An initiative to link between research and support for young farmers who access the Sub-measure 6.1 - RDP 2014-2020

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20 November 2015

AN INITIATIVE TO LINK BETWEEN RESEARCH AND SUPPORT FOR YOUNG FARMERS WHO ACCESS THE SUB-MEASURE 6.1 - RDP 2014-2020

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Summary: The paper highlights the involvement of field research in achieving a *model farm calves for fattening and associated with basic fodder popularizing information and for practical use, which is necessary for young farmers first install the head / manager of a holding in a production animal competitive. This study is based on a business plan prepared according to the Applicant's Guide for sub-measure 6.1 of the RDP 2014-2020, and meetings with young farmers. Development of a forage-based livestock farms related constitutes an advantage for farmers resulting from the combination of two types of activities in that young farmer could sell his crop production on the farm, thus reducing cost production of animal products by 60%. In the same time, the young farmer can judiciously organize his activities in both farms livestock and crops plant having a rigorous and permanent control, so that it can intervene if there are any financial losses during the production process. The results reveal that young farmers could benefit from improved access to information, but there is no real benefit assessment because of the small number of relevant surveys.*

Keywords: *research, model, farm, sub, young farmer.*

INTRODUCTION

There are many arguments in favor of allocating grants for young farmers. According to statistics, in Romania, agriculture is still characterized by an insufficient number of young farmers, aspect determined by economic and social factors as well as the aging population of farmers, which in medium and long term can affect the performance of agricultural sector. "Sub-measure 6.1 helps to promote entry into the agricultural sector of farmers suitably qualified and, in particular of generation's renewal. Scientific research supports the approach taken by the sub-measure 6.1: Support for young farmers by conducting studies of practical utility and creating new tools for transmitting information. The necessity of drawing up models of farms, in order to be adopted or to develop new ideas arises. For a scientist it is easier to follow the progress of existing things and transmit information in a manner accessible to young farmers. Research institutes have access to information. The interaction between research and farmers is not new in approach, but support the development of collaborative relationships is essential for knowledge transfer. Scientists can learn from farmers, making them aware of how their research is interpreted or how it can be applied and adapted to the needs of young farmers.

MATERIAL AND METHOD

To access the sub-measure 6.1 by a young farmer, it is necessary to develop a business plan, as recommended in the Guidelines for Applicants specific sub-measure. The proposed model aims to build a farm calves for fattening fodder base related, to achieve a competitive animal production, respecting the 5 principles for providing support, namely: priority sector, merging farms, qualifications in agriculture, the agricultural potential of the area, local breeds, etc. The method used was to use the hypothesis that the farm can become competitive if carried out with the main business of fattening cattle breeding and fodder production activities. The model was built under the funding scheme, for support in two installments.

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RESULTS AND DISCUSSION

To achieve the model took into account the five principles for support.

The principle of agricultural potential

The farm was designed Dumbrava Rosie, Neamt County, in an area with high potential for both increasing fattening cattle and for fodder plant cultivation. The advantage of combining the two activities lies in the fact that young farmers share their crop production in farms cattle fattening saving value added tax and trade margins (which were added in the production of fodder for animal feed) with a reduction in cost of production of animal products.

To identify the market for a preliminary analysis of bovine meat market in the counties neighboring the county Neamt, Botosani and Bacau respectively. For a true market meat must take into account bovine, obtained yields and their influencing factors. Fluctuating trend of the beef market is determined by a number of factors: specific pathological factors, used technological factors, economic factors (low economic base for farmers because of the low size holdings), organizational factors (poor organization of farmers for recovery production achieved; lack of strong meat producer sector - meat merchandise unplanned production, the lack of an organized supply of animals to slaughterhouses, poor forage production sector productivity, high cost of meat processing).

Table 1: Dynamics of livestock and meat production in 2007-2013

No.	Specification	UM	2007	2010	2012	2013
1	Total cattle Staff	Thousands head.	2819	1985	2164	2197
2	Total production of beef (live)	Thousands tons	333	205	198.5	232.6
3	The average weight at slaughter	kg / head	280	264	332	327

Source: MARD

The period under review reflects a negative trend of herds since 2007, reaching to a lowest in 2010, and then from 2012 recording increases of livestock and production of beef meat (in live). The current offer of beef meat is assured from the private sector. Demand for meat depends on the quantities needed for food and other necessities, like those quantities for export, industrialization, etc. For meat product, the size of the offering dependents on two factors: the bovine number and the average weight at slaughter. In the settlement of meat market and product orientation for this product an important role is to create a balance between supply and demand. Adjusting supply can be realized through:

- organizing farmers to harness production obtained;
- a system of negotiated prices agreed with the producers;
- increasing productivity in fodder production;
- Permanent informing of farmers through stock exchange quotations on the amount of meat offered and purchased on the market, price and quality indicators.

