

## RESEARCH REGARDING THE CHEMICAL COMPOSITION THE MORPHOLOGICAL AND ORGANOLEPTIC PARTICULARITIES OF THE APRICOT TREE LEAVES IN THE YEAR 2010

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### **Abstract**

*Apricot tree is species that the necessary conditions for developing in the fruit growing area Oradea.. Considering its tradition within this area, as well as the importance of the fruit, it is necessary to improve the existing assortment, the cultivated areas and to develop some new technologies to ensure a better fruit production.*

*In order to determine and in the same time to mark the difference between the species, the shape and weight of fruit were taken account.*

**Key word:** apricot, organoleptic and morphological properties, dry substance, sugar, acidity

### **INTRODUCTION**

The apricot tree is the species that finds favorable growing and fructification conditions in Oradea fruit growing pool and together with the peach tree and with the almond tree they form the species that are specific for this area.

Having in view the tradition of this culture within this area as well as the major importance of the fruits themselves, it is necessary to improve the existent type of apricot tree, to increase the cultivated surfaces and to apply appropriate technologies and measures able to ensure the increase of fruit production. For the appreciation and for the differentiation of the studied species the following have been taken into consideration: the form and the weight of the fruits, the kernel's adherence or non adherence to the pulp, the content of dry substance, of sugar, of acid, the taste, the flavor.

### **MATERIAL AND METHOD**

The current study presents the results of a study performed on a number of ten types of apricot trees during the year 2010, a study about the chemical composition, the organoleptic and morphological particularities of the apricot tree leaves.

### **RESULTS AND DISSCUSIONS**

The chemical composition of the leaves

The nourishing value of the fruits is determined by the content of the

pulp in different bio chemical components which, through the quantity of chemical substances, ensure not only the nourishing values but also the gustatory qualities.

Table 1.

The chemical composition of the fruits (average values for 2010)

Crt. No.	Type of apricot tree	Content of pulp (%, 100g fresh pulp)			
		Dry substance	Sugar	Acidity	Sugar – acidity proportion
1.	Harcot	13	10,2	1,6	6,34
2.	N.J.A.19	14	11,1	1,5	7,40
3.	The best of Hungary	15	9,3	1,3	7,15
4.	Goldrich	15	12,2	1,4	8,71
5.	Saturn	14	9,9	1,2	8,25
6.	Favorit	15	15,5	1,4	10,07
7.	Mamaia	15	11,3	1,6	7,06
8.	Skaha	14	12,2	1,7	7,17
9.	Sulina	14	9,9	1,4	7,07
10.	Comandor	15	10,9	1,8	6,05

The content of the dry substance varies in relatively small limits with increasing values from 13% at the Harcot type, 14% at the N.J.A. 19, Saturn, Skaha, and Sulina types until over 15% in the case of The best of Hungary, Goldrich, Favorit, Mamaia and Comandor. In 100 g of fresh pulp the sugar represents 9,3% in the case of The best of Hungary, then 9,9% in the case of Saturn and Sulina, followed by Harcot with 10,2%, Comandor with 10,9%, N.J.A. 19 with 11,1%, Mamaia with 11,3%, Goldrich and Skaha with 12,2% and the highest sugar content in Favorit type with 15,5%. The content of acid in the pulp registers, on the assembly of the studied types of apricot, rising values of 1,2 % at Saturn type, of 1,3% at The best of Hungary type, of 1,4% at Goldrich, Favorit and Sulina types, of 1,55 at N.J.A.19 type, of 1,6 % at Harcot and Mamaia types, of 1,7% at Skaha type and of 1,8 at Comandor type.

The relation sugar/acidity registers increasing values from 6,05 in the case of Comandor type to 10,07 in the case of favorite type.

Table 2.

