

PRACTICULTURE AND PASTORALISM IN SCIENTIFIC RESEARCH

A reference work on grasslands

The achievements of PhD. Eng. Teodor Marușca in the field of grassland culture in particular and pastoralism, obtained through assiduous and systematic research of great scientific and practical value, become a heritage in the field that must be considered by all those who approach not only grasslands as a land holding, but also the entire area of activities that is related in one way or another to this field (climatic conditions, conditions and consequences of human activities, infrastructure and the set of economic activities with administrative and political decisions) regarding this extremely complex and important way of using agricultural land and more.

The results obtained by the author of the book through a scientific work at the highest level, constitute a true national heritage that in one form or another will be used by the generations of researchers and practitioners who come and willingly or unwillingly will be obliged to consult and take into account what Mr. PhD. Teodor Marușca and the people next to him achieved in a highly professional activity, in a human life.

I am more than convinced that such a book as the present one, consisting of nine chapters in which the problems of pratology, pratotechnique and pastoralism, followed by appendices, will be not only a way of presenting some scientific results obtained over the years, a rich bibliography, an inventory of doctoral theses in which the author participated as a scientific referent, being a development model not only of research in the field, but especially of practice and directions for development and capitalization of the immense wealth that Romania has, the permanent grasslands insufficiently exploited and often neglected with the irresponsibility that characterizes us in the last 30 years.

At first glance, the book seems, as the author wants to say, an end-of-activity work, a balance sheet. In my opinion, it is not. On the contrary, the book is an opening for study, analysis and offers the chance to find solutions to bring into the economic circuit a sector, the pastoral one, of utmost importance for animal breeding, biodiversity conservation, environmental protection, landscape integration and others.

In the first chapter of the book, the author develops topics such as the specifics of scientific research in practiculture, the Swiss pastoral system and the current situation of grasslands in Romania.

In the second chapter, the problem of the scientific research of grassland vegetation is deepened, as a research method, the floristic composition and classification of switchgrass, grasslands habitats and the technique of evaluating the productivity of grasslands, based on floristic survey.

In chapters 3 - 4, the author develops problems related to: combating harmful grassy and woody vegetation, fertilization techniques and improvement

of grasslands, by using chemical but also organic fertilizers by grazing with animals.

The fifth chapter presents problems related to the improvement and creation of new varieties of perennial grasses and legumes, as well as simple or complex mixtures of them for the establishment of temporary arable grasslands or the radical restoration of degraded ones.

In the sixth chapter, the solutions given by the methods of improving the grasslands degraded by *Nardus stricta*, a non-valuable species that dominates the grassy carpet of premontane to subalpine grasslands in the high mountains, are highlighted with great knowledge. Extremely well represented in chapters 7 - 8 are the solutions for the valorisation of grasslands by grazing with animals as well as the reconstruction by reforestation of land devoid of vegetation, for the protection of the environment and the completion of the landscape.

The last chapter is dedicated to agrosilvopastoral systems and climate change – determinants of the evolution of permanent and temporary grasslands. There is a presentation of the Romanian agrosilvopastoral systems to the development of which the author of the book made a decisive and I would say unique contribution through the method of calculation and especially interpretation. The book is supported by an excellent bibliography in the field.

Annex 1 presents a list of very valuable scientific works developed as a single author or in a collective.

The author of the book, PhD. Eng. Teodor Marușca, is an excellent publicist, being present with articles in specialized magazines, especially in the last quarter of a century.

These published articles, numbering in the hundreds, are of particular importance from a scientific and practical point of view, in the extension of research results.

The more than 800 titles of published works are mainly based on an impressive volume of field and laboratory experiences from the student period 1959-1964, and the research profession 1968-1977, respectively 1995-2022, amounting to 1966 variants with 4311 plots on 23 ha under control, which multiplied by years of experimentation add up to almost 20,000 plots, 171 ha and over 40,000 samples for different analyses.

As a good connoisseur of the field of grasslands, PhD. Eng. Teodor Marușca was a referent in 70 doctoral committees, thus contributing to the training and certification of a large number of specialists in research, education and production.

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