

EVOLUTION OF THE LIVESTOCK SECTOR OF THE REPUBLIC OF MOLDOVA

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Abstract

The livestock sector of the Republic of Moldova has been in a continuous decline since the collapse of the USSR, with sharp reductions in the production of pork meat (by 2.5 times), beef (by 13 times), poultry (-50%) and milk (by 5.2 times). Revitalization of the livestock sector has become one of the priorities of the current public policies implemented in the country, new measures of public support like direct payments per head of livestock being implemented in order to boost the sector's performance. The paper aims to analyse the current state of the livestock sector in the Republic of Moldova, with an emphasis on the subsectors with the most competitive potential that require an improved or additional public support. The descriptive, comparative and analytical research methods have been used in order to develop conclusions and recommendations with respect to the further development of the livestock sector in the Republic of Moldova.

Key words: livestock, Republic of Moldova, production, public support

INTRODUCTION

The climatic conditions of the country and fertile soils are favourable for the livestock production that is one of the oldest occupations of the rural population. Livestock products represent an important part of the diet of the Moldovan population. The cattle growing is the main branch of livestock production in Moldova, providing the highest amounts of animal production as milk and meat [6].

Livestock production in the Republic of Moldova has always been an important part of the total agricultural output, which in recent years, with regret, has reduced its presence in agriculture. Thus, if at the beginning of 2010 the value of livestock production had been about 30% of the total value of total agricultural output, then in 2021 its share decreased to an extreme minimum value of about 20% of the total value of the output.

However, this decrease is not entirely due to the reduction in livestock production, but rather to the increase in plant production which is also vulnerable to climatic conditions, given the geographic location of the Republic of Moldova. A simple

comparison of the year 2020 - a year with severe drought and 2021 a year that was quite favourable in terms of climatic conditions shows us how the ratio changes in the structure of agricultural activity. At the same time, the effects of drought from 2020 which affected the crop sector have extrapolated to the livestock sector in 2021, thus contributing to its decrease.

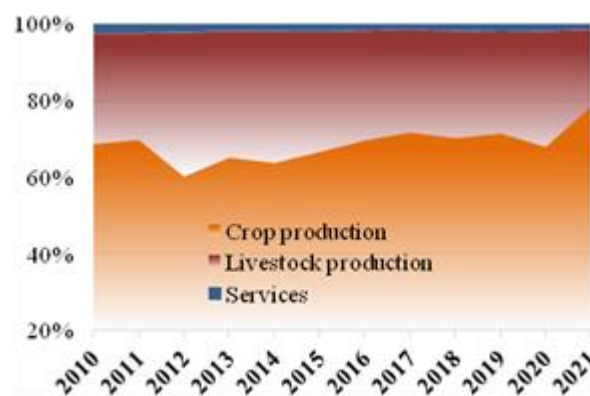


Fig. 1. Value of total agricultural output divided by branches, 2010 - 2021, %
Source: National Bureau of Statistics, 2022 [8].

The livestock sector suffered the biggest losses during the process of transformations in the agricultural sector. The overwhelming majority of the animals was moved from large

to individual farms, where are practiced mostly the extensive production technologies of cattle and poultry [9], which led to a sharp decline in production volumes [7].

At the same time, it is good to have an idea of the components of the livestock sector and the role of each product in its structure, which is presented in the table below and reflects an approximate average of each production in the livestock sector output for the analysed period.

Table 1. Structure of agricultural output and livestock production in particular, average values, 2010 – 2021, %

Total agricultural output	100
Crop production	68.6
Livestock production, of which:	31.4
Production of cattle and poultry of which:	17.8
cattle	1.6
pork	9.3
sheep and goats	0.4
poultry	6.2
Milk production	9
Eggs production	3.4
Wool production	0.1

Source: National Bureau of Statistics, 2022 [8].

However, the monetary values and the increase of the price do not fully reflect the situation of the livestock sector and, in order to make a more comprehensive analysis, it is worth paying special attention to the natural values of the given sector and their sources of origin.

