

## VISION ON AGRICULTURE IN REMETEA MARE COMMUNE, TIMIS COUNTY

Andreea Giorgiana RĂBONȚU, GeorgianA Adina STOIAN, Adalbert OKROS, Iasmina SAVESCU

*University of Agricultural Sciences and Veterinary Medicine "King Michel I of Romania" of  
Banat from Timisoara*

*Corresponding author: [adalbertokros@yahoo.com](mailto:adalbertokros@yahoo.com)*

**Abstract:** Agriculture is one of the oldest occupations of mankind, being intrinsically linked to the sedentary life, since the people, from the nomads, became plant cultivators and animal breeders. Currently it is considered that 42% of the world's population deals with agriculture, making it by far the most widespread human occupation. Unfortunately, agricultural products account for only 4.4% of the world's gross product. The purpose of this work is to study agriculture within the communal territory of Remetea Mare, Timis County, with the purpose of obtaining an information fund on the agricultural system practiced, the crops and the productions obtained during the three years of study, the natural environment. The territory of Remetea Mare commune is located in the eastern part of Timișoara Municipality at approx. 17 km from it and has the following neighbors:

- north west - Pișchia communal territory
- to the east - the communal territory Recaș
- to the south - Chevereșu Mare communal territory (Timișului course)
- to the southwest - the communal territory of Moșnița
- to the west - the communal territory of Giarmata and Ghiroda

The total area of the surveyed territory is 10,124.74 ha.

The investigated perimeter is part of the large physical-geographical unit Banato-Crișană.

This is one of the three pericarpal units being disposed on the western side of the Western Carpathians and comprises distinct subunits, but closely linked by genesis, evolution and land use:

- Banato-Crișene hills
- Banato-Crișana Plain

The territory of Remetea Mare is part of the group of South-Western hydrographic systems, the Timiș-Bega river basin. The old manure cone of Mureș was fragmented and divided by a series of erosion valleys, torrential elements in the incipient phase today mostly stabilized and corrected. The most important watercourses are the Timiș and Bega rivers. The microclimatic peculiarities of the investigated area are determined by its geographical position, so that it is characterized by a temperate continental climate with shorter and milder winters, being frequently under the influence of cyclones and air masses that cross the Mediterranean and Adriatic. Its general features are marked by the diversity and irregularity of the atmospheric processes.

There are 9 types and 127 subtypes of soil in the investigated perimeter as follows:

1. Aluviosoluri 370.10 ha.
2. Eutricambosoluri: 2406.79 ha.
3. Pruvvosols: 3089.90 ha.
4. Luvosols: 360.44 ha.
5. Pelosoluri: 1244.89 ha.
6. Vertioluri: 454.27 ha.
7. Gleiosols: 372.83 ha
8. Ponds: 346.42 ha.
9. Erosols: pelices 47.43.

The main crops grown in the studied area are: cereals, technical plants, oilseeds, legumes and vegetables.

**Key words:** Remetea Mare, yields, agriculture, areas, agricultural systems.

## INTRODUCTION

Agriculture is one of the oldest occupations of mankind, being intrinsically linked to the sedentary life, since the people, from the nomads, became plant cultivators and animal breeders. (DANIEL DORIN DICU, PAUL PÎRSAN, JELENA MARINKOVIC, FLORIN IMBREA, DRAGOSLAV VLAD MIRCIOV; LAURA SMULEAC, SIMONA NITA, ANISOARA IENCIU, ADRIAN SMULEAC, DICU DANIEL, 2013)

Currently it is considered that 42% of the world's population deals with agriculture, making it by far the most widespread human occupation. Unfortunately, agricultural products only account for 4.4% of the world's gross product. (LOREDANA DARICIUC, I. GAICA, D. DICU, 2016)

Romania has almost 15 million hectares of agricultural land, of which 9.3 million ha of arable land, 0.6 million ha of vineyards and orchards, over 4.8 million ha of natural grassland, most of the areas having a high fertility. (ANIȘOARA DUMA – COPCEA, CASIANA MIHUȚ, L. NIȚĂ, 2014; POPA M.; LATO A.; CORCHES M; RADULOV I.; BERBECEA A.; CRISTA F.; NITA L.; LATO KI; POPA D., 2016)

Due to the predominance of the relief forms of small and medium heights, the land fund of Romania has a component of an important economic value - the arable land, which is the main and the safest wealth of the country. Thus, of the total agricultural area, arable land occupies sixty percent. (D. DICU, R. BERTICI, I. GAICA, 2016)

