



International Network for Genetic Evaluation of Rice

A consortium of national agricultural research systems (NARES) and international agricultural research centers (IARCs) established in 1975, INGER is a proven platform for the multilateral, safe, and worldwide exchange and evaluation of rice breeding materials and sharing of information.

Mode of Operation

Participating institutions contribute their elite breeding lines and genetic donors to INGER. Seeds are multiplied at IRRI, organized into nurseries or experimental sets, and sent to NARES partners for evaluation under different rice ecosystems and for tolerance for biotic and abiotic stresses. The best materials are used by NARES either as directly released commercial varieties or as parents in hybridization programs.

Major Achievements

- Since 1975, 24,000 unique breeding lines (60% from NARES) were sent as 48,000 nursery entries (2.7 million seed samples) to 600 stations in 80 countries. Since 2005, INGER has also facilitated the transfer of both incoming and outgoing seed and non-seed biological materials of IRRI's Plant Breeding, Genetics, and Biotechnology Division.



- A total of 670 INGER entries were directly released as varieties in 62 countries. China, Myanmar, Vietnam, India, Indonesia and Nepal had the most direct releases with 281 of these varieties developed by IRRI.

- Among NARES, India, Sri Lanka, Taiwan, Indonesia, and Bangladesh were the major sources of directly released varieties. The most frequently released NARES contributions were: BG90-2 from Sri Lanka (released in 18 countries), Jaya from India (7), BG400-1 from Sri Lanka (6), BR4-34-13 from Bangladesh (4), and IET1444 from India (4).

- INGER entries from 68 countries were used by 51 countries in making more than 18,000 crosses for developing new rice in-breds and hybrids. Over 200 varieties released each in India and China utilized INGER entries as parents. Also, 46 released hybrids in China had INGER entries used directly or indirectly as restorers. The number of released varieties derived from INGER

materials were 44 for Indonesia, 38 for Bangladesh, 19 for Cambodia, 18 for Sri Lanka, 9 for Myanmar, and 7 for Nepal. Of 78 NERICA varieties released or adopted by farmers in Africa, 77% had parents from INGER, with 55 varieties derived from IR64.

- INGER-sponsored trainings, workshops, study tours and exchange visits strengthened rice research capacity and promoted/strengthened research collaborations among NARES scientists.

Current thrusts

- Composing nurseries aligned with NARES' needs and IARCs' strengths and priorities.
- Infusing better characterized breeding lines using molecular marker technology and new phenotyping tools/techniques
- Instituting faster data analysis, knowledge generation, and dissemination through ICT.
- Modernizing/streamlining seed production, processing, inventory, and dispatch operations.
- Enhancing NARES' capacity on plant breeding and genetic resources utilization through training courses such as the Rice Breeding Course at IRRI that is designed to train the next generation of rice breeders for launching the next green revolution.
- Strengthening collaborations with NARES, other IARCs, networks, consortia, and institutions to effect a revitalization of global rice germplasm exchange, evaluation and utilization.
- Developing INGER as a model network for the sustainable utilization of rice genetic resources under the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA).

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Weblinks for INGER

INGER Reports:

<http://www.irrialumni.org-a.googlepages.com/ingerreports200-2005>

Website (Intranet):

<http://shareportal/sites/pbgb/inger/>

Standard Material Transfer Agreement:

<http://www.iris.irri.org/smta/>