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THE IMPACT OF COUPLED SUPPORT ON TOMATOES AND CUCUMBERS FOR PROCESSING CULTIVATED IN FIELD

CORNELIA ALBOIU¹

Abstract: *The paper presents the impact of the coupled support on tomatoes and cucumbers cultivated in field in Romania. In this study a detailed analysis is made regarding the coupled support received in the period 2015-2018 for the following products: field cucumbers and tomatoes for processing. The main indicators used refer to the evolution of cultivated areas, both in field and in greenhouses and plastic tunnels, the evolution of productions and yields, of prices and trade balance. The paper also presents an analysis of the evolution of the number of farmers who received coupled support, of the areas entitled to payment and of the coupled support calculated per hectare in territorial profile. The analysis is based on data provided by the Agency for Payments and Intervention in Agriculture and the National Institute of Statistics. The results reveal a low impact of the coupled support on the main analysed indicators, as well as the lack of consistency in the support provided in the investigated period.*

Key words: *coupled support, vegetable sector, impact.*

JEL Classification: *Q10, Q19.*

INTRODUCTION

The coupled support in the vegetal sector is granted starting with 2015. According to Order no. 619 of April 6, 2015, issued by the Ministry of Agriculture and Rural Development, in Romania is granted coupled support in the vegetable sector to active farmers who grow tomatoes for industrialization cultivated in the field; cucumbers for processing grown in the field; vegetables grown in greenhouses - tomatoes, cucumbers, peppers, cabbage for fresh consumption and cucumbers for processing; vegetables grown in plastic tunnels - tomatoes, cucumbers, peppers, cabbage and eggplant for fresh consumption and cucumbers for processing. Among the stated objectives of providing this support were to increase the cultivated areas, productions and yields in the vegetable sector.

MATERIAL AND METHODS

This paper studies the impact of coupled support on tomatoes and cucumber grown in the field meant for processing in the period 2015-2018 and performs a detailed analysis in territorial profile. The coupled support is conditioned by the production, but also by certain documents that the farmer must submit to APIA (Agency for Payments and Interventions in Agriculture). The aim is to avoid overproduction of certain products and to ensure that farmers respond to real market demand. But sometimes a struggling agricultural sector or subsector may receive dedicated aid. The optional coupled support scheme aims to prevent the aggravation of difficulties, which could lead to the abandonment of production and could affect other parts of the supply chain or associated markets. Therefore, EU countries can maintain a link (coupling) between income support payments (with a limited amount) and certain sectors or products (European Commission 2019).

EU countries may review their decisions on optional coupled support by August 1st of any year, with effect from the following year. All EU countries, except Germany, have decided to apply the scheme in the period 2015-2020. The amounts granted and the range of sectors targeted varies greatly from one country to another. (The European Commission).

The allocated amounts decreased by approximately 4% from 190 million euros in 2015 to 181.5 million euros in 2019, for 2020 the amount of 179.9 million euros was allocated. The fruit and vegetable sector has always been and remains the 5th largest beneficiary of the CFS and also the second most important beneficiary (after the protein crops sector). Its share in the CFS

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decreased from 5% to 4.2%, which is about 0.4% of the annual national ceiling for all direct payments. The fixed area (EU28) decreased from 728,656 ha to 718,328 ha. An EU-wide estimate shows that support has fallen from EUR 259 / ha to EUR 251.5 / ha (EU average 28).

The approach carried out in this paper is based on quantitative analyzes, which include both a descriptive part of the vegetable sector in evolution after accession, and a comprehensive analysis of the impact of the application of the payment scheme - coupled support - on the sector, in territorial profile, during 2015-2018.

The purpose of the paper is to analyze the impact of coupled support on field tomatoes and cucumbers for processing cultivated in field in 2015-2018, both territorially and nationally on important indicators such as: cultivated area, yields, total production, prices, trade balance. For this analysis, data provided by APIA and the National Institute of Statistics were used, and the research was conducted for the period 2007-2018, using the calculation of the growth rates of the above mentioned indicators in dynamics over four time intervals, respectively: 2007-2010, 2011-2014, 2015-2018 and 2007-2018.