The agricultural potential of Romania comes from the structure of the land use mode. Depending on the qualities and geographical position of the agricultural lands, the different sectors of agriculture were structured and developed. (ANIȘOARA DUMA-COPCEA, NICOLETA MATEOC-SÎRB, TEODOR MATEOC-SÎRB, CASIANA MIHUȚ, 2013)

A branch with ancient traditions of Romanian agriculture is the cereal culture: wheat, maize, barley and, to a lesser extent, sorghum, rice, oats. The main cereal regions are: Romanian Plain, Western Plain, Moldavia Plateau, Dobrogea Plateau, Transylvania Depression and Getic Plateau. (CASIANA MIHUȚ, ANIȘOARA DUMA-COPCEA, LUCIAN NIȚĂ, SIMONA NIȚĂ, 2016; MIHUȚ CASIANA, 2018 )

The main technical plants cultivated in Romania are: sunflower (in the south-east of the country especially), soybeans, sugar beet, flax and hemp. In the colder areas (Suceva Plateau, the depressions of the Eastern Carpathians, the northwest of the Transylvanian Depression) and in the periurban areas of the plain the potato is cultivated. Vegetables and legumes for beans are grown mainly in the neighborhood of cities and in the meadows of some rivers. (KAREL IAROSLAV LAȚO, LUCIAN NIȚĂ, ALINA LAȚO, ISIDORA RADULOV, FLORIN CRISTA, ADINA BERBECEA, 2013)

Remetea Mare commune is located in the center of Timis County, 12 km east of Timisoara. It is crossed by the national road DN 6 (E70) and by the Bega canal. It is bounded on the northeast by Pischia, on the east by Izvin, Recas, on the south by Bucovăț and on the west by Ghiroda, Giarmata. Remetea Mare commune comprises the localities of Remetea Mare and Ianova. The distance between Remetea Mare and Ianova is 7 km. The main economic activities are agriculture, by cultivating the owned agricultural lands, the small industry, developed by the private companies from the commune area and the trade, carried out by the private network of shops. The studied area is in the temperate continental climate, characteristic of the southeastern part of the Panonian Depression, with some sub-Mediterranean influences (the Adriatic variant). Its general features are marked by the diversity and irregularity of the atmospheric processes. (NIȚĂ SIMONA, NIȚĂ LUCIAN DUMITRU ,MIHUȚ CASIANA, KOCIS ELISABETA, PANAITESCU LILIANA, LUNGU MARIUS, 2014)

The dominant air masses, during spring and summer, are the temperate ones, of oceanic origin, which bring significant precipitations. Frequently, even in winter, wet air masses arrive from the Atlantic, bringing significant rainfall and snowfall, less frequent cold

waves. The annual average temperature is 10.6°C, the warmest month being July (21.1°C), resulting in an average thermal amplitude of 22.7°C, below that of the Romanian Plain, which attests to the beneficial influence of the ocean air masses. From a practical point of view, the number of days with favorable temperatures for optimal crop development, namely those with averages over 15°C, is 143/year, between May 7 and September 26. The active temperature, totaling 2761°C, ensures very good conditions for the maturation of the crop plants, including some of Mediterranean origin.

#### MATERIAL AND METHODS

The data found is taken from different sources of statistics, mayors and public institutions of Remetea Mare.

#### RESULTS AND DISCUSSION

Next we will present the following data regarding the area, the cultivated plants and the yields obtained in Remetea Mare commune.