Meat consumption has tradition originates in Romania and non-commercial activities at farm level have a high level of fragmentation, a large part of production remaining on the farm for its own consumption.

Table no. 2: Meat production per capita live and average annual consumption

No.	Specification	UM	2007	2010	2011	2012	2013
1	Meat live	kg	72	64.5	67.4	66.3	65
2	Average consumption of meat, prod. Meat and edible offal (fresh equivalent)	kg	68.8	63.5	59.4	58.7	-

Source: MARD

In 2012, the average annual consumption of meat (fresh equivalent) was 58.7 kg compared to the European average of 90 kg (beef represents only 10% of total meat consumption in the EU while consumption is 40%). The market is underdeveloped, mainly because of low purchasing power, but also because of reduction of meat supplies.

For an overview of the meat market in Romania, will present the summary balance agro live animals and animal products.

Table 3: International trade in live animals and animal products

Euro Millions

No.	Specification	2007	2010	2011	2012	2013	2014
1	**Export** Live animals and animal products	252	437	584	731	747	49.1
2	**Import** Live animals and animal products	870	984	965	1035	1118	90.2
3	**Trade Balance** Live animals **and** animal products	-618	-550	-381	-304	-371	-41.1

Source: MARD

The live animals and animal products is a trend of the deficit in 2011, agro-food deficit is negative animals and animal products with -41.1 million Euro (exports exceeded imports) in 2014.

A feature of the market in beef and cattle Romania is that only 82.7% of meat production approx. 11460 tones is valued by the free market, of which 35.4% of industrialized state or private establishments and 64.6% of the production is delivered directly to the market. Family consumption represents 17.3% of total meat production.

In Romania, Collection and use of beef production on 30 March 2014, is as follows:

Table 4: Total Cattle Meat

Heads

No.	Specification	Products Total	From which Private Sector	Family consumption	Selling on the open market	From which Direct	From which state or private industrial units
	Total	**123 637**	**123 388**	**22388**	**101000**	**72,970**	**28030**
1	Botosani	10448	10448	180	10268	0	10268
2	German	7613	7600	2400	5200	4530	670
3	Prahova	6958	6958	1009	5949	5689	260
4	Bacau	6856	6856	236	6620	5664	956
	% Of total Neamt	**6.2**	**6.2**	**10.7**	**5.1**	**6.2**	**2.4**

Source: MARD

Table 5: Cattle live weight

tons

No.	Specification	Products Total	Average weight	Total Private Sector D.C	Average weight	Family consumption	Selling on the open market	From which industrialized state or private Units
	Total	**39,259**	**318**	**39,122**	**317**	**6773**	**32,349**	**11460**
1	Botosani	3958	379	3958	379	56	3902	3902
2	German	3005	395	3000	395	900	2100	208
3	Prahova	1548	222	1548	222	250	1298	90
4	Bacau	2365	345	2365	345	81	2284	435
	% Of total Neamt	**7.7**	**124.2**	**7.7**	**124.6**	**13.3**	**6.5**	**1.8**

Source: MARD

Table 6: Average purchase price of bovine meat (in the living G)

Euro / UM

No.	Specification	UM	2007	2010	2011	2012
1	Meat cattle (in the living G)	Kg-living	2.98	4.85	5.51	5.54

Source: MARD

In the case of cattle farms that are selling meat the average purchase price trend growth is very slow; this approach affects the entire acting ensemble of competitors in the market.

In this context, in terms of investment opportunity, there are the some relevant issues concerning the sector, market, labor, pedo-climatic conditions and the local economy.

At sector level: currently, the activity of meat production (livestock) shows a downward trend at national level, which is leaded by a reduction of market demand insufficient supplied by domestic producers and increased demands on the food quality; reduction of the purchasing power of consumers.

At the retail market level: orientation of the preferences of domestic consumers from pork and poultry meat consumption to beef consumption; meat demand increasing, as the growth of consumption level perspective at the same level from other EU countries.