RESULTS AND DISCUSSIONS

The impact of coupled support granted for field-grown tomatoes meant for processing

The impact of coupled support granted for field-grown tomatoes for processing. Coupled support for field-grown tomatoes for processing did not evolve steadily over the period under review, although the number of farmers applying for this support increased by 400% from 2015 to 2017. In the first year of coupled support a number very few farmers (26) received this support due to insufficient information, with very few farmers being informed about this support.

Table 1 Number of farmers, authorized amount and area entitled for payment in territorial profile granted for field tomatoes for processing%

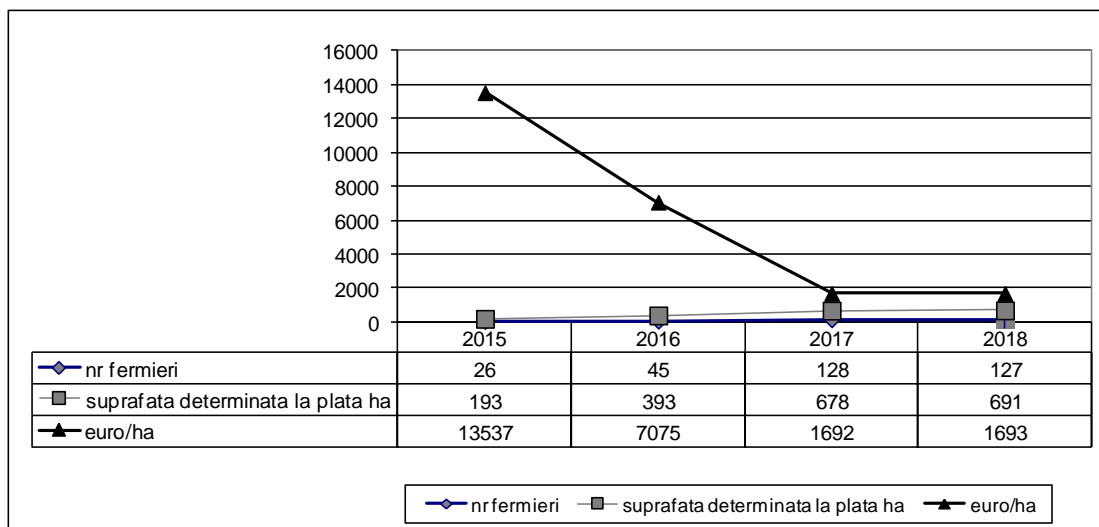
Jud	2015			2016			2017			2018		
	Nr of farmers entitled for payment	Authorized amount for payment	Area entitled for payment	Nr of farmers entitled for payment	Authorized amount for payment	Area entitled for payment	Nr of farmers entitled for payment	Authorized amount for payment	Suprafața det. la plată	Nr of farmers entitled for payment	Authorized amount for payment	Area entitled for payment
	1	2	3	4	5	6	7	8	9	10	11	12
BH	8*	7	6	4	0	0	5	2	0	4	4	4
BR	12	3	3	4	99	99	4	0	53	1	1	1
CJ	4	17	17	2	0	0	2	4	0	0	0	0
CI	4	2	2	2	0	0	3	3	0	3	3	3
GI	8	8	8	24	0	0	13	8	0	9	9	9
II	23	43	43	33	0	0	20	39	1	34	34	34
IS	4	1	1	0	0	0	1	0	0	0	0	0
OT	15	6	6	2	0	0	14	6	0	8	8	8
TR	23	6	7	13	0	0	9	3	0	9	9	9
VL	0	7	8	2	0	0	1	3	0	3	3	3

*(1), (4), (7), (10) Nr of farmers entitled for payment in %; (2), (5), (8), (11) Authorized amount for payment in %; (3), (6), (9), (12) Area entitled for payment in %.

Source: calculations based on APIA data, , 2019

In 2015, the main beneficiaries came from Ialomița and Teleorman, respectively 6 for each county (23%), and the largest area entitled for payment was 85 hectares in Ialomița county (43%), followed by Galati counties, Teleorman and Olt (table 1). In total, in 2015, 193 hectares cultivated in the field with tomatoes for processing received support. As the number of farmers who applied was very low, respectively 26, a very high support per hectare was reached. For tomatoes for industrialization, according to the legislation, growers could receive 1,400 euros per hectare, but because very few farmers knew about this support, the value of this support reached 13,537 euros / hectare (figure 1).

