

# Small fruit production in Latvia



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**LATVIA**

# Geography and climate

**Climate** and soils are various :

- The climate of the **western** part of Latvia is maritime, but continental climate prevails in the **eastern** part.
- The **cyclone activity** is high (120 – 140 cyclones per year), and so the weather is very changeable.
- The yearly **average temperature** is 3 – 7 ° C; it is about -5° C in winter and 16 – 17° C in summer.
- The **lowest temperature** in winter was recorded -41° C
- One of the biggest problems for resultative fruit growing are frequent **temperature fluctuations** during the winter period from January to March
- The sum of **active temperatures** is 2423 ° C
- The **average annual precipitation** is 560 mm

# Geography and climate

## Soils

Lowlands, which are prevailing in the area, are separated by hilly uplands

- The most **productive soddy calcerous soils**, predominantly loams and drained soddy clay are found in southern Latvia. The other parts of Latvia are mostly covered by more **humid acid soils**.

# Commercial fruit growing

The area of commercial orchards in 2009\*

<b>Crop</b>	<b>ha</b>
Strawberry	400-500
Black currant	770
Red and white currant	130
Raspberry	240
Highbush blueberry	220
American cranberry	105
Sea buckthorn	180
Gooseberry	10



# Strawberries

The most important crop of small fruits is strawberry.

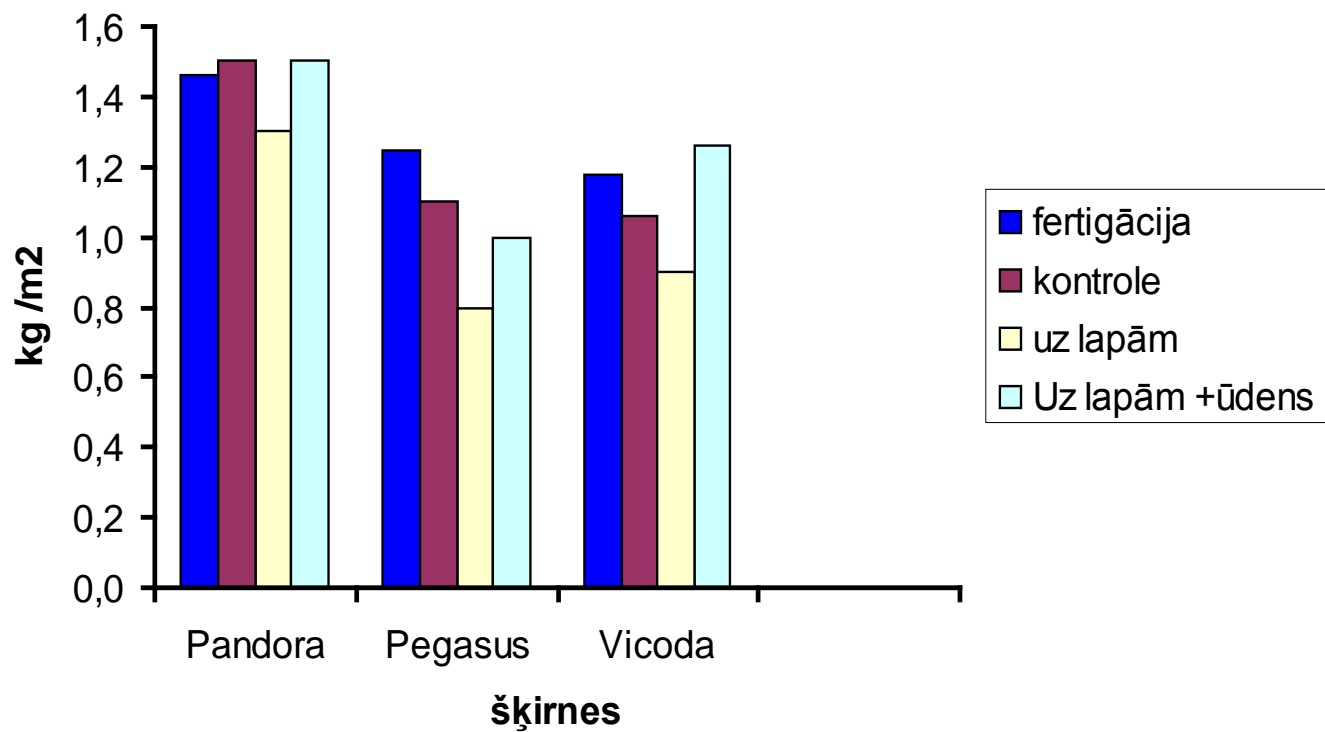
The area of strawberry plantations in year 2008 was 360 ha, average yield 5.5 t /ha.

