

Dear colleagues,

I am glad to tell you that the Sant'Anna School for Advanced Studies of Pisa (SSSUP) is about to start the 2nd year of the International Doctorate in Agrobiodiversity, in collaboration with the FAO, the International Plant Genetic Resource Institute (IPGRI) and the National Academy of Sciences of Italy.

The Course aims to contribute to the enhancement of human resource capacity in the utilisation and management of biodiversity in agricultural and natural systems, in order to improve the sustainability of agriculture and the conservation of genetic resources and agroecosystem (bio)diversity for the well-being of present and future generations. An International Scientific Board will supervise activities and ensure education and research excellence and oversee the choice of themes relevant to developing countries' agriculture, where applicable.

Six scholarships are available to motivated students from the EU and developing countries. The application must include description of a research project that the candidate proposes to carry out during the three-year period of the Doctorate. English will be the one and only language for all activities envisaged in the Doctorate. Further information on the Doctorate can be found in the attached document. An online application form can be accessed at: www.sssup.it. The deadline for receipt of applications is **30 September 2005**.

The Course will have two curricula: (A) Plant genetic resources; (B) Functional biodiversity in agroecosystems. Candidates interested in one of the below-mentioned topics (Curriculum B) are invited to contact me for further details. Topics dealt with in curriculum (B) include (non exhaustive list):

- Effect of biodiversity on agroecosystems functioning
- Assessment of agroecosystem (bio)diversity at different land scales
- Mechanisms responsible for biodiversity conservation in agroecosystems at different scales
- Effect of habitat fragmentation on biodiversity conservation
- Environmental changes and plant community dynamics in agroecosystems
- Interactions between biodiversity and biological invasions (e.g. weeds and insects) in agroecosystems
- Management of functional biodiversity in agroecosystems
- Role of biodiversity in crop production and protection in alternative agricultural systems
- Functional biodiversity as indicator of soil quality
- Comparison between functional biodiversity in conventional/integrated vs organic agriculture
- Development and assessment of functional biodiversity indicators and indices

Curriculum B (Functional biodiversity in agroecosystems) deals with the study of the positive (and possibly the negative) effects of biodiversity on agroecosystems functions, such as crop productivity and yield stability, interactions between crop, wild plant species (including weeds) and other biota (e.g. insects) in terms of crop protection, nutrient cycling and soil quality parameters. Here, we not only consider crop (genetic) diversity but also how management of crops, cropping systems and boundary structures (e.g. ditches and hedgerows) interact with the above-mentioned biodiversity parameters at field, farm or landscape scale. Research projects should be well defined within this framework. Multidisciplinary studies as well as studies addressing methodological issues (e.g. development of biodiversity indices expressing agroecosystems functionality and sustainability) will be more than welcome.

In collaboration with colleagues of the University of Pisa (DAGA and CIRAA), SSSUP is running a series of long-term field experiments comparing cropping systems, crop management systems (e.g. conventional, integrated or organic) and cultural practices (e.g. tillage systems, fertilisation and weed management regimens, cover crops) that are well suited to host research projects of the Doctorate. These experiments are mostly focussed on arable crops such as wheat, maize, sunflower, grain sorghum, sugar beet, pigeon bean, soyabean and others. Other research activities are carried out on the development of sustainable agroecosystems (for food, feed and bioenergy production) in environmentally-sensitive areas (e.g. natural reserves, hilly areas, watersheds) around Pisa. Further information on the long-term experiments can be accessed at: <http://www.avanzi.unipi.it/researchactiviti.htm>. If relevant to the project, part of the research activities may be carried out in the student's home Country or in a third Country. Please forward this message to any possible interested person you may know. Thank you very much for your collaboration.

Kind regards,
Paolo Bàrberi

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