

Research on identification and behavior of local vine cultivation areas Seliste - Prunisor, Arad County

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Abstract Were carried out research in Arad County, in 2009 and 2010, which referred to the identification and analysis of local varieties and biotypes mainly vines planted in yards and gardens and Prunisor Seliste rural population.

The purpose of this research was to highlight the biological and technological characteristics of grape varieties in the western part of Romania, who, although they have good or very good qualities, both in terms of quantity and quality of production not expanded their vineyard in practice.

To characterize cultivars ampelography references were made to the most important descriptors ampelography: leaf, grape and grain. To establish the name of local varieties and cultivars has appealed to many criteria (name of local folk if any, communities in which the initials were discovered, the initials that were discovered street, house number of householders, features and Technology ampelografice predominant, etc..).

Vines are grown successfully in many countries, its cultivation is considered one of the most efficient agricultural activities [1]. Besides the many existing varieties and others are less widely used, usually local varieties with limited areas, which deserves more attention from the breeders and growers, as have many valuable features have not been exploited enough. West Zone of Romania represented by Timis, Arad, Caras-Severin, Hunedoara and Alba is an area with a climate favorable to vine culture, plus a great tradition and experience in this field [2]. Western Romania, Arad and Timis counties especially have a mixed ethnic population, borrow some from other traditions, habits and occupations. Among these occupations, it occupies an important place vine cultivation. There is almost no households where not planted vines in the form of vaults, semibolți, garlands under the eaves of houses and even in compact plots. [4]

For these reasons, in many localities in reference to the backyards and gardens of private vineyards residents there is an abundance of hybrids, varieties and local biotypes cultivated for centuries, which are known only to very few customers,

Key words

local varieties, biological and technological characteristics

sometimes only those on the whose households are located. [3]

Materials and Methods

The research was conducted over two years in two localities in Arad County (Table 1) and referred to the identification and analysis of local varieties and biotypes of vines grown in backyards and gardens of the population in these areas.

They made observations and measurements of attributes ampelographic, sugar content, acidity, gluco-acidimetry index and potential of grape alcohol.

Name of local varieties and cultivars was given according to the popular local name if it exists, the initials of the localities where they were discovered, the initials that were discovered street, house number of householders, features and Technology ampelographic prevalent.

For the characterization of varieties and biotypes ampelography were referred to the most important descriptors ampelography: leaf, grape and grain.

Table 1

Distribution of cultivars on localities

Area	Locality	Discovered local wine varieties and biotypes
Arad	Prunișor	9
	Seliște	2
Total		11

After identifying and analyzing several local cultivation, was arrested a total of 11 cultivation, of which 8 are suitable for wine (Delevar alb, Nova tămăioasă, Lacrămă neagră, Izabelă, Târzii, Botoșei, Deși, Delevar negru), and 3 showed mixed properties (Neagră deasă, Lacrămă fetei și Novă neagră).

Results obtained

Regarding the description ampelography local cultivatelor suitable for wine, they were characterized by small grapes, bunches weighing between 42 and 63 g of berries were small or medium size, spherical clusters often located (grapes compact), juicy flesh that allowed the accumulation of large amounts of sugars.

The peel is thin grains, covered with persistent or nepersistentă bloom.

Local cultivars mixed properties are generally characterized by medium-sized grapes with bunches Lacs, cylindrical or cylindrical-conical grains often placed under the stem. Berries are medium sized, elastic skin, yellow-green colored, yellow-blue, bluish-black, coated with a medium bloom. The core was fleshy berries, crunchy or juicy, with a pleasant taste, slightly fragrant, 3-4 medium seed size.

Such cultivation is suitable both for fresh consumption, but can also be used for wine production, resulting in lighter wines, but with a lower alcoholic strength.

Table 2

Characterization of cultivars studied ampelography

Variety	Leaf	Grape	Grain
0	1	2	3
White			
Delevar alb	small cuneiform, trilobite, with open lateral sinuses form a "V" and petiole open "U" or brace	low to cylindrical-wing, grains often placed under the stem.	almost spherical, small to medium size, skin is greenish yellow, striped with brown, thick, crisp
Novă neagră	size small / medium sized, shaped almost orbicular, entire, the sinus widely open petiole shaped brace small,	small, cylindrical-conical shape,	loose high ball, the skin is elastic, yellowish-blue, covered with a thick layer of bloom, medium thickness
Nova tămăioasă	mid-size, full shape, almost orbicular, petiole sinus is widely open U-shaped than cylindrical	wings, beans often placed under the stem.	spherical, of medium size (2.1 g) and falls off very easily from the stalk, the skin is thin, moderately elastic, green, covered with bloom
Red			
Neagră deasă	medium size or cordiform cuneiform, entire, the sinus petiole open "U"	small, cylindrical, with rare grains arranged in clusters according to high,	the skin is under the thick, elastic, bluish-black
Lacrămă neagră	size medium to large, cuneiform, trilobite, with lateral sinuses open "U"	small, conical, lax, whit rare grains	of medium size (2.2 g), ovoid shape, the skin is quite thick, elastic A black, covered with bloom without fine.
Izabelă	small cordiform easy trilobite, lateral sinuses are opened in the form of "V"	the open petiole shaped brace is small, cylindrical-conical shape	with rare grains arranged in clusters. medium-sized, spherical, The peel is thin, elastic, black-blue, covered with persistent bloom
Târzii	small, round, whole, open to sinus petiole shaped brace	very small, cylindrical, often with beans placed under the stem.	Small, almost spherical shape, the skin is thin, elastic and astringent, black-purple, covered with bloom

