

DIAGNOSIS STUDY OF POTATO CROP IN SUCEAVA COUNTY

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Abstract

Need to establish such works as are found in more detailed knowledge of the needs of the consumer product which is potato based, is well known that this culture is one of the most important products in the supply of northern residents. At the same time as it seeks a better knowledge of the area chosen for research (Suceava) known for our riches such as "green gold" the famous monasteries of northern Bukovina, and last but not least one of the oldest occupations of the rural population that is growing agricultural tarenurilor.

Purpose is to determine the impact of market changes is in the north of Moldova as a result of Romania in EU integration, and developing proposals to shift the potato grower on the basis of current European, the studies carried out, adapted the realities of the transition period in Romania and new guidelines for integration into EU structures.

Also the theme proposed research will seek to increase economic efficiency and finding viable solutions for developing a healthy agriculture based on family associations that have large surface to determine the profit the larger.

Also an important role in reaching these goals has it that the Romanian state through close cooperation with Western European countries may give an opportunity for Romanian agriculture revival. An important role is played by the Structural Funds financing programs that will be applied as if it should give you a helping hand to the rural population in Suceava County.

In terms of socio economic theme is important to know the market and consumer needs and population structure, living standards and training of residents in the county of Suceava.

Key words: APIA, efficiency, potato, diagnostic, consumer product.

MATERIAL AND METHOD

The research methodology used in this paper has considered the following issues:

- bibliographic study of national and international literature;
- collecting factual information of the investigated area;
- ordering, processing and presentation of results in summary form;
- analysis and interpretation of results, conclusions and recommendations.

RESULTS AND DISCUSSIONS

Suceava county agricultural area covers 349,756 ha, of which 181,127 ha arable land, pastures and meadows, 165,927 ha and 2801 ha of orchards. Suceava county is cultivated mainly potatoes, corn, wheat - rye, fodder beet, sugar beet. Widespread grassland pastures and led to the development of the livestock sector, especially in mountainous areas. The products obtained in the livestock sector capitalize on the domestic market and export.

Share vegetation make up a forest, which occupies 52.7% of the county area, representing a

major forests of the country, both in scope (7.1% of total forested areas of the country) and the quantity and composition (79.4% softwood and 20.6% deciduous).

The structure of total land, agricultural area of Suceava county has 69.6%, the difference being occupied by non-agricultural land. Suceava county arable land is 46.3% of the total area of the county and about 67% of the agricultural area.

In the favorable conditions found Suceava potato growing, expanding in this area of the early century. The eighteenth century they begin to grow increasingly large areas, potato is used both in human food and animal feed as feed. Favourable climatic conditions for producing potato Suceava depression led autumn cultivation of this crop over wide areas, providing for the consumption needs of the area and the possibility of obtaining substantial revenue by selling its less favorable growing areas.

Structural changes were made in particular to the reduction in area occupied by other crops (42%), animal feed crops, due to lower total herd. Regarding the potato crop, they marked a significant decline from a year 2006 (from 13,745 ha to 10,695 ha) as a result of new guidance on the intended production.

Table 1

Farmland, by use (owned land holders within the administrative area of the county of Suceava)

Nr. crt	Specificare	2005	2006	2007	2008	2009	(+/- % 2009 față de 2005)
1	Agricultural area	349131	349131	349756	349756	349756	0,179
2	Arable area	180494	180623	180621	180551	181.127	0,35
3	Pastures	90450	90517	90565	90436	91.167	0,79
4	Hayfields	75657	75755	75681	75761	74.394	-1,66
5	Orchards	3207	2783	2738	2806	2.801	-12,65

Source: Processed data from the statistical information from DADR Suceava

Table 2

The total area and in potato production achieved in micro Suceava, Radauti and Falticeni Suceava County

Locality	Total area (ha)	Total production (tons)	Total private sector (ha)	Total production (tons)
Suceava	3755	71414	3709	70432
Rădăuți	3896	81064	3896	81064
Fălticeni	3044	51791	3034	51591
Total microregion	10695	204269	10639	203087
Altele	12297	221974	12297	221974
Total județ	22992	426243	22936	425061

Table 3

Structure of farmland on the types of companies surveyed MICROREGION

Locality	Total private sector (ha)	Total production (tons)	which:								SCDA	tone
			S.C. Law 31/90	tons	S.C. Law 31/90	tons	Household s indiv.	tons	Monasteries and parishes	tons		
Suceava	3709	70432	20	520	0	0	3672	65226	17	186	46	982
Radauti	3896	81064	293	7400	0	0	3601	73625	2	39	0	0
Falticeni	3034	51591	0	0	0	0	3018	51347	16	244	10	200
Total zona	10639	203087	313	7920	0	0	10291	190198	35	469	56	1182
Altele	12297	221974	24	500	0	0	12246	225633	27	341	0	0
Total județ	22936	425061	337	8420	0	0	22537	415831	62	810	56	1182

Processed data from the statistical information from DADR Suceava

Table 4

The total area cultivated with potatoes in the period 2006 - 2009 (HA.)