At the soil and climate conditions: climatic conditions from Dumbrava Rosie area are favorable for raising activities of fattening cattle. The climate is continentally- tempered with hot summers (Monthly average temperature in summer is 20 – 30ºC), harsh winters (monthly average temperature in winter is -10 – 40ºC) annual thermal amplitude (difference between the highest and lowest temperature recorded in a year) the largest, annual rainfall are about 250-500 mm, north winds; the investment will be located in an area with high potential for cattle growth.

At the local economy and geographical location: farm location in an area with strong touristic character gives the opportunities to market capitalization.

The price will be mostly determined by supply and demand. Therefore the farm will try to charge at the market price and will try to reduce the negative effect of its decline due to competition for the meat product. Selling price of farm products, which were taken into account in forecasting revenues is 12 lei / kg live calf to a weight of 450 kg / capita farm gate price.

The principle of consolidation of holdings

The idea of holding another association with the need to ensure forage base appears own young cattle fattening recommended surface for the 65 heads is 51.8 ha - Table. 7 Given the priority sector is represented by the calculated increase in cattle surface to achieve maximum economic size is 45 SO 50000 hectares. According to the Applicant's Guide for sub-measure 6.1, the size of agricultural holdings should be between 12,000 and 50,000 SO (SO - total output value in euro).

Table. 7: The estimate for providing the necessary feed

Name	Cultivated area (ha)	Prod. Average (kg / ha)	Total production (t / ha) (2 x 3)	Required farm feed (t)	Required surface (ha) (5: 3)	Difference (t) (5-4)
1	**2**	**3**	**4**	**5**	**6**	**7**
Wheat	4	4200	16.8	29.3	7.0	-12.5
Barley	4	4800	19.2	22.8	4.7	-3.6
Grain maize	4	4800	19.2	26	5.4	-6.8
Corn silage	9	36000	324	325	9.0	-1
Vetch g.m.	5	30000	150	195.0	6.5	-45
Vetch hay	4	8040	32.2	45.5	5.7	-13.3
Alfalfa hay	9	8040	72.4	65	5.4	+7.4
Lucerne g.m.	6	36000	216	195.0	8.1	21
Total	45	x	x	x	51.8	

Source: Own calculations

The principle of priority sector

The farm size shown in Table 7, 52.3% is the animal sector, and the remaining 47.7% is the vegetable sector. Within the animal sector, 100% is meat production, and in the vegetable sector, 33.3% from the economic dimension is given alfalfa, vetch 20%, 20% corn silage, maize 8.9%, 8.9% barley and wheat 8.9%.

Table 8: Economic size of farms Standard Output (SO)

Structure crop / livestock production	Farm size (SO) in 0
Vegetable Sector	**23693.20**
Wheat 4 ha	2118.7
Barley 4 ha	1824.2
Grain maize 4 ha	2562.6
Corn silage 9 ha	4217.2
Vetch g.m. 5 ha	1936.3
Vetch hay 4 ha	1549.0
Alfalfa hay 6 ha	3794.1
Lucerne g.m. 9 ha	5691.2
Animal Sector	**25932.40**
- 65 cattle fattening	25932.40
TOTAL	**49625.60**

Source: Own calculations

The principle of indigenous breeds

Brown breed is the subject of work in the farm and part of indigenous breeds list. All animals with certificate of origin issued by the National Livestock Production "Prof. GK Constantinescu "in the List of accredited associations to carry out the establishment and maintenance service of the book in accordance with HG nr.1188 / 2014 OM No.19 / 2006, OM No.22 / 2006 and OM No.13 / 2006 as amended and supplemented.

Setting goals farm: increasing the production of goods, in the third year from a spore of 800 g/day to 1000 g/day to achieve the delivery weight of 450 kg/capita.

- Introduction fattening weight: 100 kg
- Weight gain / day: 800 gr.
- Increase total weight 350 kg / head
- Timing of fattening cycle of 438 days (350 kg / head / 0.8 kg gain) - 1 year and 2 months ½ days

Rearing and fattening period is 12 months; average weight calves are purchased from 100 kg delivery is made to a year at an average weight of 450 kg. By weight of 250 kg, is discretion feeding, and then feed management will make weight structures according rations (Table 8).

