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THE ASSESSMENT MADE BY FARMERS OF THE AGRICULTURAL CONSULTANCY EFFECTIVENESS IN OLT COUNTY

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Abstract

The study undertook showed some pragmatic conclusions concerning how the consulting activity evolves in Olt County, in terms of farmers benefiting from agricultural advice. Through its quality, consultancy seeks through its specific methods, to be equally appreciated by the beneficiaries. Normally, agricultural consultancy, should be assessed, approximately equally by farmers, i.e. that there may not be no significant differences of appreciation over the areas analyzed, namely: projects preparation (Sapard and others), plants protection, chemical fertilizer procurement, procurement of pesticides, purchase of agricultural equipment, purchase of seeds and planting, animal husbandry, in various forms. From the analysis of the responses showed that farmers in Olt County, the geographical shape of the County is of particular importance to the ways of the consultancy evaluation , resulting in appreciations of significant differentiation from all areas, excluding the purchase of seeds and planting material, where appreciation was similar.

Key words**:** *agricultural production, chi square test, consultancy, consultancy efficiency, Olt County*

INTRODUCTION

In Romania the need for consultancy in all areas of activity, from industry, commerce, banks, education, health, and to agriculture. The economic and social changes require documentation and also consultancy with someone who has some experience and that you can make you to get a decision to take a risk as low, for the work which you think to be taking or improve. Since the early part of the twentieth century, the consultancy has continued to grow, becoming a profession. The consultants began to be seen as important persons able to give solutions for saving time and resources[7].

The agricultural consultancy in our country, after 1989, was formed on the fly, i.e. to chance, with dismissed specialists from the former structure of Agricultural Production Cooperatives or Agricultural enterprises. In 1998, on the basis of Decision No. 676/1998 , was established A.N.C.A. Through law 77/ 2005 and GD 1609/2009, was reorganized as a specialized institution of central public administration, which has in its technical-methodological coordination the agricultural Chambers County, to which it provides support and advice in order to achieve the objectives. The agriculture consultancy is characterized as a professional service and advice, upon request, of involvement, made free or a fee, by specialists aimed at supporting farm managers.

MATERIALS AND METHODS

The analysis indicators and assessment of consultancy services management can be structured into three categories and can be play through the following form: indicators for measuring the development of consultancy services, at the territorial level and in time, the indicators used for assessment of the effectiveness of consulting methods used in order to assess efficiency indicators; consultancy services at the level of farm management.

The data collection was done with the help of a questionnaire, at which has answered a

number of 398 farmers from 6 municipalities (two for each area: Plains, Meadow, Hill).

The questionnaire was developed through the interview and addressed directly to individuals who were involved. In assessing the survey data was used, chi square test of Association ($\chi 2$) and the significance of the result from the comparison Chi calculated with Chi theoretically. The test applies in the areas of socio-economic issues and is given by the composition of some contingency tables, the data are classified by one, two, or several variables of segmentation [5]. In comparing results[4], there is the following situation: If you reject the null hypothesis, and so there is a potential relationship between variables or if it admits the existence of a null hypothesis, and so there isn't a potential relationship, or association between the variables studied. Concrete, the degrees of significance were: very significant (p = 0.001 *); distinctly significant (p = 0.01, **); significantly (p = 0.05, *) and insignificant (calculated value is less than the theoretical value for p = 0.05, N).

RESULTS AND DISCUSSIONS

In the Olt County, the landscape includes rolling hills in the Center and North and in South Plains and terraces. Olt County actually belongs to those two major relief units: the Getic plateau in the North, which occupies one third of the surface and the Romanian Plain in the South, which has two-thirds that can be structured (three main parts: the Cotmeana Plateau, to the North, in the Centre, Boianu Plain ; Danube terrace to the South)[8].

From the total of 98 villages, 73.47% are located in the lowlands, which is predominant the agricultural area, 76.6% of the total for agriculture (*Table 1*). Regarding the number of farms from the total of 90,170, the predominant share is in plain (81.1%), followed by Hill area (14.4%) and meadow (4.5%).

Analyzing the surface on agricultural holding, it becomes apparent that it is in the meadow of 8.37 ha and 4.83 ha in the plain and 4.31 ha in the area of Hill.

