



Blueberries in Romania: past, present and future perspective

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INTRODUCTION

Nowadays, 90% of blueberry consumption in Europe is secured by Argentina/Uruguay and another 10% from Chile and South Africa (Rico, 2012; Lambert and Criner, 2014). Therefore, the blueberry supply in European countries will constantly increase in the next couple of years and have to satisfy the higher and higher demand (Brazelton, 2014). According to USDA data (GAIN Report, 2013), the first three countries in terms of blueberry production are United States of America, followed by Canada and Poland. FAOSTAT include Romania in the first ten countries with a recorded blueberry production of 2621 tonnes in 2013. An additional argument is the special interest of Romanian research and breeders who have managed to create of a large number of blueberry cultivars with superior organoleptic qualities and enhanced adaptability to environmental factors (Mladin et al., 2012).

We proposed to analyse the blueberry sector evolution in Romania including different factors that influenced the highbush spreading (e.g. limitation by technical, organisational and commercial barriers) and a foreseen developing trend on medium term taking into consideration the national and international dynamic market.

MATERIALS AND METHODS

The supporting data in the current analyse are provided by County Agricultural Departments, administrative organs subordinated to the Romanian Ministry of Agriculture and Rural Development (MARD) which are responsible for land and genetic resources use management, promoting and facilitate regional agriculture development also implementation of the governmental policy at county level, including statistical data services.

Part of the cultivated areas are represented by commercial blueberry orchards realised with the EU funds through approved projects in the frame of some measures included in the National Plan for Rural Development (NPRD) implemented between 2007-2013 and in the brand new Fruit Growing Sub-programme of the NPRD 2014-2020 (vers.2.1, February 2016).

It were also consulted the Statistical Yearbook of Romania Series and Annual reports of the MARD.

In the last three years (2012-2015), the blueberry culture extension in Romania has been focused mostly in the same regions (520 ha out of 650 ha a the end of 2015). In the top of the list we remarked Transilvania region with 319.7 ha next by Muntenia with 120.9 ha and Maramures with 79.4 ha (Figure 3). The rest of 130 ha of blueberries in Romania which represent 20% of the total planted area are spreaded in five regions: Moldova with 39.2 ha, Crisana with 34 ha, Banat with 29.6 ha, Oltenia with 25.4 ha and Bucovina with only 2 ha (Table 1).

Table 1. Regional and county distribution of cultivated area with highbush blueberry in Romania in the last five years (ha)

Region	Surface (ha)			
	Year	2010	2012	2015
Bucovina		2	2	2
Moldova		4	4	39.2
Muntenia		18.2	70.14	120.9
Oltenia		4	25.35	25.4
Banat		0	24.2	29.6
Crisana		5	31	34
Transilvania		83.9	151.0	319.7
Maramures		12.86	47.4	79.4
ROMANIA		129.9	355.1	650.1

