

USAMV BUCHAREST

**AUTHORISATION
THESIS**

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2016

**BIOLOGICAL AND TECHNOLOGICAL STUDIES
ON SOME FLOWERS SPECIES**

SUMMARY

Research conducted after the grant of scientific title of doctor were conducted in 7 research contracts and ended with 78 publications / scientific presentations indexed in international databases and 15 books, including 11 as sole author.

Floriculture Treaty and floral Art, published in 2009 in five volumes, was awarded by the Academy Award Sisesti Romanian Gheorghe Ionescu and Romanian Grand Prix Horticulture Society. This treaty has been quoted many times, both in scientific publications and in textbooks subsequent to being considered a reference work in the field of floriculture.

The themes addressed by this research were varied and had the following objectives:

- establishing the scientific arguments and the initiation of proceedings for a declaration of peony as the national flower of Romania.
- production of planting material by classical and modern methods to a considerable number of flower species;
- optimization of technological sequences to achieve higher performance the species cultivated for the production of cut flowers, pot plants grown as species or plants in parks and gardens;
- optimization of the environment to a significant number of flower species;
- establish the optimal conditions for the preservation and conservation of the species of cut flowers basic assortment;
- dendro-flowers species biodiversity in parks and site collections of Bucharest;
- the study of wild flora and enriching assortment of floral species and new varieties for production and research perspective and flower.

The major thrust of research in recent years was to establish scientific arguments and the initiation of proceedings for a declaration of peony as the national flower of Romania.

Based on research conducted we have established scientific arguments in favour of the proposal as peony is the national flower formally proclaimed Romania.

These scientific arguments have had a great impact on the peony significance for the geographical area of our country and the traditions of the Romanian people.

Under the thematic area related to the production of planting flower material by classical and modern methods, we continued and diversified research at tuberoses, testing new culture media and inoculation periods to achieve explants.

We also continued optimization studies of environmental factors in dormant bulbs addressing the microscopic preparations, and structural morphological and anatomical aspects of the bulbs to the type of climate insured.

The objectives of optimizing sequences in culture technology have been achieved through studies and researches concerning propagation and culture of other flowering plants such as *Hibiscus*, *Crassula*, *Ficus*, *Pelargonium*, *Petunia*, *Lisianthus*, *Alstroemeria*, *Hyacinthus*, *Tulipa*.

These surveys were most often interdisciplinary, which allowed a proper scientific foundation of the processes observed in relation to technological sequences studied. Also, through this research it has been established or modernized working protocol for carrying out different sequences of the species studied culture technology.

Thus, *Hibiscus*, *Crassula*, *Ficus*, *Pelargonium* and *Petunia*, it has been modernized protocol for the production of seed material and optimization of the technological sequence of plant care. At *Lisianthus* and *Alstroemeria* settled factors influencing the utmost producing cut flowers in different variants of culture.

Alstroemeria formats are being developed to have, in addition, studies of preserving cut flowers for determining the factors that allow extension of the vase floral decor stems after the harvest. At *Hyacinthus* and *Tulipa* settled for six varieties and types of climate technological links that will produce a higher quality of flowers in forced crops.

To enrich assortment flowers species with valuable species taken from the wild flora (especially in Dobrogea) have initiated research in several species, including *Aster oleifolius* Lam., Which was already accomplished a scientific paper including aspects of ecology and chorology.

Among the inquiries were aimed at preserving biodiversity dendro-flower species in parks and site collections of Bucharest remember establishment of in vitro propagation protocol of 14 species arboretum and identification, marking and protecting of 159 varieties and species arboretum very valuable.

These investigations were conducted under a research grant RELANSIN intended solely to this theme and ended with the publication of three scientific papers indexed in international databases and publishing a book that was awarded by Romanian Horticulture Society.

Regarding the future development objectives career professional, scientific and academic support continuing research and studies in declaring national flower peony that will be my main goal in the coming years. Among the activities they want to carry on in this direction, in collaboration with colleagues from other Faculties of Horticulture in the country, ranks and achieve national collections extensive varieties of peony varieties and species.

I wish also to continue research into topics and research directions which I have devoted 25 years of academic career: setting the optimal conditions for production of planting material through traditional methods and modern flower species known and less known ; optimizing environmental factors for the development of crop production and quality; establish working protocol for crop production in hydroponic system as many flower species; floricultural species assortment spontaneous enrichment with highly decorative potential and high environmental adaptability.

Another major objective of this research will be made a priority in funded research grants for the production of which will participate in national and international competitions with as many proposals.

Exploitation of the results of this research through scientific papers presented at various conferences and / or published in journals internationally used, especially ISI, will also be a major objective for my future.

15.02.2016

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