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# THE CULTURE TECHNOLOGY OF GRAPE-VINE FROM THE MONASTERIES OF THE ARCHDIOCESE OF BUCHAREST LOCATED IN DEALU MARE VINEYARD BETWEEN PAST AND FUTURE

UNGUREANU FLORIN, GUTUE CĂTĂLIN<sup>1</sup>

**Summary:** *The paper presents a study of the culture technology of grapevines at "Saint Nicholas" Chişorani - Valea Călugărească, "Saint Mary" – Urlati and "Saints Constantine and Elena" – Ceptura monasteries from the Archdiocese of Bucharest holding in property areas planted with grapevines in Dealu Mare vineyard. The culture technology is presented comparatively when the ground works were made traditionally, manually and hypo (Figure 1) and the revive period of vineyards, 2009-2014, through the Agency for Payments and Intervention in Agriculture (APIA) by the implementation of restructuring / reconversion (Figure 2). Before 2009 it was achieved on average a quantity of 4 tons of grapes/ha, and currently yield an average of 8 tons of grapes/ha. Regarding the culture technology applied after 2009, together with introduction of valuable varieties from Dealu Mare, they permit the production of quality wines with denomination of controlled origin (DOC) and geographical indications (GIs).*

**Keywords:** *vines, crop technology, retraining*

## INTRODUCTION

The history of grape-vine cultivation in Dealu Mare is inseparable from the history of monastic establishments from the "Ungrovlahia" Mitropoly recognized as Mitropoly by the Synod of Constantinople in 1359 [1]. Thus, monasteries like Snagov, Căldăruşani, Cernica, Ghighiu, Turnu held planted areas with grape-vines organized in monastic brances<sup>2</sup> in Dealu Mare vineyard, where grape-vine culture was the main concern of local residents. The current village Valea Călugărească from Prahova county has its origin in the Valea Călugărilor, alleging on the existence of Călugăreni village, attested since 1464. During the ruler Vlad the Monk (1482-1495), elevated to the trone by Stephen the Great, Valea Călugărească appears with this name as both a village and a vinegrowing center. The ruler had large areas of grape-vines in Valea Călugărească, the obtained wine production allowing the intensification of trade in wine [7]. Christianity gave a new impulse to viticulture, due to the use of wine as the religious symbol, and along with bread constitutes the matter of the Holy Eucharist instituted by Christ Himself as such, which was used in the Last Supper [2].

Wine is used at other sacraments<sup>3</sup> and religious services<sup>4</sup>: at weddings, at the church divine service, at the consecration of the church, at memorials [4]. The hierarchy of the shurch and of all the Romanian monasteries monks represent true promoters of viticulture.

## MATERIAL AND METHOD

The paper carried a study on the technology culture of grape-vine from the monasteries of the Archdiocese of Bucharest that own areas planted with vines. As such, the winegrowing culture was studied by comparative analysis during ante and post 2009. The monasteries that were subject of the research are monasteries of tradition in viticulture: Monastery "Saint Nicholas" Chişoran – Valea Călugărească, Monastery "Saint Mary" – Urlati, Monastery "Saints Constantine and Helena" - Ceptura.

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<sup>2</sup> Agricultural household or a real property of a monastery (building or group of buildings) that serves as a guest room, administratively subordinated to a bigger.

<sup>3</sup> Church services by means of which people undersand in a special way the grace of God in the most important moments of life (baptism, anointing with chrism, Confession, Communion, Marriage, Priesthood, Holy Unction).

<sup>4</sup> Religious services and prayers for human blessing in different moments and circumstances of his life, and for the blessing of the surrounding nature and different things or objects of human use (blessings, consecration, dispensations, exorcisms).

## RESULTS AND DISCUSSIONS

**Period ante 2009.** The grapevine lovingly maintained for nearly a century by the monks of three monasteries crossed a struggle of historical turmoil, by combining harmony between prayer and labor - ora et labora<sup>5</sup> [5].

The total area cultivated with grape vines that monasteries hold is 45 ha, as it follows:

- Monastery "St. Nicholas" Chițoran - Valea Călugărească → 12 hectares;
- Monastery "St. Mary" - Urlati → 10 ha;
- Monastery "St. Constantine and Helen" - Ceptura → 23 ha.