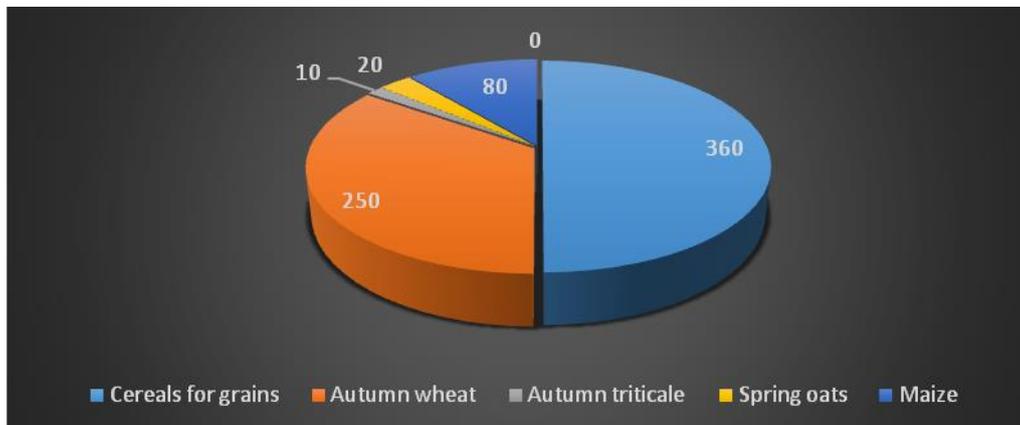


Fig. 1 The cultivated area (ha) with cereals in Remetea Mare commune

Figure 1 shows the area cultivated with cereals in the period 2015-2017. A significant weight belongs to the cereals for grains with 360 ha, autumn grains with 250 ha. The area under examination was cultivated with 80 ha of maize grains, 20 t of spring oats and 10 t of winter triticale.

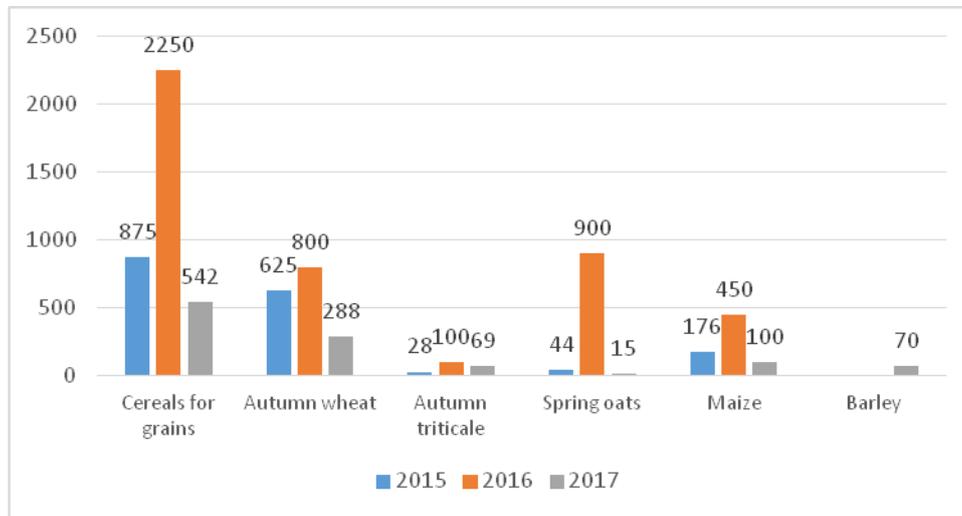


Fig.2 Yield obtained (t) for cereals in Remetea Mare commune.

In figure 2, we can observe an oscillatory movement of cereal yields in Remetea Mare commune. In 2015, a yield of 875 t for cereals for was obtained. In 2016 it increased, reaching 2250 t, and in 2017 we can see a new decrease, the yield being of 542 t. For the winter wheat, the yield is relatively similar in the period 2015-2016: 625 t, and 800 t respectively, while in 2017 it decreases considerably, reaching 288 t. For winter triticale, the period 2015-2017 brings low yields, with values of 28 t, 100 t and 69 t. The spring oats have a low weight in 2015 and 2017, with 44 tons respectively 15 tons, but in 2016 it increases considerably reaching 900 tons. The maize production in 2015 is 176 tons, in 2016 450 tons, and in 2017 100 t. In 2015, the maize yield is 176 t, in 2016 de 450 t, and in 2017 it is 100t. Barley, on the other hand, has a big yield only in 2017, namely 70 t.

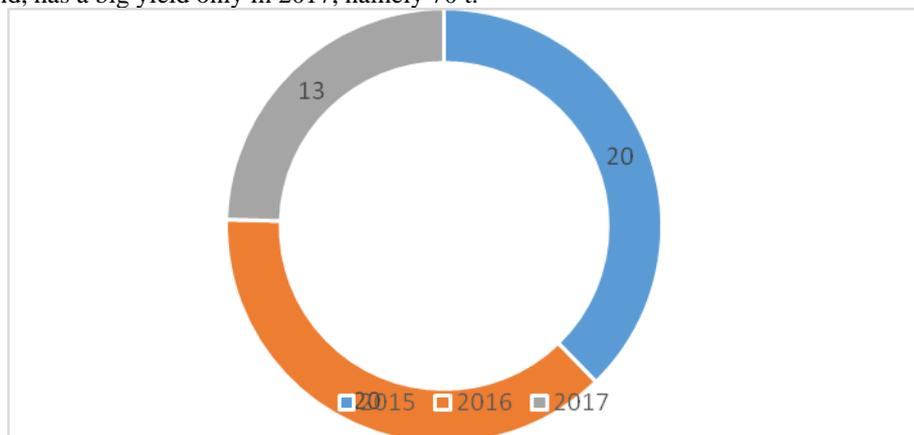


Fig. 3 The cultivated area (ha) with potatoes in Remetea Mare commune.

