SUMMARY

Since the 90s the world has been a growing interest and concern for the study and conservation of biological biodiversity. The effect of these concerns was reflected in the multidisciplinary approach to issues of biodiversity, the emergence of books, articles and specialist studies.

Following the studies conducted and published material has outlined a new conception that identifies three major prism through which can be analyzed biodiversity

1. diversity study and description of the world live it,
2. measuring the impact of anthropogenic interference on species and the correct interpretation of these interventions,
3. identification of ways and means to protect and restore biological biodiversity.

Given that the situation in Romania is not much different from the other countries in this issue, our concerns are naturally heading in that direction, which is why I proposed this topic for research.

The motivation that was the basis for addressing new conceptual basis of biodiversity is found in intensive manner for the agriculture, forestry, fish farming and modern pratoculture.

This intensive exploitation of resources required in pursuit of economic interest practice immediately, through the development and use of methods and procedures to allow the use of a limited number of species, not to measure and interpret, however, long-term consequences. It must be said, however, that the practice of extensive agriculture had a major negative impact on biodiversity through an irrational exploitation of resources.

Also, all these actions have not left room for the concerns of quality products and environmental health.

In this respect it is crucial that research and profile from us to be heading for the study of *biodiversity* destructive factors, of which we can enumerate:

- Anthropogenic activities,
- Excessive use of pesticides and chemical fertilizers,
- Habitat destruction and fragmentation,
- Aggressive pressure on resources.

Studies published abroad in the issue of *biodiversity* show the need for interdisciplinary and professional approach to this problem, in direct correlation with a sustainable management of natural resources, including a special place it occupies permanent pasturelands.

In this context the thesis main purpose was the study of new *biodiversity* issues on the permanent meadow of Moldova forest-steppe, and how it is affected by anthropogenic activity through pratotehnics measures, in the specific ecologic area taken in the study. The research conducted so far on the pasturelands of Moldova forest-steppe were particularly concerned at the influence of certain factors, in particular fertilization, production and quality of the overall study, without the influence of several complex factors on *biodiversity*, the contribution from each species composition fitomass, the quality of grass cover, on different levels of anthropogenic interference.

Analysis of indices of quality of forage made from the lawn of permanent grasslands from Moldova forest-steppe, in the conditions of the decrease of the impact of human activities on the meadow ecosystem, is another important objective that we proposed, to the achievement of which more concur study indicators such as the weight of each fitomass the species composition, chemical composition of the species components of grass cover, nutrition and energy value of the forage obtained. Study his proposes also the establishment of appropriate technologies to improve and use economic a permanent pasturelands and analyzing the evolution of plant *biodiversity* depending on anthropogenic interference.

Among the objectives pursued, in order to determine the role of pratotehnics items, the interaction between them in the forest-steppe stationed in Moldova, biodiversity and the quality of production include:

- The role of different doses of organic fertilizers and organic+mineral, under a rational use on the plant biodiversity of the of permanent forest-steppe of Moldova, the technological phases;
- The interaction in time between pratotehnics factors and the ecological factors on the biodiversity of meadow;
- Establishing the best pratotehnics routes for a good management to ensure the maximum efficiency of praticol resources in the studied area in terms of ensuring a higher quality production and conservation of biodiversity.

The proposed experimental protocol resulted in the autumn of 2002 a bifactoriale experiences on a permanent meadow belonging to the teaching farm Ezăreni.

Experience has been placed on a lawn of *Festuca valesiaca* L. with a poor composition of flora, land slope of 8-12%, black earth –chernoziom soil type, weak leachate, with silt-clay

texture, pH = 6,5-7,0, a mobile content in phosphorus (P_{AL}) of 24-26 ppm and mobile potassium (K_{AL}) of 210-350 ppm, 0-20 cm in depth.

Throughout the experiments in the field, were rigorously followed the experimental technique as a guarantee for achieving the correct results from the scientific point of view.

Paper aims to contribute to supplement the existing database and the establishment of pratotehnics routes that lead to achievement of flora compositions to reflect positively on the quality of forage and the yields obtained in order to value farms that have ownership or operational areas of permanent grasslands standing by the large topical theme that proposed by results from the experiments and studies and its entire contents.

Statistical processing of results was done by variant analysis and interpretation of results is based on the significance of differences between versions.

The paper was developed under a plan sensibly and rationally structured in 9 chapters, in addition to the introduction and conclusion.

The first four chapters are general, next five chapters related to the experiments, and the last chapter dealing with economic efficiency.

The first chapter includes feedback on the importance of permanent pasturelands, and the areas occupied by grasslands in Romania and abroad.

In the second chapter of the paper are presented aspects of the literature on the research of pasturelands productivity, productivity as a phenomenon biological and quality aspects of permanent pasturelands in the area of steppe-forest.

Chapter three presents results and conclusions of the literature on the conservation and improvement of permanent pasturelands in the area of steppe-forest by applying fertilizers on sward, permanent pasturelands overseeding, combating soil erosion on grasslands and improve the moisture.

Chapter five covers the characterization of natural conditions of the area where they conducted experiments with reference to geographical settlement, geomorphology, hydrology, climate, soil and vegetation. Pluviometric regime recorded during October 2002-September 2005 was characterized by a large oscillations, generally three years of experimentation being considered unfavorable due to water shortage, especially during critical meadow.