Table no. 9: 65 ration for cattle fattening

Name	U.M.	Quantity / head / year	Total Required
Wheat	t	0.45	29.3
Barley	t	0.35	22.8
Grain maize	t	0.4	26
Corn silage	t	5	325
Vetch m.v.	t	3	195.0
Vetch hay	t	0.7	45.5
Alfalfa hay	t	1	65
Lucerne m.v.	t	3	195.0

Source: Own calculations

Table. 10: The estimate for providing the necessary feed

Specification	UM	WINTER	SUMMER
FIBRE	t	98.8	x
Succulents	t	325	x
Coarse	t	58.5	x
Concentrate	t	32.5	26
Green earth	t	x	390
Straw	t	x	26

Source: Own calculations

= Coarse corn stalks, wheat straw and barley;
Concentrate = mixture of corn, barley and wheat

Table no. 11: Cultural Plan

Culture	Area. Cultivated (Ha)	Prod. average (t / ha)	Year 1	Year 2	Year 3
			Sing. The total (t)	Sing. The total (t)	Sing. The total (t)
Wheat	4	4.2	16.8	16.8	16.8
Barley	4	4.8	19.2	19.2	19.2
Grain maize	4	4.8	19.2	19.2	19.2
Corn silage	9	36	324.0	324.0	324
Vetch g.m.	5	30	150.0	150.0	150
Vetch hay	4	8.04	32.2	32.2	32.16
Alfalfa hay	9	8.04	324.0	324.0	324
Lucerne g.m.	6	36	48.2	48.2	48.24
Total	45				

Source: Own calculations

Depending on the necessary fodder crop plan was developed using cropping and crop rotation compliance. Farm for breeding and fattening young bulls have autonomy forage harvesters having 45 hectares of arable land, of which 15 ha area under forage (alfalfa).

For the purposes of complying with environmental requirements, the firm will build a platform of manure and slurry basin, in line with the mandatory observance of good agricultural practices on manure management.

Table no. 12: Production of livestock farms Plan

No.	SPECIFICATION	Year 0		Year 1		Year 2		Year 3	
		Head	Prod.	Head	Prod.	Head	Prod.	Head	Prod.
1	Cattle total, of which: young cattle	65	29250	65	29250	65	30063	65	31,688

Source: Own calculations

Table. 13: Summary of revenues, expenditures, financial results at farm level

Indicators	Year 0	Year 1	Year 2	Year 3
Income				
Vegetable sector (subsidies)	34,718	34,718	34,718	34,718
+ The livestock sector subsidies	383 500	383 500	394 030	408 070
TOTAL REVENUE	**418 218**	**418 218**	**428 748**	**442 788**
Expenditure				
Vegetable sector	61,092	61,092	61,092	61,092
The livestock sector	240 333	240 333	240 333	240 333
TOTAL EXPENSES	**301 425**	**301 425**	**301 425**	**301 425**
Gross	**116 793**	**116 793**	**127 323**	**141 363**

Source: Own calculations

Farm feed production is an advantage for the farmer with a reduction of production cost on the meat by 60%. On average, the gross result obtained is 2163 euro / month in the first year, 2358 euro / month in the second year and 2618 euro / month in the third year. If the farm has 4 employees, the result varies from 541 crude euro / person in 1, 589 euro / person respectively in the second year and 657 euro / person in third (1 euro = 4.5 lei). If the farmer is unhappy with the results, he can intervene at any time if it finds financial losses during the production cycle.

Principle qualification in agriculture: According to this principle, the applicant must be aged at least 18 years old, have competencies and skills (secondary education / higher education / knowledge by attending training programs (initiation, specialization)) in the veterinary field agriculture / veterinary

The role of research in interaction with young farmers: They have organized various actions, such as: developing type projects, online distribution projects, organizing workshops where they presented these model projects, etc. In this context, there is a real benefit assessment because of the small number of relevant surveys.

CONCLUSIONS

The farm, built on the basis of five principles constitute a landmark for young farmers who would like to access sub 6.1 and work in agriculture, respectively in raising young cattle for meat. The model is efficient and focused more on improving the market orientation of farmers and increasing skills in the business sector.

The initiative to create a link between research and young farmers has led to the improvement of knowledge exchange (farmers learned from the experience of others, researchers have learned from farmers, etc.) and identify problems to be solved by research, and so on It should be possible to fund research so that research can be carried out at the farm or you could easily access such budgets needed for carrying out practical experiments to verify previous results, etc.

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