The most important **problems** in strawberry growing are quality of planting material, too old the plantations (3-4 years), cultivars and low level of growing technologies. Most of strawberry plantations are without irrigations or other moisture regulations systems, or soil mulching systems. Using of the drop irrigation significantly increases the yield (from 8 to 18 t/ha) and the fruit quality.

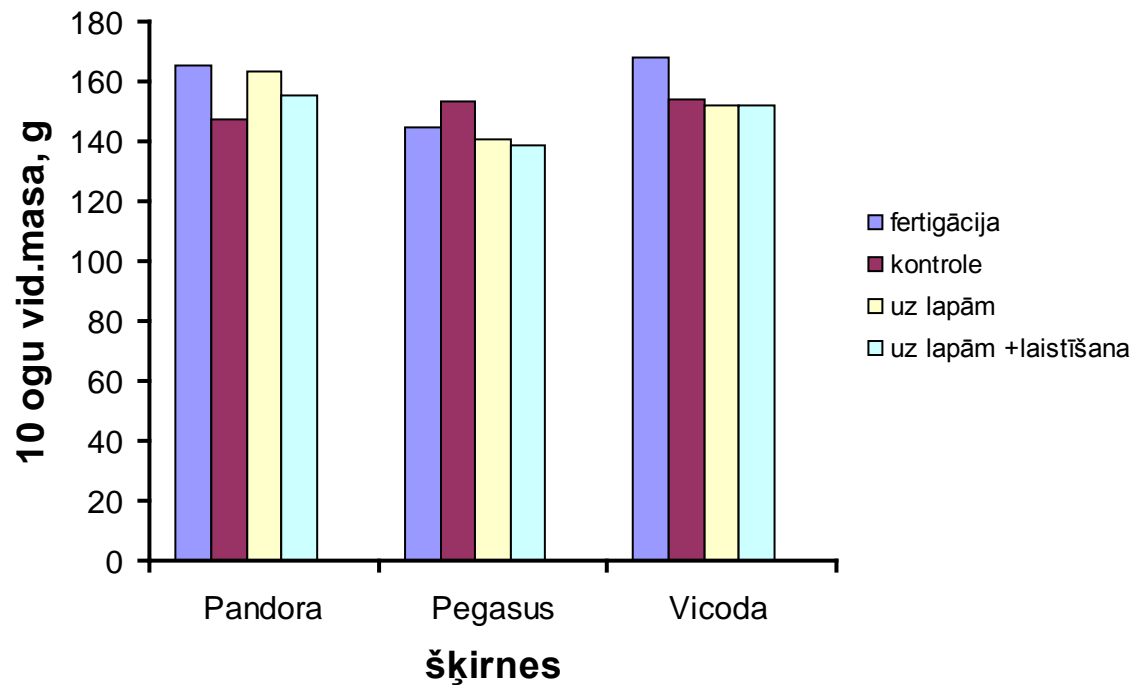
The most important **cultivars** for commercial growing are ‘Zefyr’, ‘Induka’, ‘Korona’, ‘Dukat’, ‘Siurprise Olimpiadi’, ‘Jonsok’, ‘Polka’, ‘Bounty’ and ‘Senga Sengana’, ‘Pandora’, ‘Pegasus’.