In this context, the purpose of the paper is to analyze the dynamics of livestock in the Republic of Moldova and identify the directions for its revitalization as a priority in the current agricultural policies which need public support.

MATERIALS AND METHODS

The paper is focused on the analysis of the evolution of the livestock sector of the Republic of Moldova for the period 2010 – 2020, with some incursions in the period 2000

– 2010, as well as some latest available data for 2021.

The main data source is provided by the National Bureau of Statistics, Un Comtrade database [10] and WITS database.

Aspects and data related to public support is extracted from the Annual reports provided by the Agency for Intervention and Payments in Agriculture.

RESULTS AND DISCUSSIONS

The cattle sector

The cattle sector in the Republic of Moldova in the last 22 years has registered a considerable decrease of about 3.9 times in the number of heads. This decline is closely related to the decrease in the number of heads in households, which in the given period has decreased by about 4.1 times. At the same time, enterprises and peasant households have also experienced a reduction with attempts of recovery in the last 8 years (Figure 2).

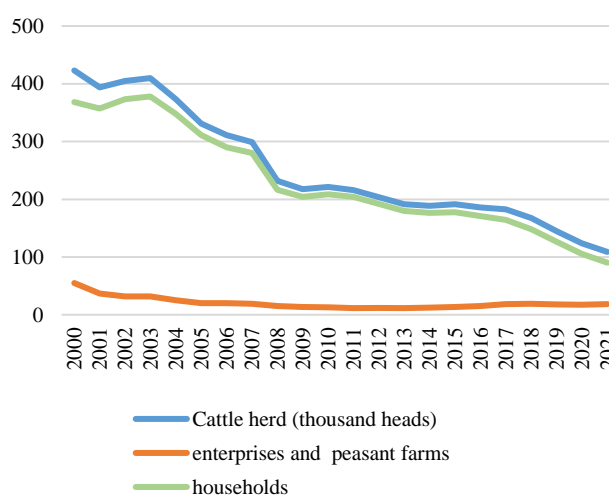


Fig. 2. Evolution in the number of cattle during the years 2000 - 2021, thousand heads

Source: National Bureau of Statistics, 2022 [8].

Moreover, the decline in the number of cattle herds has inevitably led to a reduction in both meat and milk production (Figure 3).

Although the beef production is decreasing, an important share of it goes to export in the form of fresh, chilled or frozen meat. The trade balance with beef is positive, with decreasing values of export. In 2020, for the

first time in the last 9 years, the import values have overtaken the export ones (Figure 4).

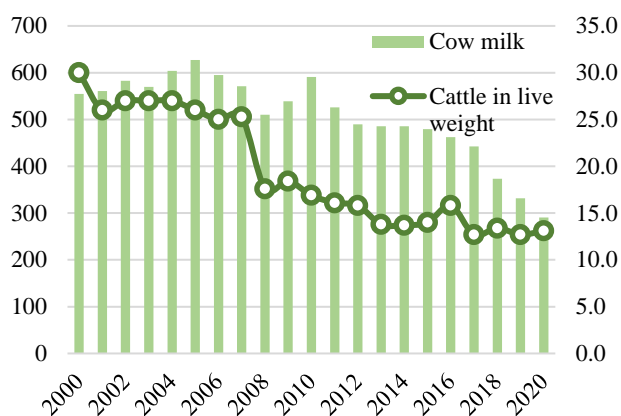


Fig. 3. Meat and milk production, 2000 - 2020, thousand tons
 Source: National Bureau of Statistics, 2022 [8].

