

## DEVELOPMENT OF FRUIT GROWING IN THE REPUBLIC OF MOLDOVA

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**Abstract:** The fruit growing inheritance surface was reduced from 251 thousands ha in 1993 to 108, 4 thousands ha in 2008. Based on a complex research, performed for the first time under market economy conditions in the Republic of Moldova, a program of sustainable development of the pomiculture branch has been developed, as it constitutes a competitive economic sector, based on advanced technologies complying with European standards. The abovementioned program provides for an increase in the shares of the crops demanded in the market (drupaceous, juglandaceous and baccate crops). This program has been included in the "Strategy of development of the agro-industrial sector in the time span 2006-2015", approved through the Resolution of Government of the Republic of Moldova.

### INTRODUCTION

Pomiculture has been and continues to be one of the major agricultural branches in the Republic of Moldova, due to the favorable natural conditions, the people's traditions, the high economic efficiency, and availability of over 100 thousand ha of land in slopes with a northern exposition and an inclination of 6-12 degree, which can be used in the most efficient manner by way of cultivating pomicultural species, particularly the drupaceous and juglandaceous ones (1, 4).

In 2000 the area of orchards in the Republic of Moldova totaled over 100 thousand ha, of which around 75 thousand ha were in a satisfactory state and possessed an efficient productivity potential, which could be used through the application of modern technologies. Therefore, the scientists of the chair of pomiculture at the State Agrarian University of Moldova, of the Institute of Pomiculture and the Botanical Garden at the Academy of Sciences of Moldova were confronted in 2000-2008 the challenge of performing fundamental research in order to improve the situation in the pomiculture branch, by way of rationalizing the use of the available orchards with the inexhaustible productivity potential and by their replacement with orchards of a new kind, with a new assortment and advanced technologies, that would ensure an early fructification, a high productivity of quality fruit, particularly bio-products, demanded and competitive both in the internal and external markets. Having these realities in view the author sets himself the to evidence some aspect referring to fruit growing development in the context of the unprecedented reduction of productivity of orchards that have not yet been cut clear and foundation of new intensive and superintensive orchards.

## MARERIALS AND METHODS

The study refers to the period 1991-2008 and aims at the evolution of principal indexes achieved in the fruit growing of the Moldova Republic such as: development of fruit growing plantation area; development of canceled, of the cut clear areas and of those planted with trees, bush fruits and strawberry; evolution of fruit growing plantations, productivity and of the total production by species; modalities of turning fruits to good account (2, 3).

## RESULTS AND DISCUSSIONS

In 1993 the area of fruit growing plantations was ascent, reaching 251 thousand ha. Statistic data confirm the reduction of fruit growing plantations area of 2.2 times (Fig.1) The area of the fruitful orchards until 1993 increased and constituted 173,5 thousand ha (70 % of the overall plantations). It is reduced up wards of 60 in comparison with 1993 and constitutes 101,2 thousand ha in 2008. Practically the total orchards area the Moldova Republic has equals to the fruitful orchards area. From statistic data results that while the cut clear areas had an ascendant tendency, the young plantations traversed an inverse sense. Extension of the fruit growing plantation area till 2007 was ascent reaching 5100 ha (Fig. 2).