Table 1. The villages, surfaces and agricultural holdings distribution in Olt County area, in 2012

Relief Area	Total common		Agricultural area		No. holdings		Surf./ Hold.
	No.	%	HA	%	No.	%	ha/hold.
Meadow	9	9.18	33,753	8.20	4,033	4.50	8.37
Hill	17	17.35	62,588	15.20	12,971	14.40	4.83
Plain	72	73.47	315,131	76.60	73166	81.10	4.31
Total	98	100.00	411,472	100.00	90170	100.00	4.56

Marinescu Emil, 2013, Agricultural advisor's questionnaire, Olt County[1]

The Consultancy areas appreciation, by geographical areas includes activites which starts with the design (accessing projects), plant protection, the main inputs (chemical fertilizers, agricultural equipment and seeds), raising livestock, forms of Association and cooperation.

The consultancy appreciation through the drawing up of projects , which was concerned principally with the SAPARD system.

Depending on the area of geographical relief consultation concerning the preparation of projects (Sapard) in Olt County in showed in *table 2* from which emerges a major implication (79.35%), with predominance of plain area (49.12%).

Concerning the significance threshold through interpretive form of calculated theoretical Chi is relevant the differentiation correlative between the importance of the granting of advice in drafting projects on the relief zone.

The calculated value of Chi is greater than the theoretical value (73.03 calculated Chi versus Chi theoretical 22,46), which means that *the geographical relief area has an influence* very significant (***) in *the drawing-up of projects.*

In the period 2008-2013, in the County of Olt, were implemented 593 projects for the procurement of equipment, 708 projects for setting up greenhouses, solaria, plantations of vineyards and fruit trees, 511 breeding projects and 140 projects for production.

It is believed to have been awarded a number of consultations of 1,200 on this theme. [3].

The appreciation of the manner in which consultations have covered the needs in the field of plant protection, depending on the geographical relief area (*table 3),* delineating the appreciation ***much*** with 53,77%, and middle with 36,43%.

Table 2. The consultancy appreciation concerning ***the establishment of Sapard projects (and others***) in the County of Olt, depending on ***geographical area relief***

Relief Area	Drawing up projects (Sapard)					Total	
	MU	Much	Middle	Little	At all	No	%
Plain	No	145	49	1	0	195	49.12
Meadow	No	110	8	3	1	122	30.73
Hill	No	60	4	5	11	80	20.15
Total	No	315	61	9	12	397	100.00
	%	79.35	15.37	2.27	3.02.	100.00	x
CHIINV (Chi calculated) =		73.03	significance threshold		0.001	22.46	***

Table 3. Appreciation of consultations relating to ***plant protection*** in the County of Olt, depending on ***geographical area relief***

Relief area	Plant protection					Total	
	MU	Much	Middle	Little	At all	No	%
Plain	No	95	80	17	4	196	49.25
Meadow	No	90	25	7	0	122	30.65
Hill	No	29	40	8	3	80	20.15
Total	No	214	145	32	7	398	100.00
	%	53.77	36.43	8.04	1.76	100.00	x
CHIINV (Chi calculated) =		33.57	significance threshold		0.001	22.46	***

The threshold is considered to be very significant (***), the difference between the calculated Chi-square (33.57%) and theoretically Chi (22.46), for a risk to which p < 0.001, whence it follows that advice on the assessment of distinctness relief areas is very significant. +

In the period 2010-2014, in the County of Olt, areas treated with insecticides have dropped from 168,612 ha to 96,898 ha, surfaces treated with fungicides have dropped from 118,183 ha to 113,471 ha, and areas treated with herbicides have increased from 157,781 ha to 168,764 ha. [1].

The consultations assessment concerning the availability of chemical fertilizers in the Olt County, according to the geographical relief area , appear in *table 4*, is different on the three areas of relief because the threshold significance is framed in a very significant assessment (***), the calculated Chi (64.65) vs. theoretically Chi (22,46).

Table 4. The consultations appreciation concerning the procurement of chemical fertilizers in the Olt County, depending on ***geographical relief area***

Relief area	The chemical fertilizers procurement					Total	
	MU	Much	Middle	Little	At all	No	%
Plain	No	52	114	24	6	196	49.25
Meadow	No	28	87	7	0	122	30.65
Hill	No	55	21	3	1	80	20.15
Total	No	135	222	34	7	398	100.00
	%	33.92	55.78	8.54	1.76	100.00	x
CHIINV (Chi calculated) =		64.65	significance threshold		0.001	22.46	***

In the period 2010-2014, the fertilized area with chemical fertilizers, in the Olt County has grown from 219,890 ha to 272,027 ha, while the area fertilized with natural fertilizers decreased from 18,640 ha to 13,245 ha, amid the decline in livestock (INSSE 2015). At the country level the amount of fertilizers and amendments increased with 134.78% from 2,479 million lei in 2008 to 3,341.12 million lei in 2013. [6].