Figure 3 shows the area cultivated with potatoes from Remetea Mare commune in the period 2015-2017. Thus, in 2015 and 2016, 20 ha were cultivated with potatoes, while in 2017 the cultivated area decreased to 13 ha.

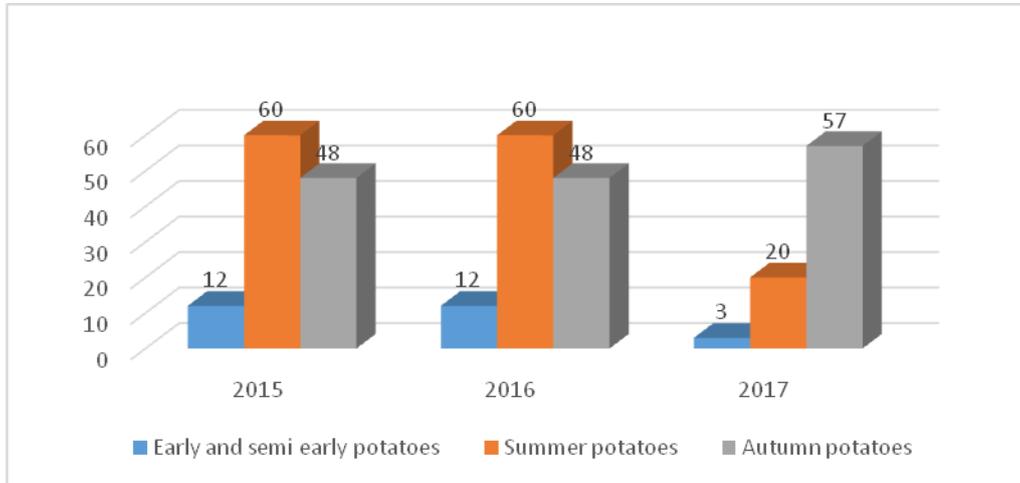


Fig. 4 Potato yield obtained (t) in Remetea Mare commune

The graph shows how the quantity of early and semi-early potatoes is the same in the period 2015-2016 - 12 t, however, decreasing to 3 t in 2017. In the period 2015-2016, the summer potatoes have the same yield of 60 t, which otherwise decreases to 20 t in 2017. Autumn potatoes total 48 t in 2015-2016, increasing to 57 t in 2017.

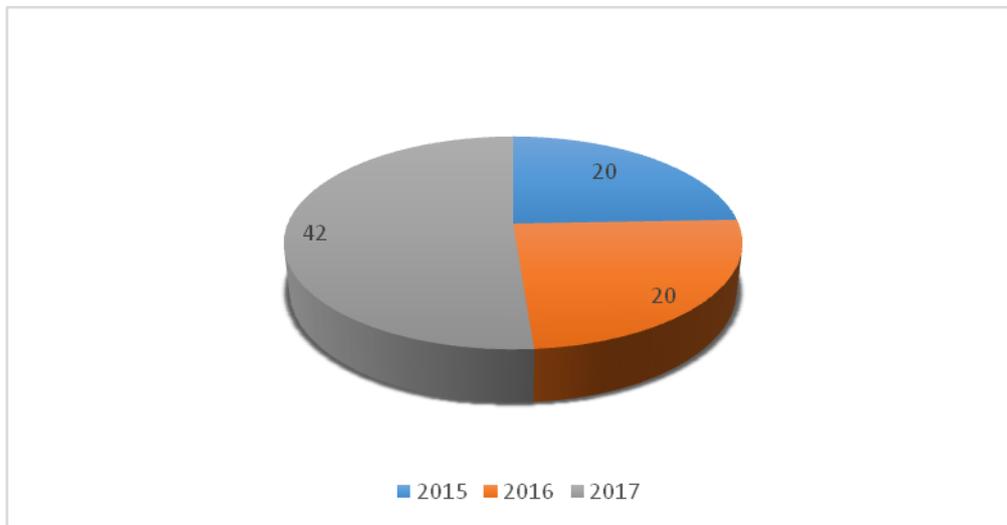


Fig. 5 The harvested area (ha) of the oilseed plants in Remetea Mare commune.

