



Hochschule Anhalt

Anhalt University of Applied Sciences

Internationaler Workshop Pflanzenbau

Hochschule Anhalt

11. Juni 2018, Bernburg / Strenzfeld

Kurzfassung der Beiträge



Internationaler Workshop Pflanzenbau Hochschule Anhalt

11. Juni 2018, Bernburg (Saale)

International Workshop Crop Production

Anhalt University of Applied Sciences

11 June 2018, Bernburg (Saale)

Im Vorfeld der DLG-Feldtage (12.-14. Juni 2018) in Bernburg/ Strenzfeld organisiert die Hochschule Anhalt einen Workshop zu aktuellen Themen im Pflanzenbau. Im Vordergrund steht der Erfahrungsaustausch zu aktuellen Aufgaben im Acker- und Pflanzenbau aus internationaler Sicht. Die Fragestellungen umfassen sowohl ackerbauliche Themen wie Fruchtfolge und Bodenbearbeitung wie auch die pflanzenbaulichen Themen der Düngung und des Pflanzenschutzes sowie Möglichkeiten zur Förderung der Biodiversität in Agrarökosystemen.

Besondere Herausforderungen ergeben sich für die natürlichen Produktionsbedingungen durch Klimaveränderungen wie auch bei den technologischen Möglichkeiten durch die Einführung eines Digital Farming.

In the run-up to the DLG Field Days in Bernburg/ Strenzfeld, Anhalt University of Applied Sciences organizes a workshop on current topics in crop production. The focus is on the exchange of experience on current tasks in agronomy and crop production from an international perspective. The questions include agronomical topics such as crop rotation and soil tillage, plant cultivation topics like fertilization and crop protection, as well as possibilities for promoting biodiversity in agroecosystems.

Special challenges arise for the natural production conditions due to climatic changes as well as the technological possibilities through the introduction of digital farming.

Wissenschaftliche Leitung / Scientific leadership

Prof. Dr. Annette Deubel

Clonal micropropagation of plants as one of the ways of biodiversity conservation and green economy development in the Republic of Belarus

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A distinctive feature of modern plant biotechnology is that practically all its directions are based on the use of plant objects *in vitro*. At present, plant biotechnology development is oriented towards the ecological, agricultural and industrial purposes. One of the main ecological directions of plant biotechnology is a conservation of biodiversity that is a basis for maintaining the environmental conditions of life and economic development of human society. Currently, there are two main strategies for the conservation of biodiversity, namely *in situ* and *ex situ*. One of the prevailed methods of *ex situ* reproduction and conservation of plants used in the cell technologies in plant growing research laboratory of Polesky State University is a clonal micropropagation. The technology of clonal micropropagation is related to the activation of axillary meristems by abolishing the dominance of the apical shoot meristem as a result of its removal or the use of cytokinins. Adaptation of clonal micropropagation methods for various plant species is a basis for creating collections of varieties and unique forms in *in vitro* culture, conservation of the gene pool and biodiversity. Furthermore, the advantages of clonal micropropagation create the preconditions for the successful commercialization of plant clonal micropropagation technology. At present, on the basis of our laboratory, technological regulations have been developed for the production of the agriculture planting material in industrial volumes that are exact genetic copies of highly productive and stress-resistant plants. It allowed creating *in vitro* collections of berry cultures, ornamental perennials and bushes, rare and endemic plant species, medicinal and spicy-aromatic plants. In addition, on the basis of achievements of our laboratory, the innovation and industrial cluster in the field of biotechnology and “green economy” was established. One of the profiles of the cluster is the profile of plant crop production, which is associated with traditional and organic plant growing. The goal of such association is to achieve the competitiveness and sustainability of innovative organizations and their products, to develop the green economy of cities and territories in the Pripyat Polesie region.

Thus, since preserved plant species are a valuable source of new varieties of agricultural crops, the conservation of rare and endangered plant species can be achieved not only by maintaining their population in specially protected natural areas (national parks, nature monuments), but also by preserving agro-biodiversity on the farm and household plots. This can be achieved through active cooperation with farmers and involving farmers in national biodiversity programs within the framework of the cluster established.

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