

# Rice Wheat Information Sheet

No.18

## News

### *Welcome*

Raj Krishan Gupta, formerly Assistant Director General (Soils) has been designated full time National Rice-Wheat Coordinator for India. He is based at the Indian Council of Agricultural Research (ICAR), New Delhi.

Robert B Zeigler has succeeded Prabhu Pingali, who has moved to Centro Internacional de Mejoramiento de Maiz y Trigo (CIMMYT). Zeigler will lead the International Rice Research Institute's (IRRI) in the Consortium, he is based at IRRI, Los Banos where is the Leader of the Irrigated Rice Program.

We welcome them to the Consortium fold on behalf of all the partners.

### *Bank Task Force on Rice-Wheat Consortium*

We understand that Michel Petit at the World Bank has initiated steps to create a Bank Task Force on promotion of agricultural technology development in South Asia. The Task force (a) share information (b) improve synergy among the actions undertaken by the partners without changing any of the established and practiced procedures. The Task Force which will include all the Bank staff directly involved in agricultural activities in the South Asia region, will be launched soon, and will meet at least twice a year either in Washington or in the region. We will keep you posted, and we urge everyone to communicate with the Task Force as it becomes active.

### *IPMnet*

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### IPMnet NEWS

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### *PAU and ICRISAT Scientists collaborate*

The Indian Punjab, a wheat growing state before the era of high yielding varieties (HYV), was transformed into an important rice-wheat state during the HYV era (post 1965), when all the cropping area was covered by HYV. This era saw wheat production increase 6-fold, and its yield triple, while rice production increased by 19-fold, and its yield more than tripled. The increased adoption of the rice-wheat cropping system triggered a series of changes, particularly in the soil fertility and the quality and quantity of ground water. There are several reports suggesting declining productivity and input use efficiency under this system. To maintain a given productivity now requires more inputs than it did earlier (Pingali et al. 1990, IRRI Paper No. 90-91). Deficiencies of secondary and trace elements are also emerging (Nambiar and Abrol 1989, Fertilizer News, India 34: 11-20). A significant decline in the productivity of these crops particularly of rice has been recorded since the mid 1980's (Singh and Paroda 1994, RAPA Publication 1994/11: 1-35).

Scientists of the Department of Soils, Punjab Agricultural University (PAU) Ludhiana, and the Agronomy Division, ICRISAT Asia Center, Patancheru, Andhra Pradesh, India, have initiated collaborative experiments on soil biology and biological nitrogen fixation by legumes, seeking ways to sustain/enhance the productivity of the rice-wheat cropping system. The collaboration between PAU and ICRISAT is an endeavor to complement the strengths of the two partners and to address some of the issues on the role of legumes and the management of crop residues. The central principle of partnership will be resource sharing. Mutual support will be extended between institutions. Efforts will be made to obtain funds from national and international agencies.

Of the two long-term experiments that have been planned. One will examine the value of high N<sub>2</sub> fixing selections of chickpea in a rice-wheat cropping system. Chickpea lines of three different nodulation capacities, nonnodulating, local cultivar and an advanced breeding line; that be used as controls/reference materials. Berseem (*Trifolium alexandrinum*), another winter legume, has been included to compare the two legumes. According to a 1992 estimate, every year Punjab farmers burn a total of about 12 million tons of rice straw (70% of the total produced) and wheat straw (30% of the total produced) annually. Consequently, about US\$ 19.5 million worth of mineralizable nitrogen is lost annually. The second experiment aims to identify alternative ways that do not involve burning.

Both the experiments will be sown in June 1996. However, to manage the crop residues, some of the in-built observations, e.g., on carbon budgeting, that need expensive equipment or analyses will not be initiated until additional sources of funds are identified. The scientists involved are: V Beri and B S Sidhu, Department of Soil Science, PAU Ludhiana, 141004, Punjab, India; O P Rupela and C Johansen, ICRISAT Asia Center, Patancheru, 502324, Andhra Pradesh, India.

## Happenings

### ***Third Meeting of the Regional Technical Coordination Committee (RTCC)***

The third meeting of the RTCC was held at Hotel Holiday Inn, Islamabad during 2-3 June, 1996. It was attended by the National Rice-Wheat Coordinators from the four Consortium countries - Bangladesh, Nepal, India, and Pakistan, and technical representatives from other Consortium participants including ICRISAT, Cornell University, International Irrigation Management Institute (IIMI), CIMMYT, and IRRI. The major recommendations are:

- Implement the ODA Project on Tillage and Crop Establishment (TCE) as explained in the project work plan.
- Hold the Long Term Soil Fertility Experiments (LTSFEs) workshop during 14-18 October in India.
- Conduct simulation modelling training at IRRI during 2-6 December, 1996.
- Submit IRRI's proposal on Nutrient Management to ODA for holdback funds after incorporating comments, if any, from the National Coordinators.
- Conduct the planning workshop on SM-CRSP Project of Cornell University.
- Resource persons from IARCs should participate in site-level planning workshops to be organised by NARS, including the one on Integrated Nutrient Management (INM)
- Consortium partners should consider nominating their scientists for an IIMI-sponsored water management workshop to be held in Pakistan in September.
- Each of the four Consortium countries should hold national level workshops to develop Integrated Pest Management (IPM) research programs on rice-wheat systems.
- Facilitation Unit (FU) prioritise regional issues and training requirements. [*Recommended to Regional Steering Committee (RSC)*]
- NARS should develop research proposals/work plans on social science and policy issues based on the deliberations of the Kathmandu workshop. (*Recommended to*

- RSC*)
- Research on overarching issues on social science should start as soon as possible, and a regional workshop to elaborate and review the above should be held during June, 1997 (*Recommended to RSC*)
  - The Rice-Wheat Information Sheet (RWIS) should continue in its present form and a technical newsletter (quarterly) with inputs from all the partner institutions should be initiated.
  - A reprint series in relation to rice-wheat system research should be started.
  - A working paper series on research issues should be initiated.
  - All the four National Coordinators will be provided with a notebook computer, communication peripherals, and a portable printer to establish firm communication links.
  - FU should organize a half-day symposium on rice-wheat related themes during the Second International Crop Science Congress (ICSC) to be held in New Delhi during November, 1996.
  - The FU should organize a “poster panel” at the ICSC venue of the Consortium.
  - FU will sponsor a few scientists from the Consortium to attend the ICSC.
  - Henceforth, any partner institution intending to submit proposals for funding on behalf of the Consortium should submit a “concept paper” through the FU, to all the other partners for their comments, , before finalizing the full proposal.
  - The next meeting of the RTCC will be held in New Delhi during 25-27 November, 1996.

## **Planning ahead**

National Agricultural Research Centre (NARC), Islamabad will hold a national IPM workshop at NARC during the first week of July 1996 to develop project proposals addressing major IPM issues. Colleagues from ICRISAT and IRRI will assist the groups in project development.

### ***Workshop on LTSFEs in Rice-Wheat Systems***

It is proposed to hold a 5- day workshop on LTSFEs in India during 14-18 October. Scientists involved in LTSFEs in Consortium countries have been requested to prepare a paper based on the experiments conducted at their station. Future strategies for improvement in this important area will be finalized during the workshop. After the workshop, a compendium of the accepted manuscripts will be published by the Facilitation Unit.

## **Food for thought**

Be willing to give service, what counts most in life is what we do for others.