The consultancy appreciation concerning the purchase of seeds, planting material, depending on the geographical relief area, for Olt County is illustrated in *table 5*. The threshold is insignificant, given the very close levels between the calculated Chi-square

(11.02) and Chi theoretically (12.59), for a risk in which $p < 0.05$.

Table 5. The consultancy appreciation concerning the ***purchase of seeds, planting material*** in the Olt County, according to the ***geographical relief area***

Relief area	The ***purchase of seeds, planting material***					Total	
	MU	Much	Middle	Little	At all	No	%
Plain	No	128	56	8	4	196	49.25
Meadow	No	97	16	7	2	122	30.65
Hill	No	56	18	5	1	80	20.15
Total	No	281	90	20	7	398	100.00
	%	70.6	22.61	5.03	1.76	100.00	x
CHIINV (Chi calculated) =		11.02	significance threshold		0.05	12.59	N

The agricultural machinery procurement of is an actual issue related especially to the demands of agricultural production capacity restructuring of farm (of the territorial area) through a correlation to the three dimensions of the characteristics of agricultural holdings envisaged (embossed area, size of the farm and farmer training). In the structure (table 6) the maximum share of this appreciation situation of consultations in the procurement of agricultural machines is at the middle level (32.75%), followed by the level of little (27.96%) and much (21.41%). Noting that at the country level the value of seeds and planting material has increased from 3,416.3 million lei in 2008 to Lei 4,353.45 million in 2008, representing an increase of 127.43%[2] The significance threshold is framed at very significant , justification given by the huge difference between the calculated Chi-square (122.00) and Chi theoretically (22,46).

Table 6. Appreciation of consultations concerning the procurement of agricultural machines in the County of Olt, depending on geographical area relief

Relief area	The agricultural machines procurement					Total	
	MU	Much	Middle	Little	At all	No.	%
Plain	No	31	41	79	45	196	49.37
Meadow	No	24	81	13	4	122	30.73
Hill	No	30	8	19	22	79	19.90
Total	No	85	130	111	71	397	100.00
	%	21.41	32.75	27.96	17.88	100.00	x
CHIINV (Chi calculated)		122.00	significance threshold		0.001	22.46	***

In the period 2010-2014, the number of physical tractors increased in Olt County from 6,527 at 6,658, number of mechanical drills has increased from 3,730 to 3825, and the self-propelled combines increased from 1,274 to 1,318. [2]

The consultancy appreciation relating to animal breeding, depending on geographical area, *it follows* trends similar to the agricultural machines procurement. It outlines the fact, in table 7, that are distinctly significant differences on relief areas. The threshold is distinctly significant (**), represented by the amplitude of calculated Chi (19.84) versus the theoretical Chi-square (8.56).

In the period under review, 2006-2011, the livestock in Olt County decreased to cattle from 60,938 heads to 32,326 to heads, at swine from 217,559 heads to 178,800 heads and at sheep from 130,238 heads to 88,218 heads[2].

The consultations concerning the association tendency of represents a new shape with totally different, for the rural dweller who needs to see through the consultant arguments, the differences and also consultant the benefits of possible association.

Table 7. The consultancy appreciation relating to animal breeding, depending on geographical area, it the County of Olt

Relief area	Animal breeding					Total	
	MU	Much	Middle	Little	At all	No.	%
Plain	No	67	50	39	40	196	49.25
Meadow	No	33	41	37	11	122	30.65
Hill	No	29	26	21	4	80	20.15
Total	No	129	117	97	55	398	100.00
	%	32.41	29.40	24.37	13.82	100.00	x
CHIINV (Chi calculated)		19.84	significance threshold		0.01	16.81	**

The hard part is the arguments one, because the inhabitants of rural areas, remember the constraint shapes that occurred in the former CAPs, abolished in 1991. From the questionnaires was outlined the appreciation at a middle level (41.21%), followed by little (28.39%), much (25.38%) and at all (5.03%). Between these appreciations, on relief area, there are differences that are very significant statistically, table 9 (***).

Table 9 .The consultancy assessment concerning ***the Association in various forms,*** in the County of Olt, depending on ***geographical area relief***

Relief area	***Association in various forms***					Total	
	MU	Much	Middle	Little	At all	No.	%
Plain	No	36	89	66	5	196	49.25
Meadow	No	65	40	16	1	122	30.65
Hill	No	0	35	31	14	80	20.15
Total	No	101	164	113	20	398	100.00
	%	25.38	41.21	28.39	5.03	100.00	x
CHIINV (Chi calculated)		111.02	significance threshold		0.001	22.46	***

From the data of the OJCA Olt appears that during the period 2008-2013, were implemented a total of 58 projects in various forms [5] To point out that CAJ OLT has supported the establishment of the following associative forms at the county level and had continuously cooperation relations with them: agricultural cooperatives = 12, producer group = 1, professional associations= 16, authorized persons by the OUG No. 44/2008 = 710[6].