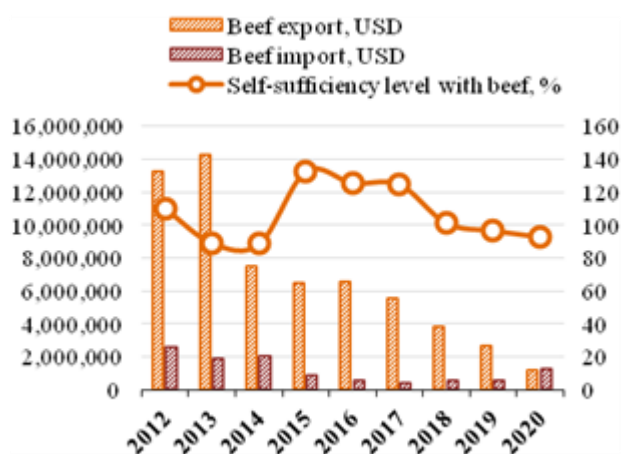


Fig. 4. Import and export of beef and the levels of self-supply of the Republic of Moldova, 2012 - 2020, thousand USD
 Source: National Bureau of Statistics, 2022[8], UN Comtrade database, 2022 [10].

The Netherlands and Germany are the main import partners of live bovine animals during the period 2010-2020. However, the main importing partners for fresh refrigerated or frozen beef are from neighboring countries, namely Ukraine and Romania. In the case of exports of live bovine animals, the main partners of the Republic of Moldova are the countries of Lebanon, the Syrian Arab Republic and Jordan, which in the last three years have a share of about 98-99% of total exports of live bovine animals. In terms of exports of fresh chilled or frozen beef, the

Russian Federation is the main partner, where is noticed a steady decline in exports throughout the years 2010-2020.

As with meat products, milk and sour cream were also negatively affected by the reduction in the number of cattle. This phenomenon has led to a reduction in the level of self-sufficiency in milk and sour cream, a figure that in the early 2010s was below the required value. This situation has created new opportunities for importers of these products which have intensified their presence on the domestic market in recent years (Figure 5).

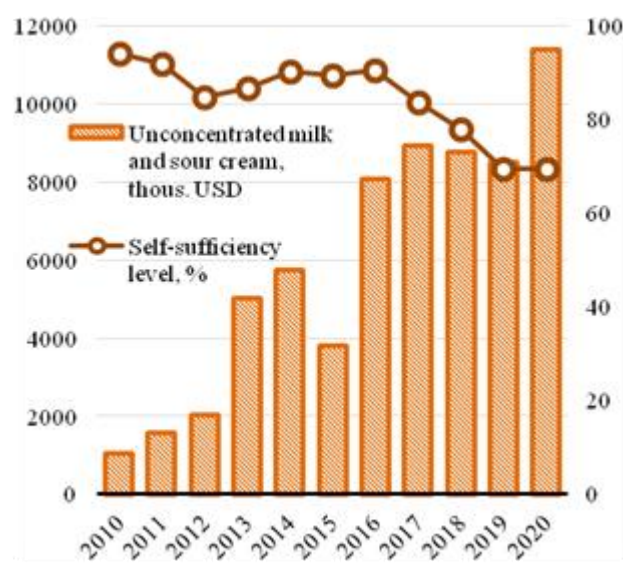


Fig. 5. Self-sufficiency level and import of milk and dairy products in the Republic of Moldova, 2010 - 2020
 Source: National Bureau of Statistics, 2022[8], UN Comtrade database, 2022 [10].

The main exporters in the Republic of Moldova of unconcentrated milk and sour cream are Ukraine, Romania and more recently, Poland, which cumulatively for the year 2020 account for about 83% of the total milk products imported by the Republic of Moldova.

Compared to imports, the value of exports of unconcentrated milk and sour cream in the analyzed period is significantly lower. Although the European Commission has approved the Republic of Moldova for the placing on the European Union market of raw milk and dairy products, our country does not have the necessary production capacity and volumes to allow an increase in exports to

both EU and other countries as a result of declining of the cow herd and milk production. At the same time, more attention must be paid to compliance with quality standards so that they meet the requirements of the international market.

In order to revitalize the cattle sector, the state provides a series of subsidies through measures such as stimulating investment for the use and technological renovation of livestock farms, namely for farms intended for raising and maintaining cattle. The amount granted can reach a value not exceeding 50% of the value of the investment and the maximum subsidy threshold should not exceed 5 mil. MDL. In order to stimulate the purchase of breeding animals and the maintenance of their genetic fund, the state provides support for investments for the purchase of these animals in an amount not exceeding 50% of the investment cost or the maximum ceiling of up to 2.5 mil. MDL [4].