In 2018, the number of farmers who benefited from support increased to 45, and the value of support per hectare decreased to 1692 euro / hectare, in total area entitled for payment representing 691 hectares (figure 1). The farmers who benefited from support came mainly from the counties of Galați (26), Olt (17), Ialomița (25), Teleorman (13). The largest area determined for payment is found in Ialomița County (232 ha, respectively 34%), followed by Galați and Teleorman (62 ha, respectively 9%), table 1.



Source: APIA 2019

Figure 1. Coupled support per hectare for tomatoes for processing, 2015-2018.

To observe the impact of this support on cultivated areas, yields and total tomato production I calculated the dynamics of these indicators over several time intervals covering the period 2007-2018.

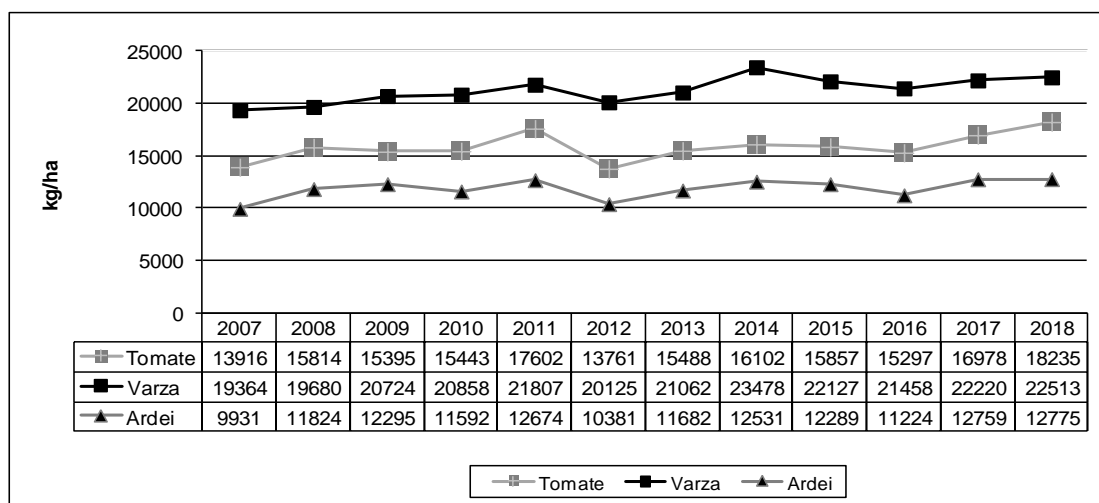
Table 2 Impact of coupled support on cultivated areas, total and average tomato production in the period 2007-2018; period dynamics in %

	2007-2010	2011-2014	2015-2018	2007-2014	2007-2018
Cultivated area tomatoes	8%	-15%	-9%	-5%	-12%
Total production tomatoes	20%	-22%	6%	10%	16%
Yields tomatoes	11%	-9%	15%	16%	31%

Source: own calculations based on APIA data

It is noted that the only period when areas increased is 2007-2010, while in 2011-2014 they decreased dramatically (-15%) primarily due to the drought of 2013. The rate of decline continued in 2015-2018, but still not so dramatic (-9%). Therefore, the objective of increasing the cultivated areas of this coupled support scheme has not been achieved, as field production also requires drought-resistant varieties or to climate change. Tomato total production and yields increased slightly in 2015-2018, but this is rather a consequence of areas grown in greenhouses and solariums (unfortunately the available data do not allow a very accurate analysis of the evolution of tomato yields grown in the field).

In order to see the evolution of the yields by vegetable species, in this study the period 2007-2018 is considered, (figure 2).



Source: INS; tempo online, 2019

Figure 2. Evolution of yields by vegetable species, kg / ha

Thus, it can be seen that the yields had slightly increasing evolutions starting with the year 2007. A slightly higher yields is noticed for tomatoes only in 2018, when the yield reached 18235kg / ha, 4% higher compared to 2011, when the yields reached a maximum of 17602 kg / ha. Compared to 2014, the yields in 2018 increased by 13%. Therefore, it cannot be concluded that there is a significant impact on yield, given that slightly increasing yields have been observed since 2007. Rather, the correlation on this increase can be made with the increase in areas in greenhouses and solariums which in 2007 -2014 doubled, and which allowed to obtain higher yields due to the use of more productive varieties and more correct application of technology.