In chapter five issues are presented on the research, method and material research, and the types of tests conducted in the laboratory.

In the sixth chapter are presented results of fitocenotic studies carried out on the associations of grasslands in the area of the lower basin Jijia and Bahlui. During floristics mapping in the area have been identified five types of plant associations that dominate the meadow: association *Medicagine - Festucetum valesiacae*- Wagner in 1941, the association

Medicagini-Festucetum valesiacae-Wagner 1941 subas. *Bothriochloetum*, association *Artemisio austriacae + Poëtum bulbosae* Pop in 1970, the association *Staticeto - Artemisietum monogyne (santonicum)* - Topa 1939, the association *Puccinellietum distantis*-Soó 1937.

Chapter seven presents the results of field experiments on influence of pratotehnic factors such as how to use and fertilization on the yields achieved on the lawn. Analysis of the results reveals that the intensity factor anthropogenic interference and climatic conditions lead to changes in the dynamics of fitomass accumulation on the permanent *Festucetum valesiacae* grassland of Moldovian forest-steppe.

Fertilization with organic fertilizers associated with the minerals in moderate doses, print a normal state of biodiversity in terms of its growth.

In the three years of experimentation (2003-2005), production increases have ranged between 47 - 73% to use for grazing and between 64 - 84% when using for hay that, by identifying the security of pratotehnics flows to ensure the maintenance of biodiversity, increased production and quality.

Application of split nitrogen (½ + ½ early spring after the scythe I), so when using mead as and when using the system of grazing on agrofond of 10-40 t / ha, led to a better recovery of its the carpet plant, compared to spring application.

To use as pasture, nitrogen applied divided (½ + ½ early spring after the scythe I), the agrofond of 10-40 t / ha of stable manure, has resulted in achieving yields ranging from 4.03 t / ha and 4.75 t / ha strain, while the meadow, in the same manner the fractionation of nitrogen and the same agrofond, yields obtained were between 4.83 and 5.42 to / ha DM.

The experimental results obtained may be in a pretty solid support for establishing precisely those routes that are appropriate technology for the research area chosen.

Also, in chapter seven are presented the results of research on the influence of fertilization and the way of use of the permanent pasturelands of forest- steppe of Moldova.

Flora and vegetation from the perimeter gate footprint from studied climate, from the soil conditions and how traditional land use. The composition of flora, in 2003-2005, has not met obvious changes, but there have been changes on the weighting of species composition in the grass cover. Among the grasses, the highest values they had: *Festuca valesiaca* (dominant in all variants), *Poa pratensis, Agropyron repens* and *Dactylis glomerata*; of legumes a very good presence was *Lotus corniculatus*, then *Medicago lupulina*, *Trifolium repens, Vicia sp* . And the group "different" *Veronica sp., Galium molugo, Plantago lanceolata, Convolvulus arvensis, Achillea setacea*.

As a result, it was found that specific natural meadow area with the composition of flora mentioned above, can produce, through an appropriate management, forage quantities of good quality, which meet the requirements of ecological agriculture in the areas studied.

The next chapter contains research results on the anthropic influence on the meadow by fertilization on the quality of forage, so in the version used for hay, and that used by grazing.

Meadow of *Festuca valesiaca* react positively to the mineral and organic fertilization, the quality of the feed being obtained influenced by the doses used, the frequency of administration, in correlation with the ecological factors. The way of use and fertilization had a positive influence on the quality of feed and the percentage of protein, confirming the results of some literature.

The percentage of crude protein recorded values ranging between 14.3 - 17.1%, to the use for hay and 12.8 - 15.9%, to the use for grazing. Regardless of how to use chemical analysis showed a better quality of the feed made from nitrogen fertilization divided.

The values recorded in pulp gross ranged between 18.2 - 22.55% of its how to use pasture and 19.4 - 21.9% of its how to use meadow.

Fertilization by anthropogenic interference with organic-mineral fertilizers on the meadow or pasture, had a positive influence on indicators nutrition and energy to feed. Thus, there is an increase in both the values of UNL, and UNC, in all variants fertilized, compared to variant witness.

The quantities of nitrogen extracted by crop varied, depending on the way ofuse of grassland, the yields achieved and the content of the feed nutrients (PB) and were between 60 and 135 kg / ha, the rate of recovery is between 46 and 84. Noteworthy is the fact that this factor increases in all variants with mineral fertilization split.

In chapter nine are covered by the economic efficiency of anthropogenic interference on the meadow of *Festuca valesiaca*. Thus, by using for hay pasturelands of *Festuca valesiaca* in terms of intervention by organic-mineral fertilization has resulted in total spending between 280 and 628 lei / ha, net income ranging between 146 and 290 lei / ha and the yield from 24, 4% and 55.8%. Using the grazing pasturelands of *Festuca valesiaca* proved to be far more effective economic, total expenditure was much lower (between 50 and 398 lei / ha), net income per hectare were also higher, between 334 and 397 lei / ha with a yield rate of between 88 and 124%.

The results were interpreted on the basis of the significance of differences limit and variant analysis, is giving full attention to the wording of interpretations, so that they can be as relevant as possible.