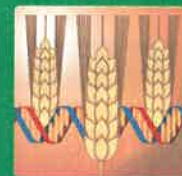




Joint FAO/IAEA Programme
Nuclear Techniques in Food and Agriculture

Plant Breeding & Genetics Newsletter



<http://www-naweb.iaea.org/nafa/index.html>

http://www.fao.org/ag/portal/index_en.html

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To Our Readers



Animated InfoGraphics on plant mutation breeding.

The year 2015 has started and many things have happened in the first biennium. I want to highlight some facts about Plant Breeding and Genetics (PBG) subprogramme.

If there is one thing that really characterises the planet on which we live, it is undoubtedly the diversity of the living organisms that populate it.

Over the past seventy years mutation breeding has generated thousands of novel crop varieties in hundreds of crop species, and billions of dollars in additional revenue, delivering higher yields, increased nutritional value and

resilience to the effects of climate change, such as resistance to diseases and tolerance to drought.

I want to draw your attention to an informative and educative series of animated InfoGraphics that the Joint FAO/IAEA Division has generated on a number of nuclear technologies used in food and agriculture (see <http://www-naweb.iaea.org/nafa/resources-nafa/multimedia.html>). One of these animated InfoGraphics is on plant mutation breeding, explaining the nature and scope of mutation breeding and how it is used for crop improvement.

detailed protocol along with the material needed to successfully complete the protocol. Kits are available upon request. The latest kit, announced in the last newsletter, is for column based purification of single-strand-specific nucleases for mutation discovery. The new protocol has now been taught at one national workshop and two *ad hoc* training courses and the kit has been distributed to six MSs.

Kits distributed since the last newsletter:

- Low cost DNA extraction kits distributed to India, Mauritius and Pakistan;
- Low cost mutation discovery kits distributed to India;
- Low cost enzyme extraction for mutation discovery distributed to Austria, India, Mauritius, Pakistan and Poland.

Professional Networking

The PBGL thanks all of you who have connected with us on LinkedIn. If you have not already linked with us, please feel free to connect (<http://at.linkedin.com/pub/iaea-plant-breeding-and-genetics/31/4b6/aa3>). We are now linked with 271 researchers and are happy to continue to expand our connections to the broader plant sciences and agricultural community.

PBGL Participation in the 'Fascination of Plants Day' 2015

The PBGL participated in the third international 'Fascination of Plants Day', 18 May 2015, which was launched under the umbrella of the European Plant Science Organisation (EPSO). According to the organizers, the goal of this event is to get as many people as possible around the world fascinated by plants and enthused about the importance of plant science for agriculture, in sustainability producing food, as well as for horticulture, forestry, and all of the non-food products such as paper, timber, chemicals, energy, and pharmaceuticals. The role of plants in environmental conservation will also be a key message.

Under the auspices of the First Lady of Austria, Ms Margit Fischer, our host country participated in the event with various activities, some of them in Vienna. On invitation of the National coordinator, Prof Dr Margit Laimer of the University of Natural Resources and Life Sciences (BOKU), PBGL had the opportunity to present its activities on plant mutation breeding at BOKU University. Among several informative posters and banners some of the crops of interest, such as banana, coffee, cassava, rice, and barley, along with their fruits, seeds, and tubers, were part of the exhibition, which attracted numerous students as well as

visiting people from Vienna. The visitors were very interested in learning more about the comparative advantage of mutation breeding in certain crop improvement programmes and also about the broad usage of mutant crops for our daily food and the high social-economic impact that many mutant varieties have. On the occasion of this exhibition, the new animated Plant Mutation Breeding InfoGraphics was presented for the first time to the public and favourably assessed. The animation is available at <http://www-naweb.iaea.org/nafa/>.



PBGL stand at Fascination of Plants Day at BOKU University, Vienna, Austria. (Mr Stephan Nielen and Mr Souleymane Bado with the National Coordinator, Prof Dr Margit Laimer (red jacket) and visitors.

Human Capacity Development

Group Training on Low-cost Purification of Single-strand-specific Nucleases for Mutation Discovery

An *ad hoc* training course was organized by Mr Bradley Till from 11 to 12 May covering low-cost protocols developed at the PBGL for bench-top enzyme purification and mutation discovery. Visitors from Austria and Poland attended this course.



Dr Miriam Szurman-Zubrzycka of the University of Silesia, Poland (centre) and Dr Stephanie Bannister of the University of Vienna (right) are taught methods for purification of single-strand-specific nucleases from plant extracts.