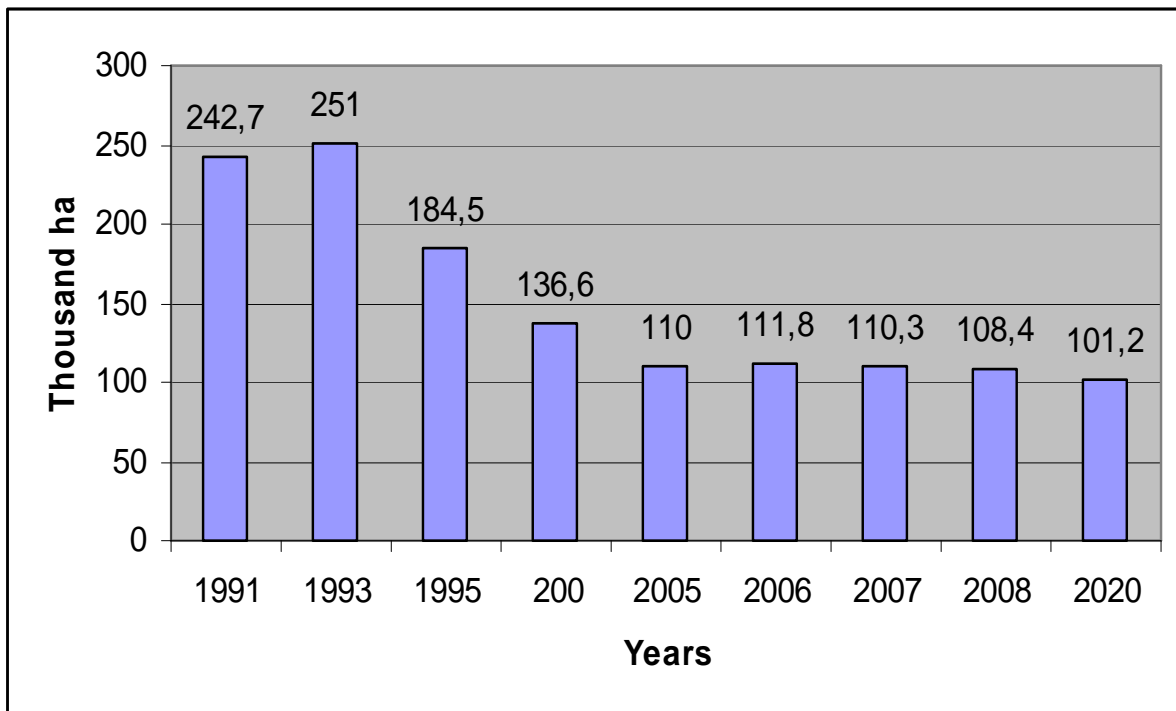


Figure 1

Evolution of the cultivate area with trees and bush-fruits, in the period of 1991 -2020

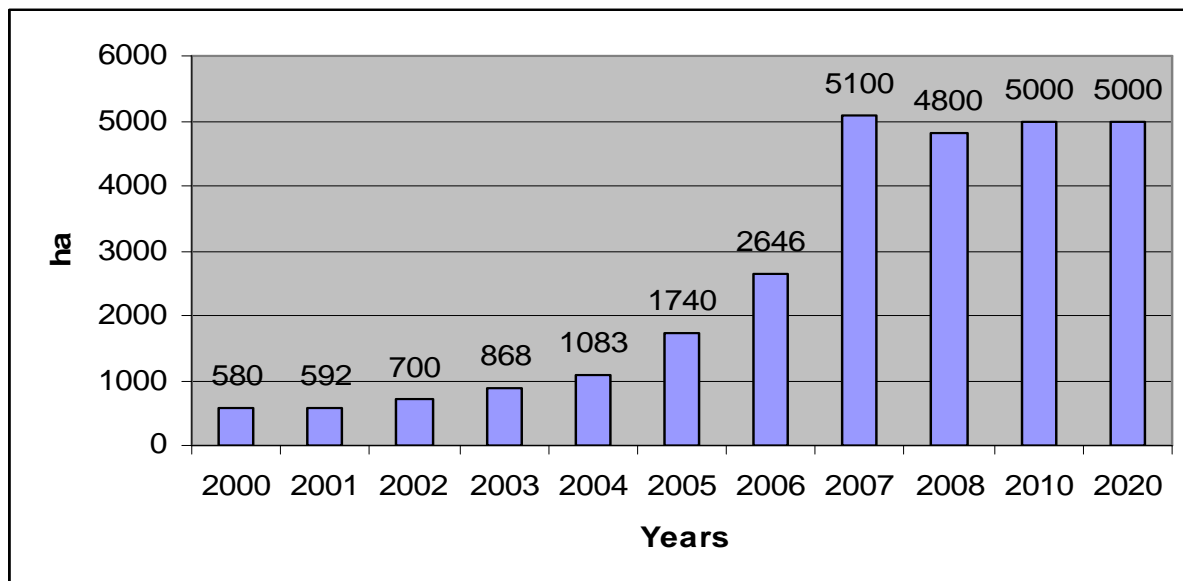


Figure 2

Dynamics of the fruit growing plantations area, in the period of 1991 -2020, ha.

Now the most part of the existent fruit growing plantations are in the period of drying, fruit-bearing and growing and are in a disastrous state with a small biologic potential with an exhausted period of exploitation and amortization and must be cut clear.