Coupled support - cucumbers for processing grown in the field

In territorial profile, in 2015, the largest number of farmers who benefited from support came from the counties of Ialomița (3 farmers), Galați (2 farmers), Olt (1 farmer), Călărași (1 farmer) and the area entitled for payment registered the highest value in Ialomița (27 hectares) and Galați counties (4 hectares), table 6. Practically in 2015 and 2016, over 87% of the total amount of 99356 thousand euros went to the 3 farmers (43%) from Ialomița county.

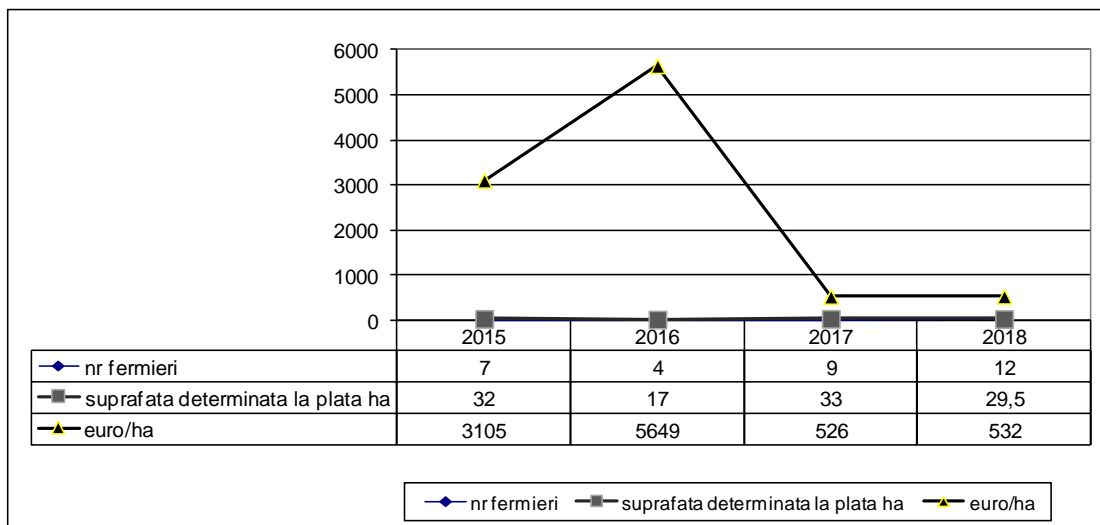
Table 3 Number of farmers, authorized amount and area entitled for payment in territorial profile granted for cucumbers grown in the field intended for processing, in%

Jud	2015			2016			2017			2018		
	Nr of farmers entitled for payment	Authorized amount for payment	Area entitled for payment	Nr of farmers entitled for payment	Authorized amount for payment	Area entitled for payment	Nr of farmers entitled for payment	Authorized amount for payment	Suprafața det. la plată	Nr of farmers entitled for payment	Authorized amount for payment	Area entitled for payment
	1	2	3	4	5	6	7	8	9	10	11	12
Bt	0	0	0	25	8	8	11	4	3	0	0	0
Cl	14	3	3	0	0%	0	0	0	0	0	0	0
Db	0	0	0	0	0	0	0	0	0	8	3	3
Dj	0	0	0	0	0	0	11	3	3	8	2	2
Gl	29	12	13	0	0	0	0	0	0	0	0	0
Il	43	83	84	75	92	92	56	89	91	42	78	78
Is	0	0	0	0	0	0	0	0	0	17	6	7
Ot	14	2	0	0	0	0	22	4	3	17	7	7
Sm	0	0	0	0	0	0	0	0	0	8	5	3
Total	100	100	100	100	100	100	100	100	100	100	100	100

*(1), (4), (7), (10) Nr of farmers entitled for payment in %; (2), (5), (8), (11) Authorized amount for payment in %; (3), (6), (9), (12) Area entitled for payment in %.

Source: calculations based on APIA data, 2019

In 2017 and 2018 the number of farmers in Ialomița County increased to 5, to which are added 7 farmers in 2018 from Dâmbovița, Iași, Olt, Satu Mare counties. It should be noted that approximately 80% of the amounts granted and approximately 87% of the areas determined for payment for the entire period 2015-2018 went to Ialomița County.