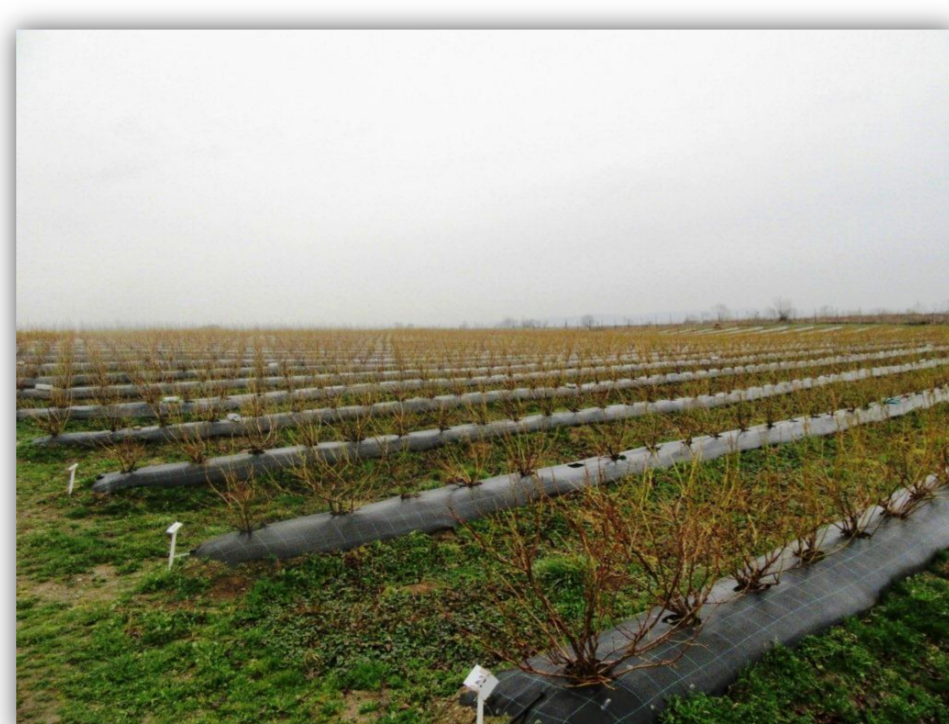


Photo 3. Blueberry plantation in Sercaia, Brasov (2012)

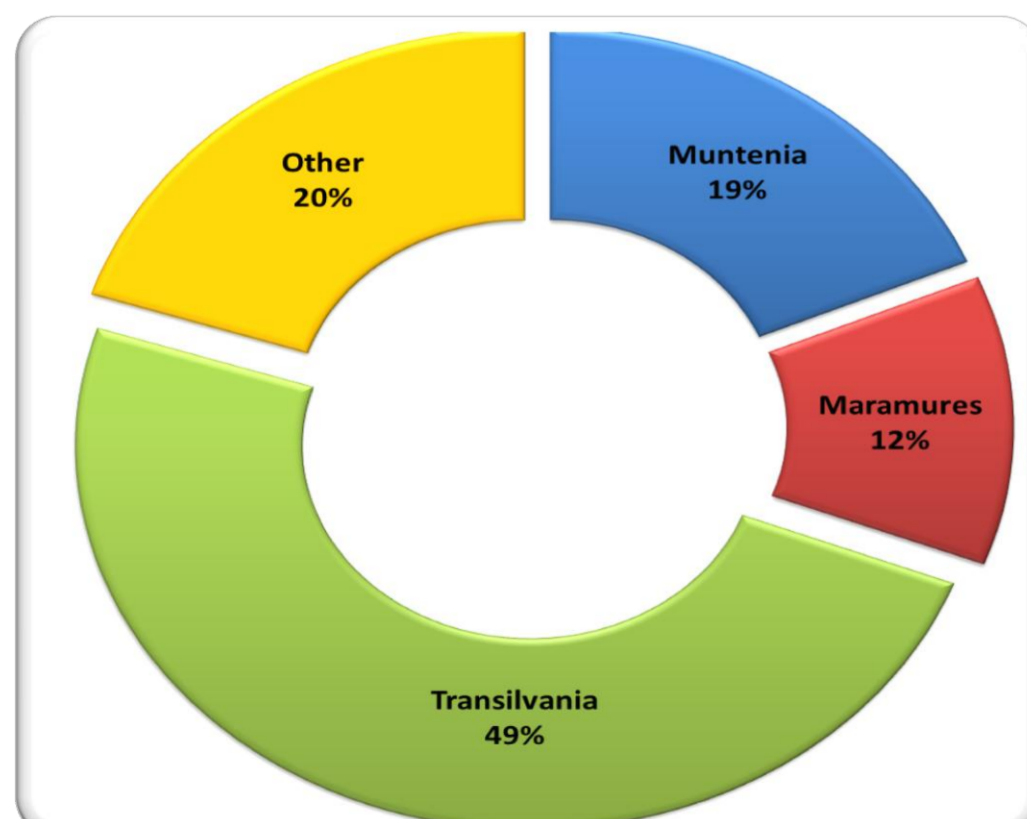


Figure 3. The share of most representative regions in Romania with blueberry plantations (2015)

CONCLUSIONS

The first highbush blueberry plantation in Romania has been settled in 1968 at Bilcesti in a submountain region at 840 m altitude. Results obtained by the researchers confirms the high favorability of the culture in that area and later in many other regions.