Direct payments per head of bovine animals (*Bos taurus*) are also granted. The amount per head of purebred cattle is 5,000-7,000 MDL [5].

For primary processing, packaging, refrigeration, freezing and storage of meat and milk, the state provides support amounting to 50% of the value of equipment and machinery but the value of support should not exceed the established ceiling of 5 mil. MDL.

The pork sector

Although in the Republic of Moldova, growth of pigs during the period 2010 - 2021 has a somewhat oscillating character, there is noticed a reduction in the number of heads in the last 4 years. Although during the analyzed period the agricultural enterprises and peasant farms have increased their number of pigs more than 2 times and have reached a share of approximately 57.9% of the total pigs in 2021, somewhat during this period it is observed an increased dependence of the total number of pigs on pigs kept in households (Figure 6).

During the analysed period, there is observed that the pork meat production is kept within the limits of 60 - 65 thousand tons (except for the years 2015, 2016) but the import has an oscillating character and only in the last four

years it has stabilized registering a slight decrease (Figure 7).

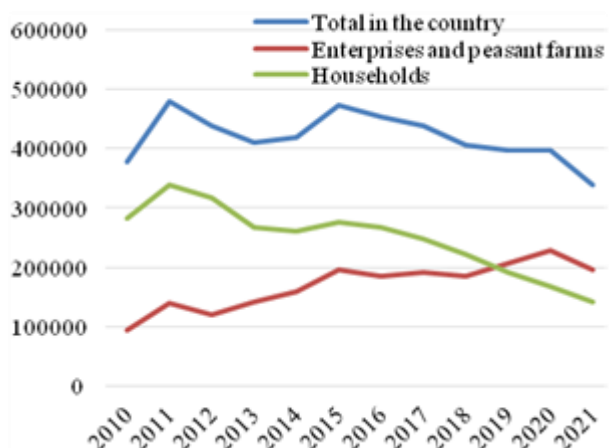


Fig. 6. The number of pigs in the Republic of Moldova by categories, 2010 – 2021, units

Source: National Bureau of Statistics, 2022 [8].

Against the background of the stabilization of pork production, namely the reduction of imports in the last four years of the analysed period led to the increase of the level of self-supply of the given product which was below the necessary limit for the Republic of Moldova. As far as the production of pork does not meet the needs of the internal market, exports of the product during the considered period are in very small quantities and do not deserve to be taken into account.

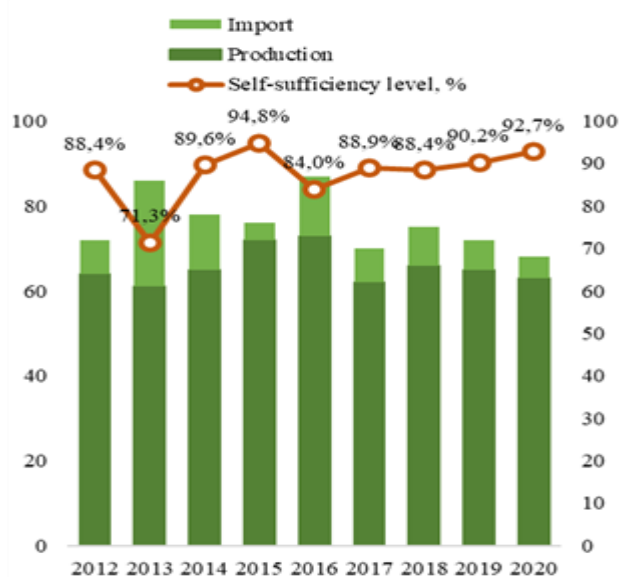


Fig. 7. Production, import and self-supply level of pork in the Republic of Moldova 2012 - 2020, thousand tons

Source: National Bureau of Statistics, 2022 [8].