The average production per ha and the analyzed total harvest had an irregular evolution. It is sufficient to mention that during the last 18 years only three times (1993, 1997 and 2003) the average harvest of fruit growing plantations has overcome the level of 5 t/ha, and the total harvest only in 1993 reached the level of one million tons of fruits – as for the rest of years these indexes are in average at the level of 3-4 t/ha and 300-400 thousand tons of fruits that constitute the level of associated fruit growing productivity comprising the agropomiculture system and family gardens (Fig. 3, 4).

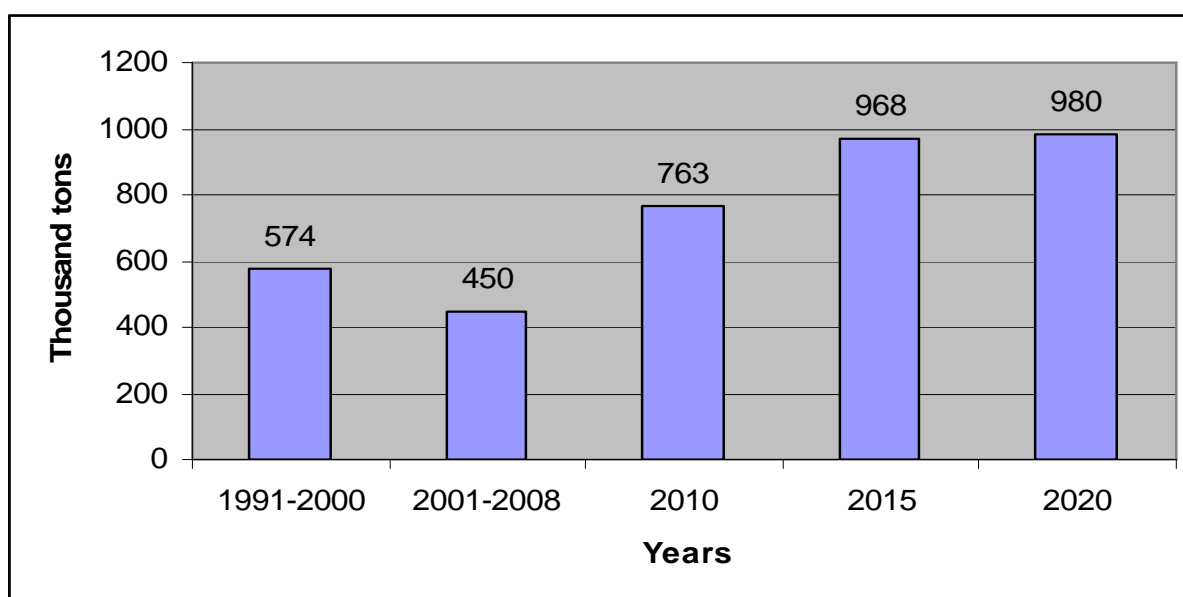


Figure 3

Total harvests of fruits, in the period of 1991 -2020, thousand tons.

The fruit growing unsatisfactory state maybe administered to repartition of fruit growing plantations area (65 %) on spots having an inclination from 3-5 up to 5-10 degrees, all being subjected to erosion processes. At the same time, a great negative influence on the fruit growing plantations state and their productivity was brought about by ignorance or negligent accomplishment of agro technical measures. Accordingly, the productivity of the existent orchards progressively diminishes, and especially have been reduced the total harvests that in turn has determined the fate of enterprises for processing and industrialization of fruits (1, 4).

The programmed of the fruit growing development for the period 2003-2020 aims at the increase of fruits production, improvement of quality and of higher competitively. This programmer (6, 7) forecasts that the areas occupied by orchards will reach 100 thousand ha up to the end of 2020, and the total harvest of fruits will reach one million tons in the period 2006 – 2020 (Fig. 1, 3).

The stable development of fruit growing foresees the gradual displacement of exhausted orchards with ones of intensive and superintensive type having a productivity potential and quality of fruits of 1.3-1.5 times higher in comparison with the previous level on the basis of rational utilization of ecologic, biologic, technologic, economic resources characteristic for each sector of spot and fruit growing farm.

In order increase the efficiency of existing plantations it is necessary to accomplish the census of orchards concomitantly with their productivity indexes. The obtained data will allow the development of a complex of measures for improvement of works in fruit growing, achievement of a more efficient productivity potential of plantations and the more rational utilization of land resources.