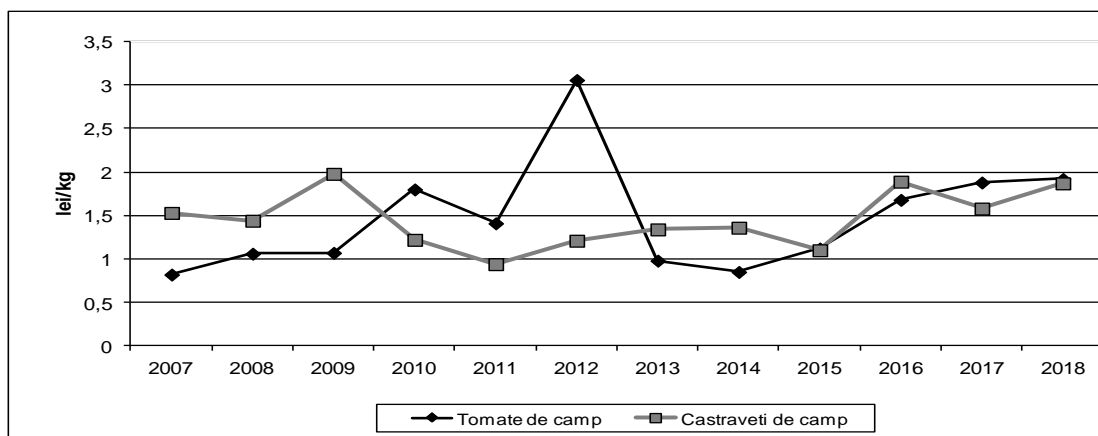
Source: calculations based on APIA data

Figure 3. Coupled support per hectare for cucumbers grown in the field for processing, 2015-2018.

In total, in 2015 a number of 7 farmers benefited from this support, the total area entitled for payment representing 32 hectares. As the number of farmers who knew about this support was very small, especially in the first two years, the value of this support was extremely high 3105 euro / hectare in 2015, respectively 5649 euro / ha in 2016. Under the coupled support schemes related to the payment applications submitted in the 2018 campaign, the amount was reduced to 532 euro / ha, the area entitled for payment remaining approximately the same, amid the significant reduction of the support granted (figure 5), the number of farmers receiving support reaching 12.

Impact on prices for tomatoes and cucumbers grown in the field

The impact on price volatility for field-grown tomatoes and cucumbers is insignificant, with prices continuing to be highly volatile, with high differences during seasons.



Source: INS, tempo online, 2019

Figure 4. Evolution of purchase prices for tomatoes and cucumbers grown in the field.

As can be seen from Figure 8, in the period 2015-2018 the average purchase prices at the farm gate for tomatoes and cucumbers grown in the field recorded a significant increase, so it can be said that there is a positive impact on this indicator (theoretically, this support should have

contributed to a reduction in their volatility). Probably the most important impact was the help that farmers received to support their production costs for small investments.

CONCLUSIONS

In the vegetable sector, the share of areas that have benefited from coupled support is 1%, the impact being very low / insignificant on the dynamics of cultivated areas, yields and total production of both vegetables grown in the field.

The impact of coupled support in Romania's vegetable sector was relatively modest and did not lead to an improvement in the situation as there was no consistency in its provision although the number of those requesting support increased significantly from 2015 to 2018.

In territorial terms, the coupled support granted to the species of cucumbers for processing cultivated in the field was destined mainly to the farmers from Ialomița with 83% of the amounts granted for this product for the entire analyzed period, and with over 85% of the areas meant for payment.

The authorized amounts and the areas determined for payment in territorial profile granted for tomatoes for industrialization grown in the field, were concentrated in the following counties: Ialomița (34%), Galați (9%), Tulcea (9%), Olt (8%), Bihor (4%).

This support was primarily an aid to cover production costs, which was appreciated by the farmers who received it. However, as it was shown in this study, the impact of this support has been modest in terms of the indicators analyzed. For a major impact on the sector, investments in productive varieties, technologies and new equipment / machinery are needed primarily to increase yields, correlated with the improvement of the chain's functioning (through the organization of the sector, respectively the increase of the number of producer groups and organizations).

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