In order to revitalize the given sector, the state through the Agency for Intervention and Payments for Agriculture (AIPA) [1] provides support in the form of subsidies to stimulate investments for the use and technological renovation of pig farms up to 50% of the investment value. Within the measure dedicated to stimulation of the procurement of breeding animals and the maintenance of their genetic fund, provided subsidies are up to 30% for boars aged 4 to 8 months and sows aged 5 to 8 months. The maximum amount of the grant must not exceed 500,000 per beneficiary. Also, for equipment and machinery intended for primary/finished processing, packaging, refrigeration, freezing, processing and storage of meat, granted subsidies must not exceed 50% of the value of the investment.

Sheep and goat sector

Growth of sheep in the Republic of Moldova during the years 2010 - 2021 decreased by about 40%, but this decrease did not have a continuous and constant trend. The reduction was slow in the period 2014-2018 and with a more pronounced reduction in the years 2019-2021. Of course, these reductions also affected wool production, which decreased by about 30% between 2010 and 2020n (Figure 8).

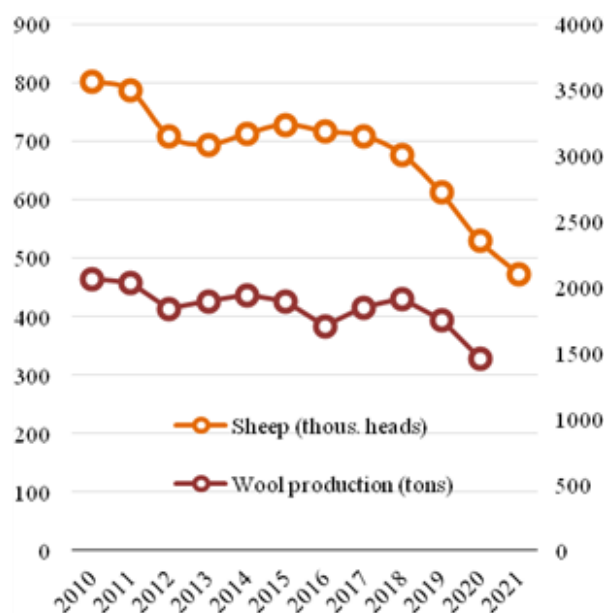


Fig. 8. Sheep breeding and wool production in the Republic of Moldova, 2010 – 2021
Source: National Bureau of Statistics, 2022 [8].

Compared to the sheep breeding, the goat breeding had an ascending character during the years 2010 - 2018, which then changed its growth vector and had 3 consecutive years of decrease (Figure 9). Also, the given results are noticed due to the households that hold a share of over 99% of all goats in the Republic of Moldova over the years.

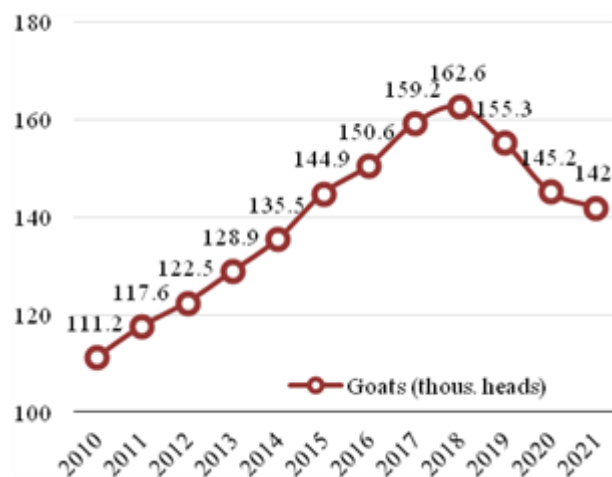


Fig. 9. Goat breeding in the Republic of Moldova, 2010 – 2021
Source: National Bureau of Statistics, 2022 [8].