The extending rhythm of surfaces occupied by blueberries in Romania oscilated from 1 ha in 1958 to over 250 ha in 1989 and less than 30 ha in 2000. After 2008, the number of plantations and the total hecterage in Romania intensely increased, reaching 650 ha in 2015.

The spreading of the blueberry highbush culture was made mainly in three geographical regions of Romania: Transilvania, Muntenia and Maramures. These counts more than 80% of the total area occupied by blueberry.

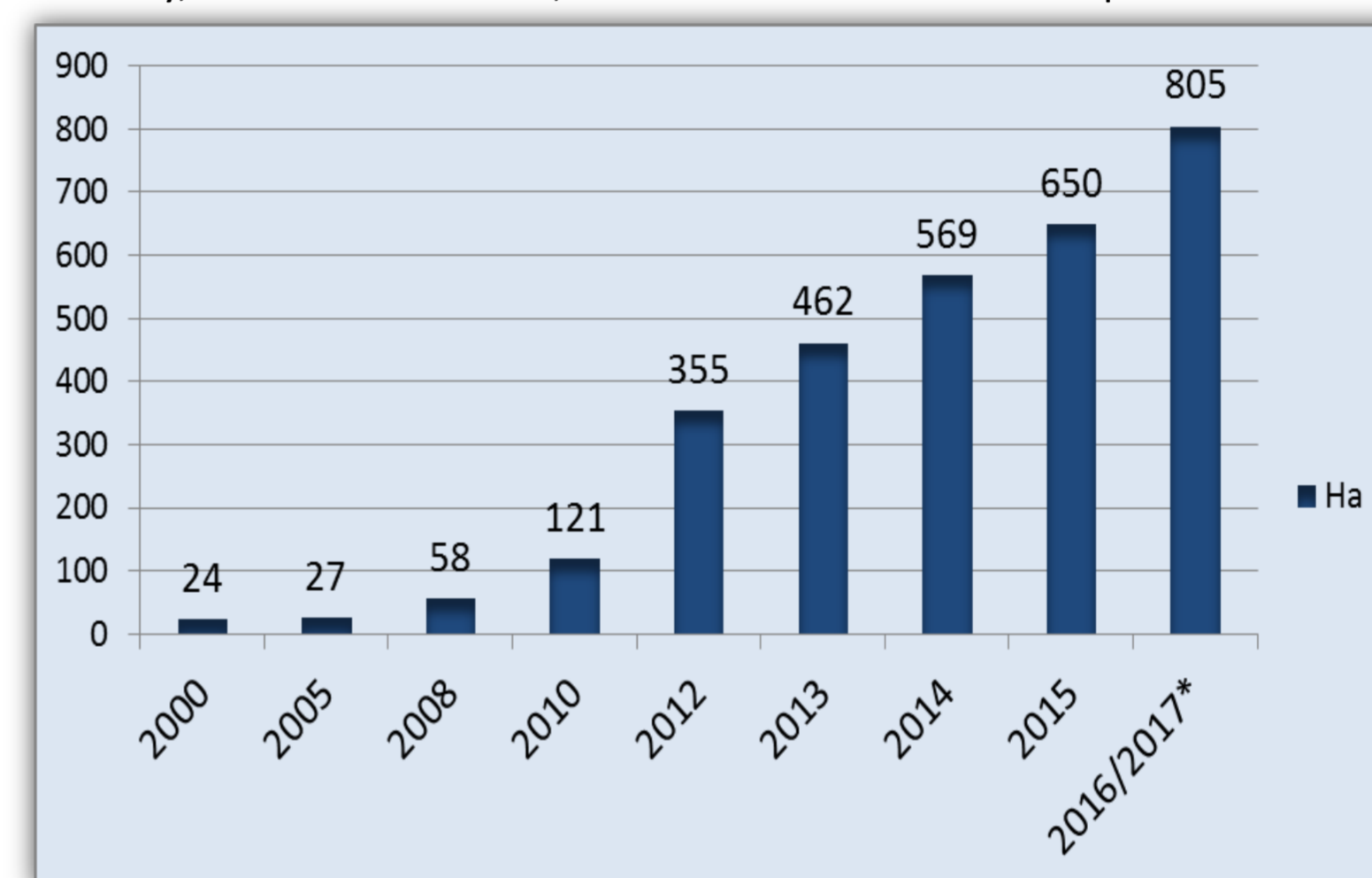
Although some of the blueberry Romanian growers encounter some difficulties in the valorization chain, the blueberry culture will continue to expand, in the next years expecting to rich 1000 ha.