This period has also meant a protected technology culture system, characterized by using the low-form of leading hubs to allow a total or partial cover of the ground hub in winter, a work which is being executed in autumn after leaves fall [6].

Planting distances were 1.6m between rows and 1.2-1.3m between hubs, ensuring densities of 4.807-5.208 hubs / ha. Soil tillage is performed exclusively hypo and manually due to the small distance between rows, mechanization was impossible, also smaller distances between rows and the highlight influence of the hub. The grape-vine is a plant with high demands to light. The process of photosynthesis is more intense in the direct sunlight with a chlorophyll assimilation higher than in the shade. Insufficient light was a determining factor in reducing photosynthesis, debilitating hubs, sensitizing them to disease, reducing buds and, consequently, low production and low quality grapes [3].



Fig. 1 – Grapevine plantation before reconversion



Fig. 2 - Grapevine plantation after reconversion

Initial plantations were pure in terms of diversity of varieties such as: black Horn, Afuz Ali, white and black Babeasca, ink Traminer, Pinot Gris, Muscat Ottonel, filling the voids in time was conducted without further taking into account of the initial variety, leading to impure plantations. There was such an inconvenience to determine when to harvest the grapes caused by staggered ripening varieties in the plots.

Phytosanitary treatments against pests and phytopathogenic agents were executed with a manually pump sprayer. The application of these treatments relatively few in number (4-5 / season) were insufficient to ensure rational measures to combat noxious agents (diseases, pests) at the best time and with the best results. The inability to execute phytosanitary treatments on time has produced a significant loss of crop quality. All these elements of plant protection involved a heavy workload, multiple staff numbers, higher costs and more time spent on the links in crop maintenance program.

Harvesting grapes is held at all 3 monasteries, successively, all the monks and day workers were finishing harvesting at a monastery, then in an organized way, they continued harvesting at other monasteries. The grapes were harvested into baskets or buckets and hand-carried to the end of the row where horse carts had taken and had brought them to the winepress. Harvesting began with the white grapes and continue with the red obtaining the two categories (white wine and red wine) and with obtaining table wine (consumer), light, anonymous, without claims of identity or vineyard variety [6], with an alcoholic strength of 8.5-9% volume.

The year of 2009 represented for the monasteries mentioned a moment of change in the technology culture of grape-vines. The program of restructuring / reconversion implemented by APIA was an eligible measure or all three monasteries which led to changes in crop varieties with superior varieties existing in terms of quality.

The reconversion program was conducted over the entire surface of 45 ha, staggered as it follows:

Table 1

Reconversion distribution in 2009-2014

Year of planting	Monastery	Area(ha)
2009	"St. Constantine and Helen" – Ceptura	3,0
	"Saint Mary" – Urlați	2,0
2010	"St. Constantine and Helen" – Ceptura	4,0
2011	"St. Constantine and Helen" – Ceptura	16,0
2012	"Saint Mary" – Urlați	8,0
2013	"Saint Nicholas" - Chițorani – Valea Călugărească	2,0
2014	"Saint Nicholas" - Chițorani – Valea Călugărească	10,0
<b>Total</b>		<b>45,0</b>

The establishment of new plantations aimed at obtaining an increased production of quality grapes through the use of modern technology culture of grape-vine, based on the technical execution projects.

Previous work of replanting with varieties of noble grape-vine pursued to ensure optimal conditions for the development of roots and shoots growth of freshly planted vines. The following works were performed:

- grubbing up vines from old-vine plantation;
- removing wooden trellis and concrete and wire port;
- removal of roots and land scarification depth of 70cm;
- 30-40 cm deep plowing and land leveling disc harrow through two passes perpendicular.

For pedological characterization there were performed soil profiles in which soil samples were collected, while for agrochemical characterization of soil samples were collected at 0-30 and 30-60 cm depth from 5 different locations.