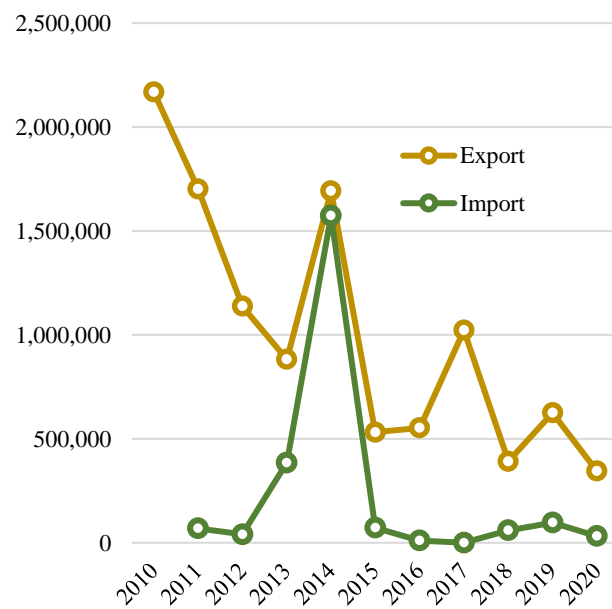


Fig. 10. Import and export of live sheep and goats, USD
Source: UN Comtrade database, 2022 [10].

The value of imports of sheep and goats during the analysed period was small compared to the one of exports, except for 2014 when imports of sheep and goats reached a value of about 93% compared to the

value of exports. At the same time, during the analysed period, there noticed, with large fluctuations, a gradual decrease in the values of exports of live sheep and goats (Figure 10). As well as the export of live sheep and goats, the export of the meat of the given species significantly prevails over imports. Although in the years 2010 - 2012 there was an increase in the export values of meat of sheep and goats, in the next four years 4 years they had a diametrically opposite situation with the most pronounced reduction in 2015, 2016. In 2017 is already noticed a restoration of the situation regarding the exports that are relatively kept for the rest of the analysed period, however registering a reduction in the 2020 (Figure 11).

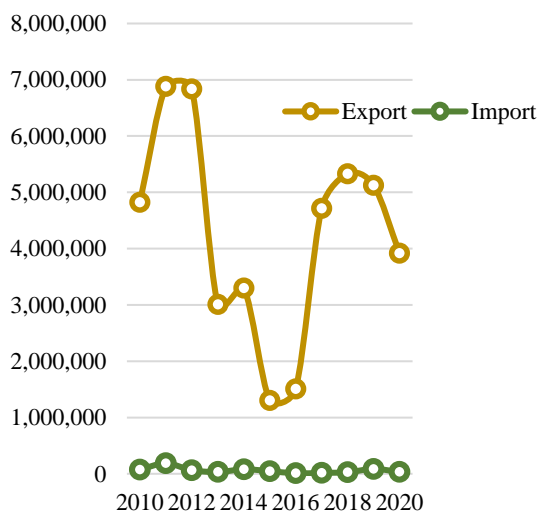


Fig. 11. Import and export of sheep and goats meat, USD
 Source: UN Comtrade database, 2022 [10].

In order to support the sector, the competent state authorities grant subsidies to partially compensate for the investment in the purchase of breeding animals from breeding farms, ie 50% of the cost for rams and goats aged between 6 and 20 months, but the value of the subsidy should not exceed the amount of 200,000 MDL per beneficiary and for the purchase of lambs and goats from breeding farms aged between 6 and 20 months in an amount of 50% of the purchase cost.

The beekeeping sector

Contrary to the general situation in the livestock sector, beekeeping in the analysed

period had an increasing character. The number of bee families in the given period, with small oscillations, was in a continuous increase and in 2021 registered an increase of approximately 45% compared to 2010, thus reaching a sum of approximately 184.9 thousand bee families (Figure 12).

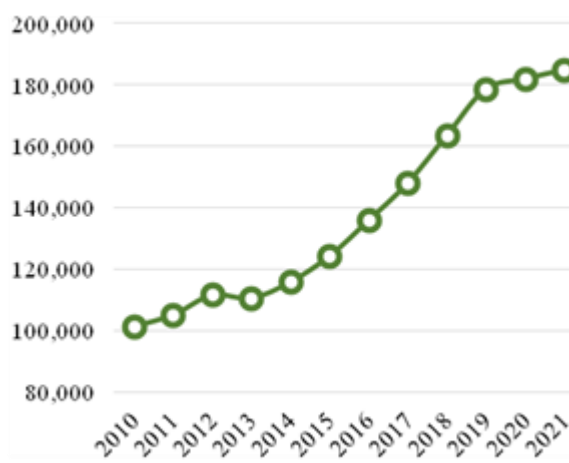


Fig. 12. Number of bee families in the Republic of Moldova, thous. Families
 Source: National Bureau of Statistics, 2022 [8].