Table 10. Developments in agricultural production value, according to branches of production in Olt County during the period 2008-2013

Agricultural branch	UM	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Total	**Th. lei**	1,931,732	1,779,899	1,875,620	2,315,761	1,981,842	2,344,424
	%	*100.0*	*92.1*	*97.1*	*119.9*	*102.6*	*121.4*
Vegetal	**Th. lei**	1,322,404	1,174,546	1,348,345	1,756,239	1,384,574	1,789,013
	%	*100.0*	*88.8*	*102.0*	*132.8*	*104.7*	*135.3*
Animal	**Th. lei**	600,902	593,920	523,449	556,960	592,330	545,837
	%	*100.0*	*98.8*	*87.1*	*92.7*	*98.6*	*90.8*
Services	**Th. lei**	8,426	11,433	3,826	2,562	4,938	9,574
	%	*100.0*	*135.7*	*45.4*	*30.4*	*58.6*	*113.6*

Processed by: INSSE, 2015, statistical database, Tempo-Online [7]

In the period 2008-2013, the total agricultural output value of Olt County increased from 1,931.7 million lei to 2,344.4 million lei (121.4%). We note the increasing of the vegetal production value 135.3% and the decrease in livestock production value with 90.8 in the same period of time. Agricultural services had an increase of 113, 6%. (Table 10)

In the structure of the agricultural output value it is presented a huge transformation during this period 2008-2013, in the sense of increasing the share of crop production from 68.46% in 2008 to 76.31% in 2013 (table

11). In the same period it is found a decrease in the share of animal production value from 33.37% in 2009 to 23.28% in 2013.

Table 11. The structure of agricultural production value by branches, in the County of Olt, during the period 2008-2013

Agricultural branch	UM	2008	2009	2010	2011	2012	2013
Total	**%**	100.00	100.00	100.00	100.00	100.00	100.00
Vegetable production	**%**	68.46	65.99	71.89	75.84	69.86	76.31
Animal	**%**	31.11	33.37	27.91	24.05	29.89	23.28
Services	**%**	0.44	0.64	0.20	0.11	0.25	0.41

Processed by: INSSE, 2015, statistical database, Tempo-Online [7]

These changes were the result of the decrease in livestock. These transformations have the effect of lowering the population engaged in agriculture and the increase of imports of agricultural products of animal origin.

CONCLUSIONS

The differences, on area, concerning the assessment way of the consultancy activities demonstrates the need for guidance specific to each area in part.

All questions relating to the level of appreciation of the Consultancy domains, on geographic areas, can be found through: the existence of a very significant correlation for geographical relief area (in Olt County is predominant the plain where it finds a very significant assessment of consultancy).

The effective applicability of agricultural consultancy depends on the consultancy quality, but also on the degree of interest of the beneficiaries.

In conclusion, the work of consultancy is very necessary, although still setting goals, the beneficiaries remain in a fairly large proportion confident in this activity.

We believe that the consultancy results at the County level will influence positively the future average yields and the increase of management activities of agricultural holdings.

REFERENCES

[1]Anuarul Statistic al judeţului Olt, INS, Direcţia judeţeană de Statistică Olt, Ediţia 2012

[2]INSSE, 2015,Baze de date statistice, Tempo-Online,http://statistici.insse.ro/shop/

[3]Marinescu Emil Vergilius, 2014, Teză de doctorat, Cercetări privind dezvoltarea consultanţei agricole în judeţul Olt, USAMV, Bucureşti

[4]Merce, E., et al., 2010, Prelucrarea statistică a datelor, Editura Academic Pres, Cluj-Napoca.

[5]Mihăiţă, N. V., et al., 2013, Relaţiile statistice puternice, ascunse, false si iluzorii http://www.biblioteca-digitala.ase.ro/biblioteca/carte2.asp?id=388&idb=, accesat 22.03.2013.

[6]Raport privind starea economico-socială a judeţului Olt în anul 2013, http://www.prefecturaolt.ro/comunicate/2014/raport2013.pdf

[7]Sin, G., 1998 , Asistenţă şi consultanţă agricolă, Ed. Agris-Red. Revistelor Agricole, Bucureşti

[8]Vrabete Mihaela, et al., Proiect "Elaborarea planului de amenajare a teritoriului judeţean Olt, Faza I Documentare şi studii de fundamentare", Proiectanţi, URBAN INCERC, SC HALCROW SRL