The graph shows the harvested area of the oilseed plants from Remetea Mare commune. Thus, in 2015-2016, an area of 20 ha was harvested, following that in 2017 the harvested area would grow to 42 ha.

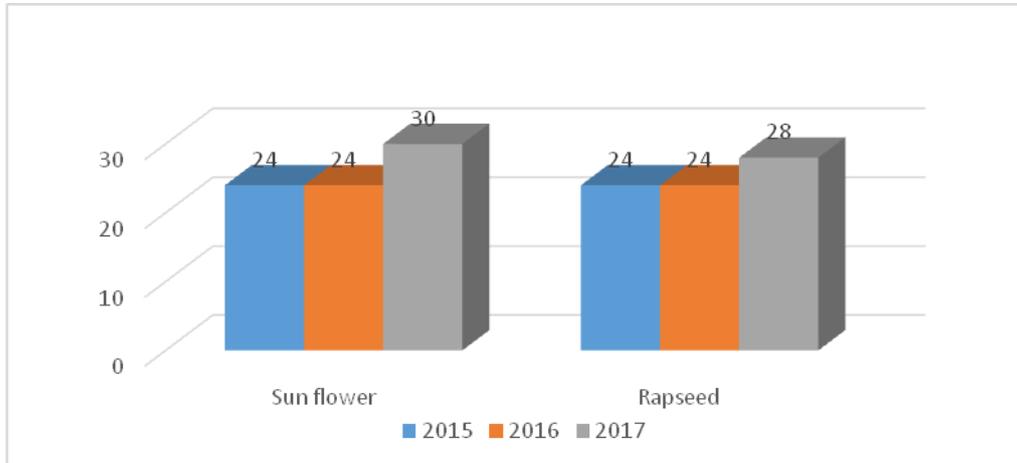


Fig. 6 Yield obtained (t) for oilseed plants in Remetea Mare commune.

Figure 6 shows the yield obtained for oilseed in the period 2015-2017. For the sunflower, in the period 2015-2016, the yield is the same, 24 t, increasing to 30 t in 2017. For rapeseed, in 2015 and 2016, we have 24 t, following that in 2017 it would grow to 28 t.

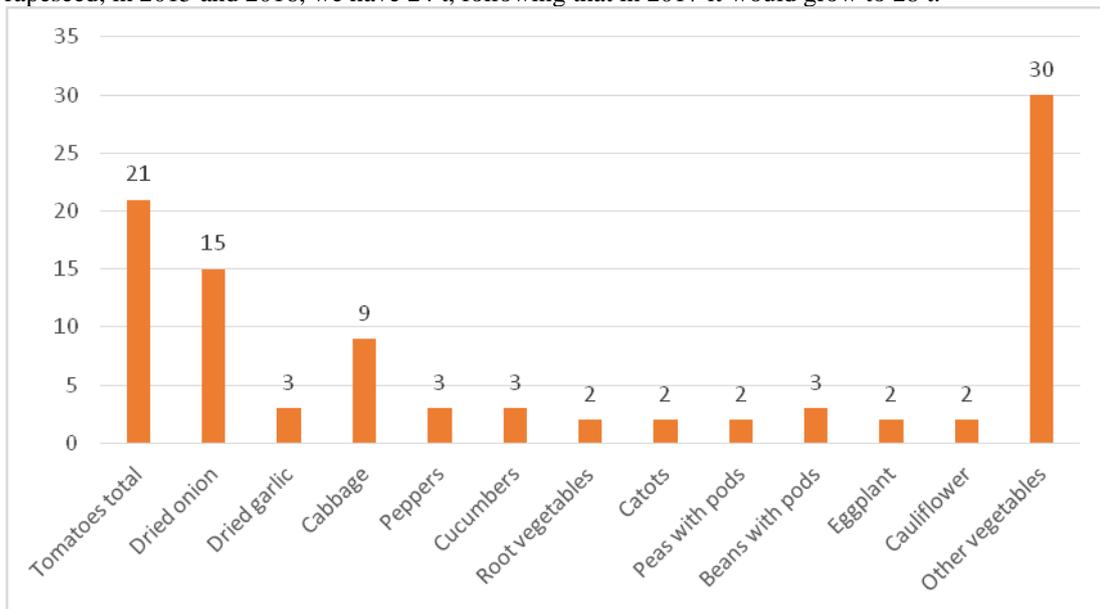


Fig. 7 The cultivated area (ha) with vegetables in Remetea Mare commune.