Overall, the obtained results are due to households, which if at the beginning of the analysed period had a share of about 95.1% of all bee families in the Republic of Moldova then during the period only strengthened their positions and in 2021 had a share of about 98.7%.

The number of bees is closely correlated with honey production, but there are other factors that can positively or inversely influence honey production, including: the strength of the bee family, the age of the bees, the location of the hives, the slower arrival of the warm season, low temperatures, unfavourable weather conditions, etc. During the analysed period there is a gradual increase in bee honey exports which covered the period 2010-2017, when bee honey exports increased about 11.7 times. Unfortunately, this increase in exports was not closely linked to the economic advantage of beekeepers, although throughout the analysed period, with small fluctuations, there is noticed a decrease in the price which at the end of the period became with 28% cheaper compared to 2010 (Figure 13).

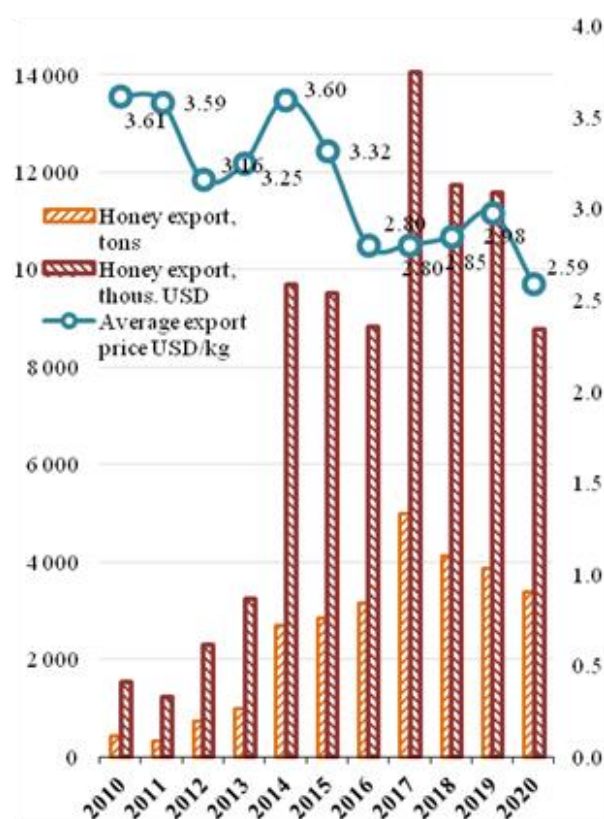


Fig. 13. Export of honey, 2010 - 2020
 Source: UN Comtrade database, 2022 [10].

The public authorities also support this direction for the development of animal husbandry and by subsidizing several stages of beekeeping activities such as: granting compensation for the purchase of new technological equipment for the endowment and modernization of beekeeping farms; provision of support for partial compensation for the purchase of queen bees from hatchery farms up to 3 months old; providing support not exceeding 50% of the value of equipment and machinery intended for primary / finished processing, packaging and processing of bee honey. Also, for farmers who are registered in the organic farming system for the period of conversion and maintenance of organic beekeeping is granted 300 MDL for each family of bees.

Poultry sector

In terms of poultry production during the years 2012 - 2020 in the Republic of Moldova there has always been a negative balance. Although the deficient level of the product given in 2012 constituted 31.6% of the total necessary resources and which was replaced

by imports, the relative increase in poultry production that rose between 2017 and 2020 did not solve this problem, the reason being the increase in demand on the local market and therefore the increase in imports which in turn decreased the level of self-sufficiency even more reaching 66.6% by 2020 (Figure 14).