The shape, the size and the adherence of the pulp to the kernel (average values for 2010)

Crt. No.	Name of apricot type	Shape of the fruits	Mass of a fruit		The adherence of the pulp to the kernel
			Total	From which kernel	
5.	Saturn	Round and flat	49	5,0	Non adherent
6.	Favorit	Oval	60	5,5	Non adherent
7.	Mamaia	Round and flat	60	4,0	Non adherent
8.	Skaha	Shape of the fruits	58	5,0	Non adherent
9.	Sulina	Oval	60	6,0	Non adherent
10.	Comandor	Elliptical	40	4,0	Non adherent
2.	N.J.A.19	Oval	55	5,0	Non adherent
3.	The best of Hungary	Round and flat	60	5,0	Non adherent
4.	Goldrich	Elliptical	50	5,0	Non adherent

In order to appreciate and to make the difference between the studied types of apricot trees the shape and the weight of the fruits were taken into consideration and also the adherence or the non adherence of the kernel to the pulp.

As it comes out from table number 2, the form of the studied fruits varies from oval to ovoid, elliptical and flat round. The preference for one of the above mentioned forms is at the customer's choice and appreciation as the consumer does not take into account that it is easier to pack, to arrange, to transport and to value these fruits if they have an oval or ovoid form.

The mass of a fruit registers rising values from 40 g at Harcot type to 70 g at Comandor type. From the ten studied types the ones to be appreciated are the types in which the fruit overcomes 50g (Goldrich, N. J.A.19, Skaha, The best of Hungary, Favorit, Mamaia, Sulina and Comandor). From the total mass of the fruit the kernel represents from 4% to 7 %. A favorable efficiency in favor of the pulp in which the kernel represents between 4% – 5% is to be noticed at the following types: Mamaia 4%, Harcot 4,5%, The best of Hungary 5%, N.J.A. 19 with 5%, Goldrich 5%, Saturn 5%, Skaha 5%, and Favorit 5,5%. Although the fruits are bigger less favorable relations between the pulp and the kernel are noticed at Sulina type in which the kernel represents 6% and at the Comandor type with 7% kernel. The adherence of the kernel to the pulp is favorable for all the types of apricot fruits as, the latter is non adherent in all the analyzed cases.

Table 3.

Organoleptic particularities of the fruits (average values for 2010)

Name of apricot type of tree	Name of apricot type of tree	Characteristics of the pulp	Characteristics of the pulp
	Consistency	Taste	Flavor
Harcot	Tight	Sweet – sour	Fine specific
N.J.A. 19	Tight	Sweet - sour	Fine specific
The best of Hungary	Middle consistent	Sweet- sour	Fine specific
Goldrich	Tight	Sweet - sour	Fine specific
Saturn	Tight	Sweet – sour	Fine specific
Favorit	Middle consistent	Sweet – sour	Fine specific
Mamaia	Middle consistent	Sweet – sour	Fine specific
Skaha	Tight	Sweet – sour	Fine specific
Sulina	Tight	Sweet – sour	Fine specific
Comandor	Mellow	Sweet - sour	Fine specific

The consistency of the pulp with graduations from mellow to middle and to tight can also mean industrialization, the middle category being highly appreciated as it is consumed in a fresh estate, the tight category which includes the types: Harcot, N.J.A. 19, Goldrich, Saturn, Skaha and Sulina also appreciated as it is consumed fresh and the mellow category

with the Comandor type used mainly in specific industry.

The taste expressed through the relation sugar/acidity belongs to the studied types of apricots from sweetish in the case of the Goldrich type to the preferred sweet –sour category specific for the Harcot, N.J.A. 19, The best of Hungary, Saturn, Favorit, Mamaia, Skaha, Sulina and Comandor types. The flavor of the fruits fits from partially flavored for the Saturn, Sulina and Comandor types to a fine specific flavor for the Harcot, N.J.A. 19, The best of Hungary, Goldrich, Favorit, Mamaia and Skaha types.

### CONCLUSIONS

If, in what the composition of the fruit pulp is concerned we take into account the dry substance, the sugar the acidity then the relation between them and the organoleptic particularities specific to the studied types of apricot fruits fit in favorable limits for consumption in a fresh estate and for industrialization as well

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