0	1	2	3
Botoșei	mall-medium size, cuneiform, with upper lateral sinuses very deep, open the "U" and lower lateral sinuses open into a V-shaped	small, cylindrical, often with beans placed under the stem. small,	nearly spherical shape, the skin is thin, elastic, astringent, black-purple, covered with bloom
Deși	small cuneiform, trilobite easy with shallow lateral sinuses open form of "V"	small, cylindrical, nearly spherical grains often placed under the cluster medium size	almost spherical shape, the skin is black and blue thin and elastic, covered with bloom.
Lacrăma fetei	cuneiform, middle to large trilobite with deep sinuses open "U"	small-medium size, conical, lax, with rare grains	medium-sized, spherical - slightly ovoid, the skin is thick and elastic, bluish-black, covered with thin bloom.
Delevar negru	small-medium size, cuneiform, , open lateral sinuses very narrow V-shaped, some being almost superimposed lobar	small, cylindrical, with rare grains placed under the stem	nearly spherical shape is medium to large size, the skin is suitable elastic medium thick, bluish-black is coated with a thin layer of bloom without

Table 3

Technological and physical-chemical characteristics of local cultivars with qualities mixed

Variety	Locality	Sugar (g/l)	Acidity (g/l H ₂ SO ₄)	Glucosidimetric index	Alcoholic potential	Difference to the control (Sugar)
Novă neagră	Prunișor	158	5,6	32,2	9,29	-17
Lacrăma fetei	Prunișor	152	5,3	28,6	8,94	-23
Neagră deasă	Seliște	185	4,5	41,1	10,88	+10
Chasselas dore (Mt)	Timișoara	175	3,15	55,5	10,29	-

In Table 3 we present the local cultivars shows mixed traits, compared with the variety Chasselas dore, table grape variety but that can be used in winemaking. These varieties had both a nice, well balanced chemical composition, which allows us to

recommend and to obtain consumer wine, but balanced with a lower alcoholic strength. Regarding sugar composition, there was dense Black variety, discovered in the area Seliște, Arad, who has been to witness an addition of 10 g / l sugar.

Table 4

Technological and physical-chemical characteristics of the local wine grape cultivars

Variety	Locality	Sugar (g/l)	Acidity (g/l H ₂ SO ₄)	Glucosidimetric index	Alcoholic potential	Difference to the control (Sugar)
0	1	2	3	4	5	6
Delevar alb	Seliște	164	4,9	33,4	9,64	-24
Izabelă	Prunișor	171	5,3	32,2	10,05	-17
Târzii	Prunișor	199	5,5	36,1	11,70	+11
Botoșei	Prunișor	170	5,6	30,3	10,0	-18
Deși	Prunișor	143	5,5	26,0	8,41	-45

0	1	2	3	4	5	6
Lacrămă neagră	Prunișor	182	5,5	33,09	10,70	-6
Delevar negru	Prunișor	159	5,6	28,3	9,35	-29
Nova tămâioasă	Prunișor	145	5,7	25,4	8,52	-43
Feteasca Regala (Mt)	Timisoara	188	4,3	43,7	11,05	-

Table 4 reports the technological and physico-chemical characteristics of the local wine grape cultivars. Samples from the cultivars for the production of wines were vinified in mimipartizi using the same technology for all cultivars for wine production.

Vinification took place in environmental conditions without addition of yeast and other substances conditioning, resulting in lighter wines, sufficiently balanced wines that can be considered organic, if we consider the fact that technology is a culture of clean cups biotypes, the in most cases not used the substances to combat diseases and pests, and no chemical fertilizers.

The resulting wines have an alcoholic strength move lower in the cultivation, ranging between 8.41 and 11.70 degrees alcohol. There were some growing that the accumulated sugar allowed to obtain wines with a high alcoholic strength, or close control.

Conclusions

In Arad county is growing abundant biodiversity represented by a large number of hybrids, varieties and biotypes plus local varieties and biotypes grown variety in assortments of wine farms.

Many local cultivars in this area do not receive an adequate publicity, although their

characteristics and technological agrobiological valuable would recommend them to be more cultured.

Due to their resistance to diseases and pests, these local culture can be grown without heavy usage of pesticides, which recommends their suitability for sustainable viticulture or for inclusion in breeding programs and production of new varieties of vines. Also, these varieties can always be a source of obtaining authentic wine products specific to the region of origin.

References

1. Dobrei A., Sala F., Moș Victoria – 2009 - Local grapevine biotypes and varieties – a source for biodiversity, specificity and authenticity, Bulletin UASVM Cluj-Napoca , vol. nr. 66(1-2)/2009, pag. 260-266
2. Dobrei A., Sala F., Poiană Mariana, Ghiță Alina, Mălăescu Mihaela – 2010 - 2nd International Conference "Vallis Aurea", in Pozega, Croatia, pag.0301-0309
3. Dobrei A., Rotaru Liliana, Morelli S. – 2008 – Ampelografie, Editura Solness Timișoara
4. Mihalca A., Lazea E. – 1990 – Tradițiile și experiența culturii viței de vie în zona Aradului, Editura Ceres, București.