



NOTE

Competences in plant breeding in Brazil

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ABSTRACT - *The Plant Breeding Brazilian Association (SBMP, in Portuguese) and the Center for Strategic Studies and Management in Science, Technology and Innovation (CGEE, in Portuguese), with the support of the Ministry of Agriculture, conducted a survey aiming to collect and to make available, the Brazilian competence in plant breeding. Such survey is organized in a databank held by the SBMP and the CGEE. Also, a summary of the collected information is available in the publication "Competences in Genetic Plant Breeding in Brazil" recently edited by the Brazilian Association of Plant Breeding. The main aspects of such survey are presented here.*

Key words: *Brazilian plant breeders, web survey.*

The third chapter of the book **Competences in genetic plant breeding in Brazil** (Ramalho et al. 2010), presents the results of the assessment on the current status of the competences in the area of plant breeding in Brazil during the last two years. This work was conducted via electronic consultation to the list of SBMP associated members, the participants of the Plant Breeding Brazilian Meetings and to other unlisted breeders. The dissemination of the results of this survey aims to make available the names of the current plant breeders to the scientific community in Brazil, as well as their academic qualification, research area, species/products studied, and other relevant information. The data of this assessment are presented so as not to repeat information on the academic qualification of plant breeders in Brazil and their private enterprise profile, topics that will be addressed by other speakers of this panel.

Of 3,299 scientists consulted, 689 who replied to the questionnaire, worked for 178 private and public institutions. Most of the professionals who did not reply worked for private institutions.

The 178 institutions cited were classified by the participants as: Governmental, Other Governmental

Institution, Enterprise, or Public Research Institution, Public Institution of Higher Education, Private Institution of Higher Education, Association, Co-operative, Private Enterprise, and Non-Governmental Organization. The majority (86.6 %) of the professionals were involved with plant breeding programs at public institutions. The highest concentration of professionals was found in Public Research Institutions (39.4 %) and Universities (44.6 %).

An even distribution was found in the academic qualification (undergraduate, Master's and Doctorate levels) of the responding participants and, as expected, there is a predominance of agronomists (74.1 %) with a graduate degree (49.3 % with a Master's, and 44.3 % with a doctorate) in plant breeding.

With respect to the nature of the activity (research, teaching, rural extension and consultancy), the highest plant breeding production is found to be concentrated in research and teaching. Two hundred and fourteen professionals, corresponding to 31 % of all the participants, are exclusively involved in research.

The largest number of respondents declared to be involved on the following areas: Plant breeding programs,

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selection of parents for crossing, germplasm screening, genetics teaching, and/or plant breeding, and conduction of assays to determine cultivar use and value (CUV).

The species studied by the respondents comprised the following eight major groups: Major crops (362 specialists), Fruit trees (128), Olericultures (102), Oleaginous plants (71), Forest species (51), Pastures (49), Medicinal Plants (26) and Ornamentals (25). In some cases, the same professional works with more than one species within the group or between groups.

The major goal of plant breeders is to develop and introduce a new cultivar more promising than the existing ones. In this survey, the development of cultivars represents more than half of the technological production of the consulted breeders.

For the new cultivars to be developed and commercialized as seeds or seedlings, it is necessary to register them at the National Register of Cultivars (NRC) of the Ministry of Agriculture. In case the breeder is interested in protecting the cultivar, a formal request must be submitted to the National Service of Protection of Cultivars, also part of the Ministry of Agriculture. The cultivar submitted for protection must meet certain legal requirements and technical requirements, such as, confirmation of its distinctiveness, homogeneity, and stability (DHS), based on specific official tests. To

commercially explore a protected cultivar, users must ask for authorization of the breeder who can demand royalty payment. Even with all the advantages granted by registration and protection, 25 % of the breeders stated that often they release the protected cultivars for use. On the other hand, among those breeders who follow the Ministry of Agriculture rules, 21 % register and 14 % protect their cultivars.

The results obtained in this survey clearly show that, despite the plant breeders' high qualifications and a considerable increase of supply of superior cultivars of several species, approximately half of these breeders do not register or do not protect their cultivars. Thus, the question remains: Why? It reflects a lack of knowledge or lack of interest?

Such surveys are indispensable to measure and enrich scientific development, and can also be used as tools for detection of weak points. If not constantly updated, their validity will be quickly lost. Exploring new data sources, making plant breeding community members aware of the importance of this information, and providing periodic feedback, aiming to improve and expand the Data Bank must be the periodic actions of a "curator" for the *Permanent Mapping of Competences in Plant Breeding in Brazil*.

Competências em melhoramento de plantas no Brasil

RESUMO - A Associação Brasileira de Melhoramento de Plantas (SBMP) e o Centro de Gestão e Estudos Estratégicos (CGEE), com o apoio do Ministério de Agricultura, Pecuária e Abastecimento (MAPA), conduziram uma pesquisa com objetivo de prospectar e disponibilizar informações sobre a competência brasileira em melhoramento genético de plantas. O resultado foi organizado em um banco de dados sob a coordenação da SBMP e o CGEE. Um condensado das informações coletadas está disponível na publicação "Competências em Melhoramento genético de plantas no Brasil", recentemente editado pela Associação Brasileira de Melhoramento de Plantas. Nesta apresentação é feita uma abordagem dos principais aspectos desta pesquisa.

Palavras-chave: melhoristas de plantas brasileiros, consulta WEB.

REFERENCES

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