Crops	Year				% 2009 compare with 2006
	2006	2007	2008	2009	
Potato– TOTAL, which:	30860	30250	26663	24100	-21,91
% of total	100	100	100	100	0,00
Early and mid early potatoes	170	150	10	10	-94,12
% of total	0,55	0,49	0,03	0,04	-92,47
Summer Potatoes	1320	919	1178	1098	-16,82
% of total	4,27	3,03	4,41	4,55	6,51
Fall Potatoes	29370	29181	25475	22992	-21,72
% of total	95,17	96,46	95,54	95,40	0,24

Processed data from the statistical information from DADR Suceava

The biggest increase in areas planted with potatoes, and potatoes were recorded in autumn, proximately 95%, but the total area decreased by 21, 72% in 2009 compared with 2006. Also, the area with other categories potato had a downward trend until 2009, with decreases of 20% to 94.12% in early potatoes and extratimpurii.

The micro structure of the main potato crop, averaged over the 4 years analyzed, the first place is held by surface followed by the Suceava and Radauti Falticeni. During the period under review, the average production per hectare, marked a slight increase to differentiated cultures of potato.

Table 5

Developments in potato microregion

Localitatea	Producție				(+/-%) 2009 față de 2007
	2006	2007	2008	2009	
Suceava	77244	86144	44280	71414	-7,54
Radăuți	82712	106296	64658	81064	-1,99
Fălticeni	63723	56852	0	51791	-18,72
Total microregion	223679	249292	108938	204269	-8,67

Processed data from the statistical information from DADR Suceava

In terms of absolute average yield was influenced by adverse weather conditions (lack of rain in particular) in 2008 to early potatoes, and low level inputs allocated.

One can appreciate that, four years analyzed, 2008 were characterized by excessive drought, causing large areas occupied calamitarea with potato. Evolution of the average per hectare had a direct influence on total production for the main species of potato, except 2008, showed a trend of accelerated growth with a significant decrease, which was 204,269 tonnes (- 8.67%).

Since the area is cultivated leased land, after 2002, organizational and economic reasons to cut the total area cultivated land planted with potatoes and thus the seed, that which had strong repercussions on the economic situation of the unit. Further quantities present situation and evolution of cultivated land certified seed potatoes for seed.

The total production of potato, on average, over 70% for sale, and the rest is retained for own consumption. Typically, seed potatoes are intended for domestic Moldavia, and sometimes also in other geographical areas in the south of the country and west of the country and export. Distribution of seed potato is done directly from manufacturing units, with no intermediaries.

Payment terms and delivery is agreed between both parties, and prices are negotiable depending on the biological category and vintage year. In the area studied, seed potato production units have adopted a market-oriented, so Surface sizing is closely related to contracts with companies hired profile.

This strategy to have in mind that the vânzareacartoflui seed units can increase their

revenue substantially, especially where quality standards are complied with standards and protocols entered into agreements with such beneficiarii. De units of its domestic need for seed production given their inexpensive compared to alternative purchase from other suppliers.

Given market demands for industrial potato, processing, consumption and early extra early, many manufacturers have turned to the potato seed imports from the EU. This is useful to analyze the evolution of surface and structure of seed planted varieties grown in 2010.

In terms of economic efficiency of the potato crop at the current level of prices and tariffs, has been calculated and established weight constituents in the cost price structure, which showed that at an average of 30 tons / ha potato consumption autumn-winter and 25 tons / ha for seed potatoes can be obtained approx. 1510 lei profit, reflected in the table below.

In the same context is necessary for each manufacturer to determine the levels and know that technical factors are situated allocations AND technology at optimum, to limit costs and to achieve economic maximu possible in their conditions of each grower. Return is a category belongs to economic activity at the micro level. It is expressed by two synthetic indicators:

Profit - the absolute size of return (profit *table 6*) • The rate of return - which is the degree to which capital and other resources of the enterprise unprofitable. Therefore, rates of return are identified as effective rates, which measures the efficiency of resource material and financial resources allocated to a business activity (*table 7*).