In the graph, we can see the total area cultivated with vegetables from Remetea Mare commune in the period 2015-2017. A significant percentage is occupied by tomatoes with 20 ha, followed by dried onions with 15 ha, and by cabbage with 9 ha. Other vegetables like the:

dry garlic, peppers, cucumbers and beans have 3 ha each, and the roots, carrots, pea, eggplant and cauliflower have 2 ha each. A large area of 30 ha is occupied by other vegetables.

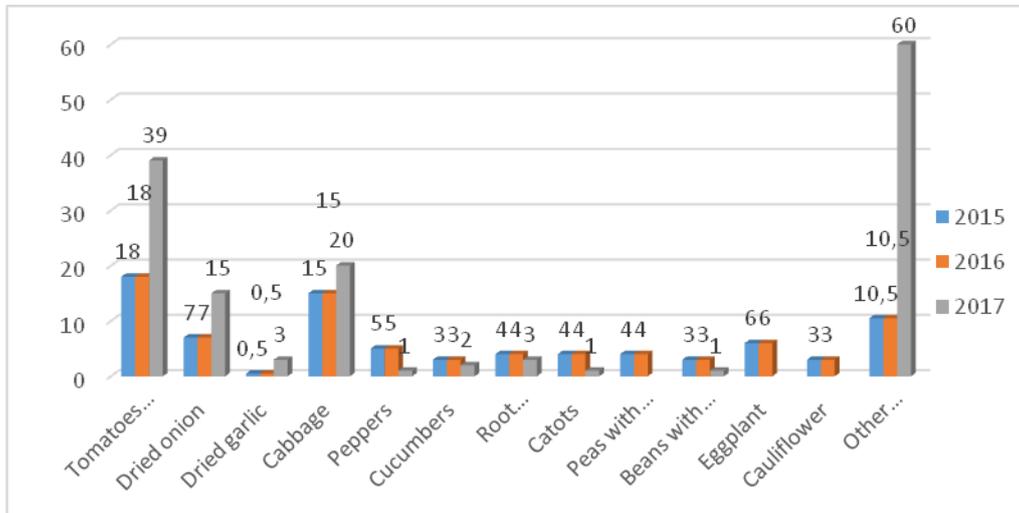


Fig. 8 Yield obtained (t) for vegetables in Remetea Mare commune.

Figure 8 shows the obtained yield of vegetables in Remetea Mare commune in the period 2015-2017. In the period 2015-2016 there are: 18 t of tomatoes, 7 t of dried onions. 0.5 t of dried garlic, 15 t of cabbage, 5 t of pepper, 3 t of cucumbers, 4 t of root vegetables, 4 t of carrots, 4 of peas with pods, 3 t of beans with pods, 6 t of eggplant, 3 t of cauliflower and 10.5 t of other vegetables. In 2017, the yield of tomatoes increased to 39 t. The same happened with dried onions, 15 t, dried garlic 3 t, cabbage 20 t, pepper 1 t, cucumbers 2 t, root vegetables 3 t, carrots 1 t, beans 1 t and other vegetables 60 t.

