



An INIBAP Newsletter for Asia and the Pacific Network

IPGRI APPOINTS FRISON AS DIRECTOR GENERAL DESIGNATE



Maccarese, Rome, Italy — The Board of Trustees of the International Plant Genetic Resources Institute (IPGRI) is pleased to announce the appointment of Dr Emile Frison as IPGRI's Director General Designate.

IPGRI is one of the 16 Future Harvest Centers of the Consultative Group on International Agricultural Research. Its mandate is to use crop diversity to advance sustainable development. "I firmly believe that although we work with plants, people are the centre of our interests," said Dr Frison, "and we will continue to help them conserve and make use of plant genetic resources to gain a better standard of living."

Dr Frison is currently Director of the International Network for the Improvement of Banana and Plantain (INIBAP), one of IPGRI's three programmes. He has been responsible for giving added impetus to research on bananas and plantains, the world's fourth most important staple crop. In 1997, he launched the Global Programme for *Musa* Improvement (PROMUSA), which brought together researchers and growers with an interest in bananas and plantains. In 2002 he launched the Global Consortium on *Musa* Genomics with 27 members from 14 countries, whose goal is to decode the genetic sequence of the banana and use it to improve the varieties available to smallholder farmers.

Emile Frison is a Belgian national who has spent most of his career in international agricultural research, including 18 years of work related to plant genetic resources. Dr. Frison obtained an MSc in plant pathology from the Catholic University of Louvain and a PhD from the University of Gembloux in Belgium. He worked for six years in Africa and

was Development Manager of an agrochemical company in Belgium for three years. He joined IPGRI in 1987 to coordinate research on plant health aspects of international transfers of plant diversity. In 1992, as Regional Director for Europe, he initiated a new phase of the European Cooperative Programme for Crop Genetic Resources Networks. In collaboration with FAO, he also launched the European Forest Genetic Resources Programme.

IPGRI is a decentralized organization, with more than 200 staff in some 20 countries and research interests in many more. "That is one of IPGRI's great strengths," said Dr Frison. "In the future the institute will build on its unique way of working to reinforce our existing partnerships and build new ones. For example, IPGRI's work was crucial in securing the adoption of the International Treaty on Plant Genetic Resources for Food and Agriculture. Now we need to carry on working with national programmes to help them develop the policies they need to implement the Treaty and to make the benefit sharing it envisages a reality." He singled out other areas in which IPGRI would move forward, such as the use of diversity to improve nutrition and health, guidelines, policy and research to help people make sustainable use of forests and their genetic resources, and the increasing use of neglected species to improve peoples' livelihoods.

"The Board is very pleased that Dr Frison has accepted our offer," said Dr Benchaphun Shinawatra Ekasingh of Chiang Mai University in Thailand, chair of IPGRI's Board of Trustees. "He combines continuity with a clear vision for the future of IPGRI."

Emile Frison will take over as Director General of IPGRI on 1 August 2003, when the term of office of Dr Geoffrey Hawtin, the current Director General, ends.

Just how far are bananas from extinction?

INIBAP, Montpellier, 21 January 2002 – The world's most popular fruit and a basic staple food for hundreds of millions of people in the developing world – the banana – is under severe threat from virulent pests and diseases. An article in the 18 January edition of the *New Scientist* magazine has warned of the risk of shoppers finding the shelves empty when they go to buy their weekly bunch. Articles and broadcasts from around the world have followed with alarming and sometimes exaggerated stories of extinction.

While this helps to raise awareness of the importance of bananas in the world and the threats faced by banana farmers, it is important not to lose sight of the facts and to point to the positive progress that researchers are making to address these challenges.

The *New Scientist* article focussed on concerns over the spread of a new form of Panama disease (Fusarium wilt) - known as race 4 - which is threatening the Cavendish variety, the world's major export banana. The disease has spread through plantations in Australia, South Africa and parts of Asia. It is only a matter of time before race 4 reaches the hub of commercial production in Latin America and the Caribbean.

The Cavendish took over as the No. 1 dessert banana in the 1960s from the Gros Michel, a variety that had dominated world markets until it fell prey to an earlier form of Panama disease. So fears are justified.