Table 6

The surface of potato seed lots

Nr. crt	Economic Agent	Variety	Biological categories					Total
			Pre-	Basic		Certified		
			Basic	SE	E	Clasa A	Clasa B	
1	S.C. Polonus Agroprest SRL - 20 ha	Laura	0	0	0	0	20	20
2	I.F. Berejovschi Mihaela 7,5 ha	Marabel	0	0	0	0	7,5	7,5
3	P.F.A. Niculiță E.Vladimir 2 ha	Laura	0	0	0	0	2	2
4	S.C. Nord Intermed Consulting SRL - 15 ha	Roko	0	0	0	0	2,5	2,5
		Picasso	0	0	0	3	0	3
		Marfona	0	0	0	0	3	3
		Aladin	0	0	0	0	3	3
		Tresor	0	0	0	0	3,5	3,5
5	S.C. Agromec Zvoriútea SA - 12 ha	Barna	0	0	0	0	12	12
6	P.F.A. Calinciuc Traian - 19,5 ha	Barna	0	0	0	10	0	10
		Carnaval	0	0	0	0	2	2
		Opal	0	0	0	0	2,5	2,5
		Marabel	0	0	0	2	0	2
		Laura	0	0	0	3	0	3
7	S.C. Prodimpex SRL - 40 ha	Rosara	0	0	0	0	3	3
		Red Lady	0	0	0	0	30	30
		Carnaval	0	0	0	0	7	7
8	P.F.A.Ungureanu Dumitru - 9 ha	Barna	0	0	0	0	9	9
9	S.C. Scânteia SRL 7 ha	Laura	0	0	0	0	7	7
10	P.F. Chiriac Gheorghe –20 ha	Red Lady	0	0	0	0	20	20
11	S.C.D.A. Ferma 10 ha	Sante	0	0	10	0	0	10
12	S.C.D.A. Ferma 2 . 11 ha	Sante	0	6	0	0	0	6
		Magic	0	5	0	0	0	5
TOTAL	SUCEAVA		0	11	10	18	156	195
TOTAL	Country		32	49.8	108.9	444.4	243.5	878.6

Table 7

Cost and efficiency in potato production in Suceava County

Nr crt	Indicator	U.M	Potato consumption		Seed Potatoes	
			Valoare	%	Valoare	%
1	Average yield (t / ha)	t/ha	30		25	
2	Total expenditure	lei	4170	100	4740	100
3	of which seed	lei	1040	24,94	1460	30,80
4	pesticides	lei	790	18,94	850	17,93
5	materials	lei	1520	36,45	3790	79,96
6	Labor	lei	470	11,27	540	11,39
7	Total direct costs	lei	3820	91,61	4330	91,35
8	Indirect Expenditure	lei	350	8,39	410	8,65
9	Total revenue	lei	5400		6250	
11	Cost of production	lei /kg	0,139		0,1896	
12	Sale Price	lei /kg	0,18		0,25	0,00
10	Total Profit	lei	1230	-100	1510	-100
12	Unit Profit	lei pe kg	0,04		0,06	

The profit rate, however note that the profit rate is above 25% which shows that potato production is profitable with a relatively high rate which gives it a future in other crops in Romania.

To avoid wastage of resources and use the potato crop with their maximum efficiency (seed, fertilizer, mechanical and manual work, etc.) must

be practicing an agriculture-based scientific research showing above the following conclusions:

- the need to establish planting rules differentiated by AGROTEHNICA applied, size of planting material, intended for seed potato production and prices;

- the same time planting the maximum yield is obtained at high seed tubers, and additional net income up to mid-sized tubers;
- split application of fertilizers increases their economic efficiency, economic □ up to the application of various inputs (seed, fertilizer, etc.) is variable depending on their price, with a maximum upper limit of the technical production of the variety;
- piggy growing need for rationalization in terms of increasing macanizare and combination of mechanical work, also research results on the two crops production highlights the existence of real possibilities for increasing yields per unit area through the correct application of technologies for cultivation.

Table 8

Profit and profit rate (€)

Production value	
-seeds	15 to.x 600 €/to.= 9.000 €
consumtion	5 to.x 300 €/to.= 1.500 €
Total revenue	10.500 €
Profit	2.152 €
Profit rate	25,8%

CONCLUSIONS

Territory MICROREGION Suceava, Radauti and Fălticeni is located in the north - east of Suceava county, and in terms of geomorphological forms part of south-eastern plain of Moldavia, in the middle of the river basin, sub-bottom Jijia.

In micro Suceava, Radauti and Falticeni Suceava County, the area planted with potatoes, had a decreasing trend, so in 2009 compared with 2006, the decline was over 20%.