To stimulate the production of fruit growing planting material and foundation of fruit growing plantations (article 5 of the State Budget Lau on 2007, No.348-XVI of November 23<sup>rd</sup>, 2006) it is distributed for administration and management 17 million lei and 3 million lei for stimulation of nut culture development (5).

Resources to support the production of fruit growing planting material (grafted trees) and foundation of fruit growing plantations except bush-fruits plantations and strawberries will be utilized for partial compensation of the production expenses of grafted trees in the licensed, tree nursery as well as the cost of the fruit growing planting material used for foundation of fruit growing plantations.

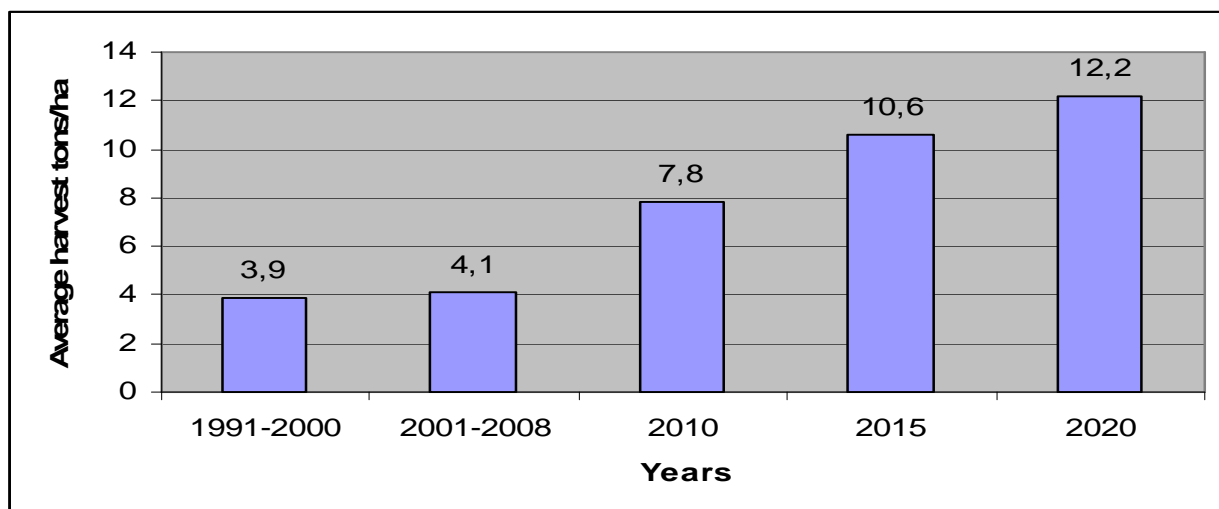


Figure 4

Average harvest, in the period of 1991-2020, tons/ha

The right to partial compensation of the production expenses of fruit growing planting material and for foundation of fruit growing plantations may benefit the economic agents regardless of the type of property and legal form of organization, who have founded tree nurseries as well as those who have founded fruit growing plantations. Subventions are granted: for production of fruit growing planting material (grafted trees) – in an amount of 20 thousand lei per one ha of field I area (bench grafting) or field II (bud grafting); for foundation, beginning with autumn 2006, of fruit growing plantations – in an amount of 10 thousand lei per ha of planted area with seed-bearing species and in an amount of 7.5 thousand lei for an area of one ha planted with stone-fruits species.

## CONCLUSIONS

In 2008 the fruit growing patrimony of the Moldova Republic has been diminished with 142,6 thousand ha, in comparison with 1993. Nowadays the orchards area constitutes 108,4 thousand ha of which with seed-bearing 67.3 thousand ha, stone-fruits – 36.5 thousand ha, nuts-3.7 thousand ha, bacciferous-0.9 thousand ha.

The structure of fruit growing plantations is unsuitable, in the sense that fruitful plantations constitute 92 % and the most pond ration is detained by apple trees and prune trees while the pear trees, nut trees, apricot trees and other are cultivated on rather reduced areas.

The state development of fruit growing in perspective of 2020 requires investments worth 602 mln USA dollars which will be defrayed by the private sector, allocations from the state budget and foreign investments. The program also foresees the creation of a state fund for fruits production development in the Moldova Republic.

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