues were suggested. Immediate seed money is needed to bring the groups together to prepare the research and funding proposals. It was suggested that one document (perhaps on micronutrients or IPM) should be prepared as a model for the others, and that national and international groups should be involved in developing detailed work plans. Suggestions on the locations for the trials were also made.

Productivity and Sustainability: *Concepts and Definitions*

The problem-solving process assumes that the broad regional productivity and sustainability trends in R-W systems are unfavorable. Research at a higher level of aggregation is needed to ascertain whether productivity and sustainability are in fact threatened. This led to a discussion on the meaning of productivity and sustainability. In this case, it was agreed that yield and productivity trends were not identical (increasing yields may coexist with declining productivity) and that sustainability involves such themes as changes in the quality of the resource base, employment, income, and food needs for the present vs future generations. This subject deserves further discussion or even a workshop.

Regional Steering Committee (RSC) Meeting

The program for this Meeting to be held at IIMI in Sri Lanka is being finalized. All the RSC members are planning to attend as are an equal number of resource persons. The main items on the agenda will be an examination of the recommendations from the RTCC Meeting, the budget needs and possible sources of funding, and interviews with the five candidates short-listed for the Facilitator's position. The next RWIS will report this Meeting.

Facilitator's Visit

The Interim Facilitator visited Pakistan, 17-20 Dec 1994. The R-W Program staff in Pakistan held two meetings to develop very detailed research plans for presentation at the RTCC Meeting and were therefore very disappointed that they were unable to come at the last minute. They had difficulty in implementing their in-country research plan as the funds promised by their Government have not yet been released. Fortunately, they were able to find enough money from other sources to sow their long-term trials. They were optimistic that funds would shortly be available. The Interim Facilitator saw their new Plant Genetics Resources building that has been provided by the Japanese Government, the new equipment and staff for their GIS Unit, their new e-mail connections, and a big program to encourage R-W farmers to accept *Sesbania aculeata*. When used as a green manure, in 60 days *S. aculeata* can provide about 200 kg N ha⁻¹ to the next crop. The Pakistan R-W Program staff were looking forward to being intimately involved in Consortium activities.

Workshop on GIS

Plans are well under way for a Workshop entitled *Role of GIS in developing and transferring sustainable agriculture technologies in the tropics* which will be held at the Asian Institute of Technology in Bangkok, Thailand, 20 Feb to 7 Mar 1995. About 40 participants are expected. A major workshop component will be to identify the extent of the R-W system and the edaphic conditions associated with the system, using data provided by workshop participants. The workshop is partially supported by the Consortium, its proceedings should be interesting.

Next Issue

Expect the next RWIS to contain exciting news about the future activities of the Consortium. Please send along any items you would like to contribute, including ideas for a shorter name for the Consortium-Initiative. Some guidelines have already been given under *Name for the Initiative* in the last RWIS. Sleep on it, you may come up with a brilliant idea!