European leafy vegetables project is not just rocket science

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On 1 January 2007 a new EC-funded project started to stimulate the use of genebank material in leafy vegetable production. The most important European leafy vegetables are lettuce, spinach and chicory, but the minor crops of lamb's lettuce and rocket (rucola) are also becoming increasingly important, especially with the trend towards increased sales of bagged mixed salads. A network has been established of 14 partners from 10 European countries that brings together genebanks, universities, research institutes and NGOs active in the conservation and utilization of the genetic resources of these crops. The project is coordinated by Chris Kik from the Centre for Genetic Resources (CGN), Wageningen, the Netherlands.

Group photo of the participants of the start-up meeting of the GENRES Leafy Vegetable project in Wageningen (February 2007). Photo: CGN, Wageningen, the Netherlands

The potential is huge. Over 8400 accessions of lettuce alone are held in genebanks and living collections by project partners across Europe. Spinach and chicory have more than 900 accessions each and there is a total of 270 accessions of rocket and lamb's lettuce. The task is to characterize more than 1200 of these accessions and to develop the databases of these crops to improve access and utilization of the collections.

Evaluation of important characteristics of more than 750 accessions will allow breeders to use the most promising germplasm to develop improved materials. Promising sources of resistance to pests and diseases will be used to develop varieties requiring fewer fungicides and pesticides. The selection of improved and more attractive varieties should stimulate consumption of these healthy vegetables. Parts of the collections will also be evaluated for nitrates, oxalic acid and glucosinolates, which can have negative effects on health.

The project will run for four years and is far from just an academic exercise. The involvement of NGOs ensures an increased use of the collections by growers and ultimately consumers. Researchers and growers will evaluate selected accessions for agronomic performance, including organic farming systems and market appeal. The NGOs will encourage uptake of the material for supermarkets, restaurants and farmers' markets.

For further information, please contact Chris Kik (Email: chris.kik@wur.nl) or visit: http://documents.plant.wur.nl/cgn/pgr/leafyveg/default.htm

EURALLIVEG Project: "Vegetative *Allium*, Europe's Core Collection, safe & sound"

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Readers of this Newsletter have been informed about the richness of the vegetative alliums genepool in Europe (see Newsletter 32 page 7). The authors of that article are happy to report the successful start of a new project granted by the European Commission under the Council Regulation No 870/2004. Soon after starting date, the kick-off meeting was hosted by IPK Gatersleben, the coordinating partner, on 12-13 April. Eight partner institutions, represented by 14 participants, joined to set up a stable foundation for a European base collection of vegetatively propagated alliums, starting with garlic and shallot. This will be implemented according to the orientations of the AEGIS recommendationsl and in close collaboration with the ECPGR *Allium* Working Group (AWG) and European *Allium* Database (EADB). Jan Engels (AEGIS Coordinator), Bioversity, and Dave Astley, AWG Chairman, participated and contributed substantially to the meeting. Since garlic and shallot cannot be stored as seeds, cryopreservation will form the core activity of the project. It will be organized in a Cryobanks Network, initially formed by three partners, the Czech, German and Polish genebanks and will be open for other institutions to join. Material for this base collection will need to meet the criteria of a Most Appropriate Accession (MAA) and be unique.

Garlic plants growing in the field. Photo: IPK, Gatersleben, Germany

Molecular marker screenings to eliminate duplicates are the primary actions for garlic and shallot. Plant health is another important factor, which will be improved by meristem culture for virus elimination in garlic. Furthermore, the virus eliminating effect of cryopreservation itself will be explored.

The project is highly integrative and needs the close collaboration of the partners from Germany, Czech Republic, France, Italy, the Netherlands, Poland and the Nordic Gene Bank. The meeting was conducted in a very open atmosphere, characterized by vivid discussion around nine main talks covering all aspects of the project. Interesting laboratory and field visits rounded it off. More information is on the EURALLIVEG Web site: http://euralliveg.ipk-gatersleben.de/