Cavendish bananas are already under attack from another fungal disease, black Sigatoka, but are protected commercially by as many as 40 sprayings a year of fungicide. The sprayings are not only expensive, making up a quarter of production costs, but present a serious risk to workers and a threat to the environment.

Unlike black Sigatoka, which attacks leaves, race 4 is a soil-borne fungus that attacks roots and cannot be controlled by fungicides. If race 4 reaches the commercial plantations, it is likely to wipe out Cavendish just as the earlier disease eradicated Gros Michel. The only option is to find another variety that

resists race 4.

While the loss of the Cavendish would hurt consumers in developed countries, diseases have an even more severe impact on other types of banana, of which there are more than 500 varieties. Banana exports make up just 13% of world production. The other 87% represents bananas that never leave the country where they are produced. In the developing world banana is the most important food in terms of production value after rice, wheat and maize. Most banana farmers subsist on very limited margins and cannot afford the expensive chemicals to keep diseases in check. Epidemic diseases that attack these bananas undermine the very roots of food and income security for millions of people in the developing world. New resistant varieties are needed urgently.

What makes it difficult to breed new, improved varieties is that cultivated bananas are sterile and do not have seeds. They are propagated as suckers, or shoots, which arise from the base of the plant underground. There is no easy way to cross one variety with another. It is only in the past 10 years, after more than 80 years of research, that improved varieties acceptable for large-scale production have been made available.

Only five scientists, globally, are presently working to breed improved bananas. Such a meager research effort is decidedly out of proportion to the scale and importance of the problem. But currently there is alarmingly little investment in banana research compared to the global significance of the crop. This must be reversed if the world's most popular fruit, an important survival food for families in the tropics, is not to decline further.

With the progress already made, if we can mobilise new and significant investment, there is every reason to believe that the banana will provide food and income security for those families for many years to come.

Facts about the banana

- The biggest producer of bananas is India, which produces 16 million tonnes, more bananas than are exported in world trade.
- Nearly 100 million tonnes of banana and plantain are produced globally every year by about 120 countries in subtropical and tropical zones.
- The export trade concerns around only about 12.5 million tonnes of banana.
- Roughly equal amounts are produced from each of the regions of Asia, Latin America with the Caribbean, and Africa.
- There are more than 500 varieties of banana in the world. The Cavendish banana is the one that is exported and found on supermarket shelves. It represents just one variety.
- The highest rate of consumption is in East Africa. Ugandans produce 10.5 million tonnes, around 450 kg per year per person. The word for bananas "matooke" also means "food".
- 99.5% of banana-eaters in the world are eating varieties of banana that have been selected by farmers and haven't changed in centuries.

International Training Courses on Banana Tissue Culture Techniques and Indexing Techniques of Banana Viruses and Health Management of Virus-Free Repository held in Taiwan

An international training course on Banana Tissue Culture Techniques was held in Taiwan Banana Research Institute, Pingtung, Taiwan last December 9-13, 2002. A total of 11 participants from 8 countries attended in the hands-on training course. The training course was aimed at transferring/enhancing knowledge on tissue culture techniques of banana and to enhance productivity and efficiency of banana tissue culture laboratories of the different NARS involved in the repository, multiplication and distribution of improved banana cultivars in Asia and the Pacific.

Another international training course, entitled Indexing Techniques of Banana Viruses and Health Management of Virus-Free Repository was also held in National Taiwan University, Taipei, Taiwan on December 16-20, 2002. This training program was aimed at transferring/enhancing knowledge on indexing techniques of banana viruses and health management of virus-free banana repository, which would result to, improved quality of virus-indexed banana materials for distribution to researchers, farmers and other end-users. Twelve participants from eight countries joined in the training course.

The participants to the two training course were nominated by heads of BAPNET-member NARS of the different countries in Asia and the Pacific. Taiwan's Council of Agriculture funded the training course through the Food and Fertilizer Technology Center for the Asian Pacific Region. The Taiwan Banana Research Institute, National Taiwan University and INIBAP were the co-sponsors of the training courses. A total of 18 scientists benefited from the international training courses.