RESULTS AND DISCUSSIONS

In 1968 when the first highbush blueberry was established in Romania, the *V. corymbosum* L. fruits were quite unknown by the Romanians. As a result of the first researches carried out on blueberry assortment (Badescu and Rudi, 1975), agrotechnics (Badescu, 2003) and propagation obtained at that time in the Muscel region at Bilcesti (840 m altitude), the interest of the researchers and experts highly increase for this culture (Sumedrea et al, 2014).

Nevertheless, the highbush blueberry plantations in Romania totaled less than 50 hectares in 1980, most of the orchards belonging to fruit growing research units. After 1980, as a result of the National Plan for Promoting Berries in Romania (NPPBR) which foreseen extending to 1000 ha only for blueberry production, it were planted 250 hectares till 1989. The political regime changed by the Revolution in December 1989 intrerupt the further blueberry planting plan, mostly because of the funciar reasons, a lot of lands moving in the private sector. This transfer of land property and the poor farms infrastructure and knowledge had conduct to a degradation of existing blueberry plantations and sometimes to deforestation. In this way, at the end of 90's the blueberry plantations summarized less than 30 ha.

After 2000, the interest of consumers for this fruits increased, the surfaces occupied by blueberry has grown only with 3 ha, from 24 ha in 2000 to 27 ha in 2005. The supporting European Programmes in our country after EU adhesion has encourage growers to intensify the rhytm of highbush blueberry planting. Thus, in the period 2005-2008, the blueberries surfaces has been doubled (from 27 ha to 58 ha). Next years, the situation becomes even better, in 2009 and 2010 been established another 63 ha and between 2011-2012 other 234 ha had been planted with blueberry. In this way, at the end of 2012, Romania riched the 355 ha planted with blueberry in different cultivation systems (Fig 1).



*Estimated in the next years by summing 155 new hectares approved for planting
Fig.1. Evolution of blueberry cultivated surfaces (ha) in Romania (2000-2015)



Photo 1. Maramures (2012)



Photo 2. Pojorata, Brasov (2010)

After 2012, the spectacular growing of blueberry surfaces has slow down a little bit but still increase with 30% in 2013, 23% in 2014 and 14% in 2015. In this years, it have been planted 295 ha, the total area of blueberry at the end of 2015 riching 650 ha in Romania.

Regarding the blueberry plantations distribution analyse at the country level (figure 2), it seems that from the existing 129.9 ha in 2010 in Romania, 83.9 ha were located in Transilvania which represent almost 65% of the total blueberry orchards in Romania. More than 10 hectares with blueberries were identified in only two other Romanian provinces: Muntenia with 18.2 ha and Maramures with 12.9 ha. Gathering all these values, we conclude that more than 88% of the blueberry in 2010 are found on three hystorical povinces of Romania (Transilvania, Muntenia and Maramures). In the next period, the same regions lead the blueberry surfaces. From the existing 355.1 ha in 2012, Transilvania recorded te highest planted area (151 ha), followed by Muntenia with 70.1 ha and Maramures with 47.4 ha.



Fig.2 The main repartition of blueberry plantations in Romania (ha)

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