The fertilization of soil was done in accordance with recommendations issued by I.C.D.V.V. Valea Călugărească<sup>6</sup> after agrochemical mapping. From the data analysis about the main agrochemical features of the soil, after the application of basic fertilization, it results that the soil plots studied showed a high fertility. The high content of mobile phosphorus and potassium forms have the effect that the basic fertilization was carried out properly. Table 2 illustrates, for example, agrochemical mapping result before plantation establishment of "St. Constantine and Helen" - Ceptura in 2011/7

Table 2

Results on agrochemical mapping

No. sample	Depth (cm)	N-NH <sub>4</sub>			N-NO <sub>3</sub>			P mobil ppm			K mobil ppm		
		Initial Mappin g	Final Mappin g	Dif .	Initial Mappin g	Final Mappin g	Dif .	Initial Mappin g	Final Mappin g	Dif .	Initial Mappin g	Final Mappin g	Dif .
1	00 - 30	2,62	2,76	0,14	1,40	1,48	0,08	40	368	328	120	392	272
	30 - 60	2,40	2,49	0,09	1,82	1,88	0,06	32	264	232	104	348	244

2	00 - 30	2,95	3,11	0,16	1,90	1,98	0,08	28	352	324	160	416	256
	30 - 60	2,72	2,81	0,09	1,31	1,37	0,06	42	260	218	112	320	208
3	00 - 30	2,11	2,24	0,13	1,71	1,75	0,04	28	292	264	148	392	244
	30 - 60	2,72	1,79	0,07	1,23	1,25	0,02	30	266	236	120	348	228
4	00 - 30	2,38	2,53	0,15	1,77	1,85	0,08	60	420	360	112	328	216
	30 - 60	2,30	2,39	0,09	1,33	1,37	0,04	32	302	270	104	304	200
5	00 - 30	2,62	2,79	0,17	1,59	1,72	0,13	48	340	292	148	352	204
	30 - 60	2,71	2,82	0,11	1,74	1,84	0,10	36	416	380	144	312	168
Average values	00 - 30	<b>2,54</b>	<b>2,69</b>	<b>0,15</b>	<b>1,67</b>	<b>1,76</b>	<b>0,09</b>	<b>41</b>	<b>354</b>	<b>313</b>	<b>138</b>	<b>376</b>	<b>238</b>
	30 - 60	<b>2,37</b>	<b>2,46</b>	<b>0,09</b>	<b>1,49</b>	<b>1,54</b>	<b>0,05</b>	<b>34</b>	<b>302</b>	<b>268</b>	<b>117</b>	<b>326</b>	<b>210</b>

Planting cuttings was executed manually and mechanized with planting distances of 2.2 m between rows and 1.0 m between plants in the row, ensuring a density of 4.545 vines / ha. The main support consists of concrete and metal trellis with 3 wires bearing fixed at heights of 70 cm, 110 cm and 150 cm from the ground and plant support tutors made with bamboo.

Phytosanitary treatments are administered at the time of warnings issued by the County Agricultural Directorate Phytosanitary Unit.

The varieties used in plantations in the period 2009-2014 are: Merlot (19 ha), Cabernet Sauvignon (7 hectares), Black Fetească (10 ha), Royal Fetească (3 hectares), Muscat Ottonel (1 ha), Sauvignon Blanc (5 hectares). These varieties allow a category of wine with denomination of origin (DOC) and geographical indications (GIs).

## CONCLUSIONS

The post 2009 period brings to the life of monasteries that hold large areas with grape-vine from the Archiepiscopate of Bucharest a major change. It went from tillage performed manually and hypo to mechanization tractors and performant equipment. Phytosanitary treatments are mechanized according to warnings issued by the Department of Agriculture. Maintaining soil in plantations is done with a grass strip system - alternating grass field intervals with intervals maintained as black field. If in past it was achieved on average a quantity of grapes 4 tons / ha, currently it is registered an average of 8 tons of grapes / ha. The cultivation technology applied after 2009, together with introduction of valuable varieties from Dealu Mare vineyard ensure the production of top quality wines.

## BIBLIOGRAPHY

- [1] Braniște, E., Pr. (1980). *Liturgică specială*. București, Editura Institutului Biblic al B.O.R.
- [2] Dejeu, L. C. (2011). *Vinul și sănătatea*. București, Editura Ceres
- [3] Dejeu, L. C. (2010). *Viticultură*. București, Editura Ceres
- [4] Păcurariu, M., Pr. (2006). *Istoria Bisericii Ortodoxe Române*. București, Editura Institutului Biblic al B.O.R.
- [5] [www.ziarullumina.ro](http://www.ziarullumina.ro)
- [6] [www.winetaste.ro](http://www.winetaste.ro)
- [7] [www.icdvv.ro](http://www.icdvv.ro)