International Plant Genetic Resources Institute

The International Network for the Improvement of Banana and Plantain (INIBAP) is a programme of the International Plant Genetic Resources Institute (IPGRI). The objective of the INIBAP programme is the improvement of smallholder banana and plantain production. IPGRI is seeking candidates for:

Director, INIBAP

The appointee, based at the INIBAP headquarters in Montpellier, France, will lead and manage the INIBAP Programme and contribute to the overall programme and administrative management of IPGRI. The work will include running of the Montpellier office, supervising staff, reviewing and implementing the strategy of INIBAP, fund raising and extensive international travel.

Potential appointees will have a higher degree (preferably doctoral level) in a relevant field (e.g. agricultural sciences/biology) and experience in research management and networking. They will also have work experience in a developing country, good interpersonal skills in a multicultural environment, outstanding communication skills (oral and written) in English and a good knowledge of French. Potential appointees will also have a track record in fund raising and knowledge of Spanish would be an advantage. Experience in banana research is highly desirable.

Terms and conditions: Initial appointments will be for a period of three years. IPGRI offers an internationally competitive salary and benefits package and assistance with relocation expenses.

Applications including a letter of application, full curriculum vitae and the names, addresses, e-mail and/or fax numbers of at least three referees, should reach INIBAP no later than 31 March 2003 and be addressed to: Susan Faure, INIBAP, Parc Scientifique Agropolis II, 34397 Montpellier Cedex 5, France. Please also quote the source of advertisement.

Tel + 33-4-67 61 13 02, fax: +33-4-67 610334, e-mail s.faure@cgiar.org website: <http://www.inibap.org>.

For further information on vacancies at IPGRI, consult the website: <http://www.ipgri.cgiar.org>



IPGRI is an equal opportunity employer and strives for staff diversity in gender and nationality.

Facts.....

- The fruit is one of the most easily digested foods available, and is particularly useful in feeding infants, the frail or ailing (and sportsmen in need of quick energy), providing a good source of potassium, calcium, phosphorus, vitamins A, B6 and C.
- Black Sigatoka causes yield declines of up to 50%. Commercial plantations follow a very intensive regime of fungicide spraying – up to 40 times a season — to combat black Sigatoka.
- Almost all cultivated bananas are difficult to breed because they are seedless and sterile. They also take up to 18 months to fruit, which prolongs breeding efforts compared to annual crops.
- Improved varieties produced by classical breeding have started to become available in the past 10 years. They have not yet been planted on a large scale.
- Cuba is the first country to use improved varieties of banana on a significant scale. They have planted more than 11,000 ha. As a result, farmers have experienced yield increases and made annual savings of US\$3 million on spraying.
- Biotechnology can speed up research dramatically. Classical plant breeding can use biotechnologies to see which varieties are worth pursuing. And genetic modification is one biotechnology that could be used to breed improved varieties of banana. In cases where varieties are totally sterile, it is the only available solution. Genetically manipulated bananas would be environmentally safe because the banana is sterile and modified genes would not be able to escape from the transformed crop.
- Plantain is one kind of cooking banana. It represents a group of bananas that are popular in parts of South Asia, West Africa, Latin America and the Caribbean.

The International Network for the Improvement of Banana and Plantain (INIBAP) is a programme of the International Plant Genetic Resources Institute (IPGRI), one of the Future Harvest centres of the Consultative Group on International Agricultural Research (CGIAR).

INIBAP coordinates research and carries out hundreds of projects worldwide on the smallholder banana crop. It manages the largest collection of banana germplasm in a genebank held at the Katholieke Universiteit Leuven (KULeuven) in Belgium.

RISBAP - Regional Information System for Banana and Plantain is a regional mechanism of improving the dissemination, utilization and access of information on banana and plantain in the Asia and the Pacific region. The *RISBAP Bulletin* is published by the INIBAP - Asia/Pacific Network. Write us at: INIBAP-A/P, c/o IRRRI, Khush Hall, College, Laguna 4031 Philippines; Tel/Fax. (63) 49-536-0532; E-mail: inibap.bapnet@cgiar.org; <http://www.inibap.org>.