SUMMARY

Keywords: spontaneous flora, wild plants, *Sedum sp., Dianthus sp., Silene sp., Globularia punctata* Lapeyr., *Campanula romanica* Săvul*, Alyssum murale* Waldst. &Kit.*, Allium paniculatum* L., *Melica ciliata* L..

In Romania, spontaneous flora comprises numerous species with decorative characteristics; some of them are already grown in our country, whereas others can constitute new and important horticultural sources in the future.

Since ancient times, numerous species of decorative plants have been grown in the gardens and green species in Romania; some of them belonged to the spontaneous flora and, due to their special decorative value, in time they were "adopted" and cultivated frequently, either only in certain areas (corresponding to the specific natural habitat of the plants), either with a large spreading, in the case of plants with a higher level of adaptability or of plants which are frequently found in spontaneous flora. There are numerous examples of such plants, loved and grown in the gardens from Romania, such as: lilies, bluebonnets, peony (*Paeonia romanica*), bigroot geranium (*Geranium macrorrhizum*), snowdrops, etc.

The floral diversity of Romania is due to the varied types of landscape, as well as to the fact that the territory is situated at the confluence of various floral regions. Very many of these species are rare, endangered or on the brink of extinction because of the very small cultivation surfaces, the deterioration or collection of the habitats for commercial purposes; in this context, the valorization and the judicious protection of the plants in Romania, as well as the preservation of the biodiversity and quality of the environment are objectives for the protection of the environment and sustainable development.

Thus, the scientific and technical importance of this research thesis, aimed at identifying and valorizing the new decorative species from the spontaneous flora of Romania, is necessary for enriching the range of decorative plants grown and for the "ex situ" conservation of some vulnerable plants.

The scientific research conducted as part of this thesis has focused on plants with decorative characteristics, identified in the spontaneous flora of Romania, and has studied their adaptability and growth in the agricultural and weather conditions of the Iaşi region.

The data in the research thesis rely on observations made in the experimental field of the Floriculture Department from the University of Agricultural Sciences and Veterinary Medicine of Iaşi, where the experiment was conducted.

The results obtained further to the carrying out of the research took the form of a series of conclusions and recommendations regarding the cultivation and valorization of some species of wild plants.

The research conducted with a view to elaborating the doctoral thesis entitled "***Study of some decorative species from the spontaneous flora of Romania and the possibility of cultivating them"*** was carried out at USAMV Iași, over the period 2010 – 2013, within the experimental field and the laboratory of the Floriculture Department.

The **aim** of this doctoral thesis consists in the elaboration of an in-depth study of the technical and scientific knowledge concerning the use of the spontaneous flora as a modality of enriching the range of decorative plants and of promoting the growth of new species.

For these purposes, we have established three general objectives, namely:

1. Study of the natural conditions in which the research was conducted.

2. Study of the propagation possibilities of some taxa with a decorative value from the spontaneous flora of Romania.

3. Evaluation of the behavior in crop production of the taxa with a decorative value and the determination of their capacity to adjust under "ex situ" conditions.

The research protocol drafted with a view to elaborating the doctoral thesis focused on research based on references and field work, the establishing of the source of biological material and its acquisition, the establishing of the categories of experiments, the organization and setting up of the experiments, the collection and processing of experimental data, the interpretation of the results and the formulation of the conclusions and recommendations.

The doctoral thesis is divided into two parts and comprises nine chapters. The first part is a synthesis of bibliographic data and includes a description of the spontaneous flora species that participated to the study so that they could be cultivated, whereas the second part deals with the presentation of the natural setting, of the climatic conditions from the experimental period, with the research material and method, as well as with the results obtained.

Part I – Current state of research. This part comprises two chapters:

- ✓ **Chapter I** - Current state of research on the spontaneous flora species with decorative potential;
- ✓ **Chapter II** - General considerations on the cultivation of flowering plants and description of the species included in the study;
- ✓ **Chapter III** - Identification and collection of the biological material from the natural habitats.

Part II - Research results, comprises six chapters, as follows:

- ✓ **Chapter IV** - Aim, objectives and general research methodology.
- ✓ **Chapter V** - Study of the natural, organizational and institutional conditions of the research.
- ✓ **Chapter VI** - Results concerning seed plant reproduction of the studied species.
- ✓ **Chapter VII** - Results concerning propagation through cuttings of the wild plant species studied.
- ✓ **Chapter VIII** - Results concerning the behavior in crop production of the wild plants species and their decorative value.
- ✓ **Chapter IX** – General conclusions.

The references include 157 specialty titles from the country, as well as from overseas.

The first part of this thesis has two chapters and includes general information concerning the current state of research in the field of the doctoral thesis. For the elaboration of these chapters, we conducted documentary studies using various sources: specialty treaties, textbooks, scientific magazines, as well as recent web information (the FAOS websites – SpringerLink, the Ministry of Agriculture).

The **first** chapter of the thesis includes vast research on the study of rare plants from the spontaneous flora and the enriching modality of the species of plants cultivated since ancient times.

The **second** chapter deals with the description, the systematics, the origin and spreading of the following species: *Sedum hispanicum* L., *Sedum sexangulare* L., *Dianthus nardiformis* Janka, *Dianthus superbus* L., *Silene compacta* Fisch., *Silene nutans* L., *Globularia punctata* Lapeyr., *Campanula romanica Săvul*., *Alyssum murale* Waldst.&Kit., *Allium paniculatum* L., *Melica ciliata* L.

The **third** chapter presents aspects concerning the identification and collection of the biological material from the natural habitats.

The **fourth** chapter focuses on the aim and objectives of the doctoral thesis and research methodology.

The **fifth** chapter comprises information concerning the organizational frame, the landscape, the vegetation, the soil and the climatic conditions from the experimental period.

Starting with the **sixth** chapter, we have presented a synthesis of the results of the experiments. The research in this chapter aims at determining the germination capacity of seeds in the wild plants studied and at improving the technology for the production of seedling for planting the experimental crops in the field.

The research presented in the **seventh** chapter focuses on the identification of the propagation capacity through cuttings of the analyzed wild plants species.

In the **eighth** chapter, we have tried to determine the decorative potential of the wild plant species included in the study under the ecological conditions specific to Iaşi.

The **ninth** chapter presents the conclusions drawn from the doctoral thesis. This chapter also includes several recommendations concerning the production of the seeding material and modalities of valorizing the studied species.