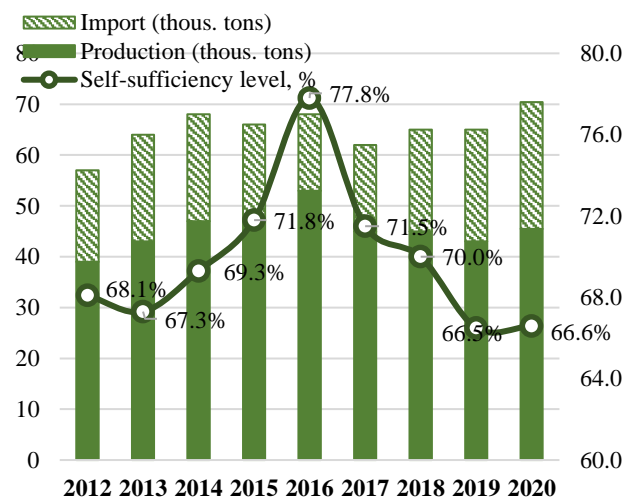


Fig. 14. Production, import and self-supply of poultry meat in the Republic of Moldova, 2012 - 2020
 Source: National Bureau of Statistics, 2022 [8].

Like poultry production, egg production between 2012 and 2020 is oscillating. The biggest interest in the analysed period is shown by egg exports, which in 2012 accounted for only 0.5% of total poultry egg resources, then the peak quantity exported was recorded in 2017 and accounted for 9.7% of total egg resources for that year, afterwards decreasing gradually to a share of 2.4% of total poultry egg resources for 2020.

At the same time, during this period imports experienced an increase, being used predominantly for incubation. But all these fluctuations influenced the level of supply which, although in 2012 it was at the limit but had positive values of 102.2% then in 2020 it registers a negative value of 97.9% (Figure 15).

Therefore, foreign trade with agricultural products is facing an unbalanced ratio between exports and imports as affirmed other authors in their studies in the Republic of Moldova [2, 3].

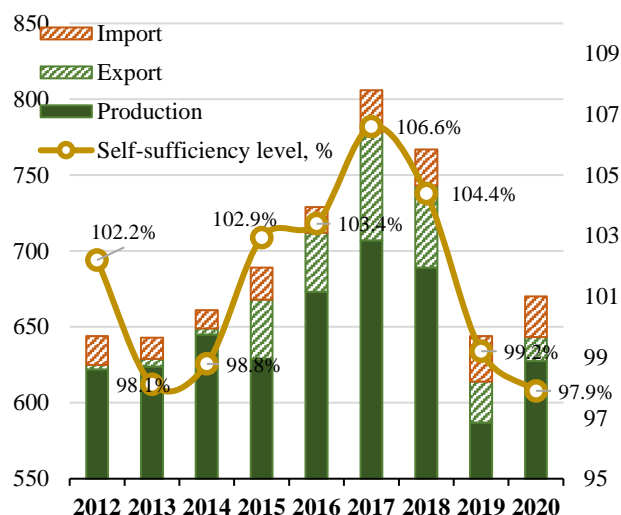


Fig. 15. Production, import and self-supply with eggs in the Republic of Moldova, 2012 – 2020

Source: National Bureau of Statistics, 2022 [8].

In order to support this sector, the public sector provides financial aid in the form of subsidies for the purchase of equipment and technological renovation of livestock farms. Also, in order to stimulate investments in primary processing, packaging, refrigeration, freezing, processing and storage of meat, the public administration provides financial support in the form of subsidies not exceeding 50% of the investment cost.

CONCLUSIONS

Many sectors of the livestock complex are dependent on households, namely their migration from urban to rural areas or abroad has led to a reduction in animal production.

The livestock sector of the Republic of Moldova experiences decreasing in all sub-sectors, except for beekeeping.

State aid by allocating subsidies in different directions of development of the livestock complex are of course favorable for their development but they are more aimed at stimulating agricultural enterprises and peasant farms, rather than households, which, as mentioned, have a still quite important role in the given complex.

The reorientation of subsidies in this direction can stimulate the exit from the shadow of the records of households.

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