Evolution of the average production per hectare had a direct influence on total production for the main varieties of potato, with the exception of 2008, showed a trend of accelerated growth with a significant increase, which was 2911 tonnes.

The natural and economic Suceava County has allowed the classification of land belonging to the county in the so-called "dark zone of the potato, which allows for the seed potato crop. By buying organic varieties and categories superioarae and ensuring proper healthy society can share in potato production in potato consumption and seed potato.

Potato cultivation is over 20% of the countys acreage, and income from this crop are estimated around 45%. The amount of commercial potato seed is being manufactured annually around 14-15% in potato has been and

remains for Romania one of the main crops, a second loaf of Romania, is a staple food in the diet.

Offer local potato production has fared inconsistent since 1989, thanks to, on the one hand, environmental factors, and on the other hand, social factors (excessive fragmentation of areas, de-capitalization of agriculture, lack of technological and economic information organizational, etc.). To support potato growers is necessary to form associations or groups of producers with viable areas that may apply improved technologies, with performance management and marketing.

By applying a coherent program of concrete measures and support to producers of potatoes, will create the prerequisites of profitable, with positive effects on increasing living standards in rural areas. Distribution of the county is made directly to beneficiaries, which shows the society and pick up the goods from there. Delivery is done locally provider has the advantage to society as cargo transportation costs disappear, this task fell to benefit.

Recommendations

To meet consumer demands will be taken into consideration in future marketing and market demand of each variety, as most searches will be expanded in culture. Suceava area, benefiting from the fact that the potato has the tradition and being in the "closed" potato culture so Perspectives county to focus on expanding seed potato culture, it brings important revenue to the county than potato consumption. Circulation seed will be the basis of certificates of accreditation and quality of seed, issued by laboratories for potato quarantine.

After Romania joined the European Union, increased subsidies for farmers, it gives hope to the county, area planted with potato to other farmers will expand, demand will increase planting material.

To be tested in future potato varieties, which correspond to consumer demands for industrialization. Conquest of new markets or market segments through internal or external small packaging capacity, according to consumer demands on the potato market.

Labelling delivered production is a condition required by the EU and at the same time is a system of promotion and advertising of the county by selling products made in various markets. The label can contain and identification of county phone numbers, fax, email, etc.

The promotion policy will be to adopt a strategy to promote its global image through

aggressive advertising, which is based on information in the market to stimulate demand, increase sales offer for differentiation. You will also need to choose the most effective forms of advertising using: billboards, illuminated signs, banners, advertising in newspapers, radio and television.

BIBLIOGRAPHY

- Bibirie, E. 1992** - *Opinii asupra evoluției conceptului de marketing la orizontul anului 2000*, Revista "Marketing-Management", nr. 2.
- Brinza, Nica T., 1967** - *Elemente de marketing*, Litografiat, Universitatea "A.I. Cuza" Iași.
- Chiran, A., Gîndu, Elena, 1997** - *Marketing agrar - Indrumător pentru aplicații practice*, Ed Periscop, Iași.
- Chiran, A., 1992** - *Marketing – curs*, Litografiat, Institutul Agronomic Iași.
- Chiran, A. și colab., 1995** - *Aspecte privind cererea de consum și consumul pentru produsele agroalimentare în condițiile trecerii spre economia de piață*, Lucrări științifice Universitatea de Științe Agricole a Banatului - Timișoara, vol XXVII, partea a-III-a Agronomie.
- Chiran, A, Ciurea, I.V., Gîndu, Elena, Ignat, Gabriela, 2006** - *Management, marketing și gestiune economică*, Editura Performantica, Iași.
- Chiran, A. și colab. - Piața produselor agricole și agroalimentare – Abordare teoretică și practică**, Ed. Ceres București.
- Săicu, C-tin, Scurtu, D. 2008** - *Unele aspecte ale culturii cartofului din județul Suceava*, Simpozion științific Brasov.
- Gîndu, Elena și colab., 2009** - *Unele aspecte privind eficiența economică a producerii semințelor la cereale boabe – Studiu de caz la S.A. Moldova Țigănași jud. Iași*.
- Drobotă, Benedicța, Chiran, A., Gîndu, Elena, 2005** - *Studiul principalilor indicatori tehnico-economici privind evoluția cultivării cerealelor*, Lucr.științ.,USAMV,Iași,vol.48, seria Agronomia.
- Gîndu, Elena, 2006** - *Marketing – organizare, strategii, decizii, comportamentul consumatorilor*, Editura Tehnopress, Iași.