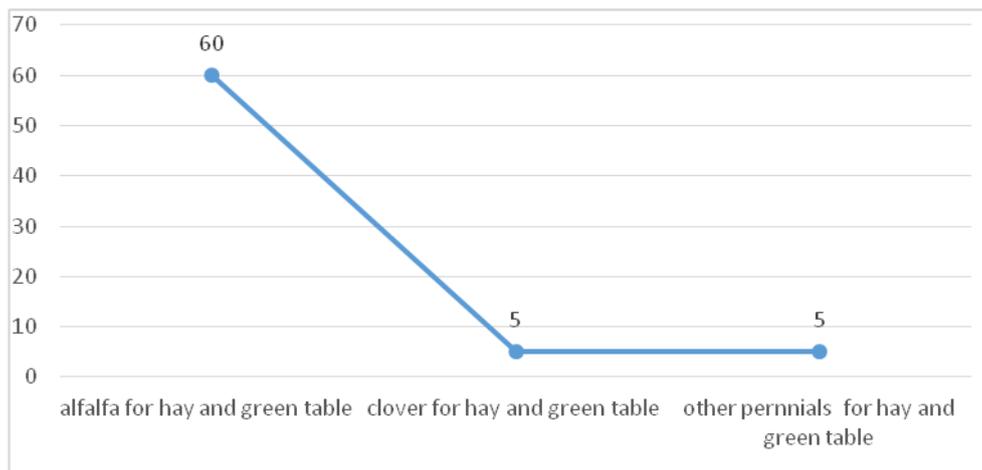


Fig. 9 The cultivated area (ha) for fodder plants in Remetea Mare commune.

We notice, in figure 9, that during the period under analysis, we sum up 60 ha for alfalfa and green table, 5 ha for clover for hay and green table, and 5 ha for other perennials for hay and green table.

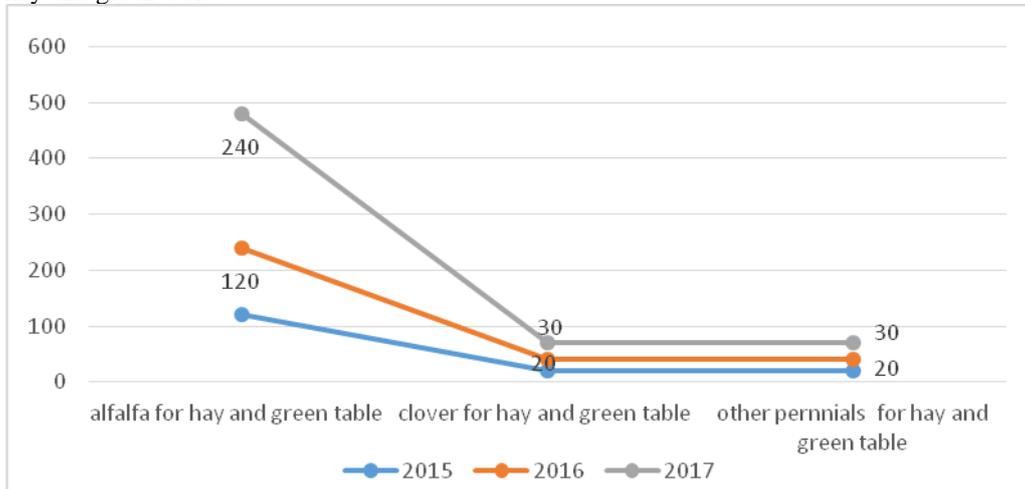


Fig. 10 Yield obtained (t) for fodder plants in Remetea Mare commune.

In this graph, we can notice that in the period 2015-2016 there were 20 t of clover and other perennials, and 120 t of alfalfa for hay and green table. In 2017, we have 30 t of clover and other perennials, and 240 t of alfalfa for hay and green table.

### CONCLUSIONS

1. From the information presented, I can state that agriculture in Remetea Mare commune is well developed especially during the period under analysis.

2. In the case of cereals for grains there is quite a high yield in 2016, 2250 t, but in 2015 and 2017 respectively the yield decreases to 875 t and 542 t respectively.

3. The same situation applies in the case of spring oats, which in 2016 have a very high yield, but in 2015 and 2017 it falls quite a lot.

4. There are various situations when even though the cultivated area is relatively similar, the yield differs. These situations come as a result of the influence of climatic factors that determine various fluctuations.

5. For the sunflower crop, in the period 2015-2016, the yield is the same, 24 t, increasing to 30 t in 2017 up. For rapeseed, in 2015 and 2016, we have 24 t, following that in 2017 it would grow to 28 t.

6. In the studied area, a special significance is occupied by the areas cultivated with vegetables as follows: tomatoes with 20 ha, followed by dried onions with 15 ha and cabbage with 9 ha. Other vegetables such as: dried garlic, peppers, cucumbers and beans with pods have 3 ha each, and root vegetables, carrots, peas with pods, eggplant and cauliflower have 2 ha each. Other vegetables occupy a large area of 30 ha.

7. In conclusion, Remetea Mare commune is a pleasant place with a developed agriculture and human resources. It has good connections to infrastructure and to domestic and international transport. A welcoming commune, open to the new. A commune located on the

European road (E 70), with high agricultural and tourist potential and openness towards citizens and investors.

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