## Zemeņu raža atkarībā no mēslojuma padeves veida



## 10 zemeņu ogu vidējā masa mēslošanas izmēģinājumā 2002.gadā



## Black currants

The next important crop is black currant. The area of subsidized plantations of black currant in 2009 reached 770 ha, the average yield was 2-3.2 t/ha. The largest single plantation is 60 ha. (Baltic Berries).

The most important problems: winter hardiness and spring frost resistance, health of plant material, disease resistance (reversion virus), gall mite resistance, and better processed products. Black currants mostly are grown for mechanical harvesting. Providing of moisture in the period from blossoming to harvest increases the the yield of berries to 12-15t/ha.

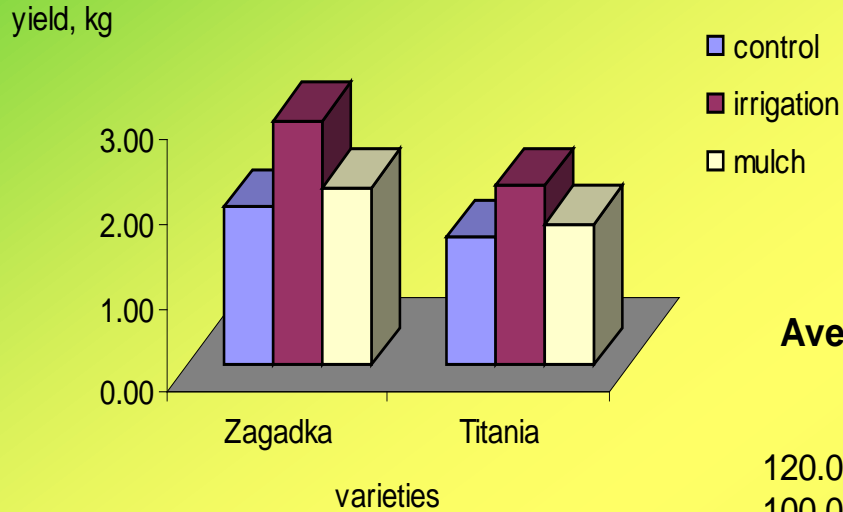


The most important **cultivars** for commercial growing are :  
'Zagadka', 'Pamyati Vavilova',  
'Katiusha', 'Ben Lomond',  
'Titania', 'Triton', 'Ojebyn'.

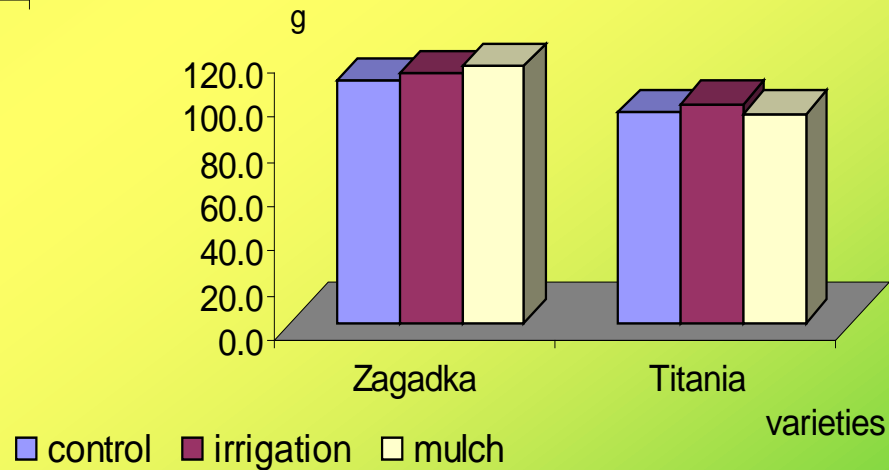


# Effect of moisture regime on productivity and average berry weight of black currants

## Yield of black currant, kg per bush (2000- 2003)



## Average weight of 100 berries (2000-2003)



# Raspberries

The area of subsidized raspberry plantations in 2009 reached 240ha. Average yield was only 3 t/ha.

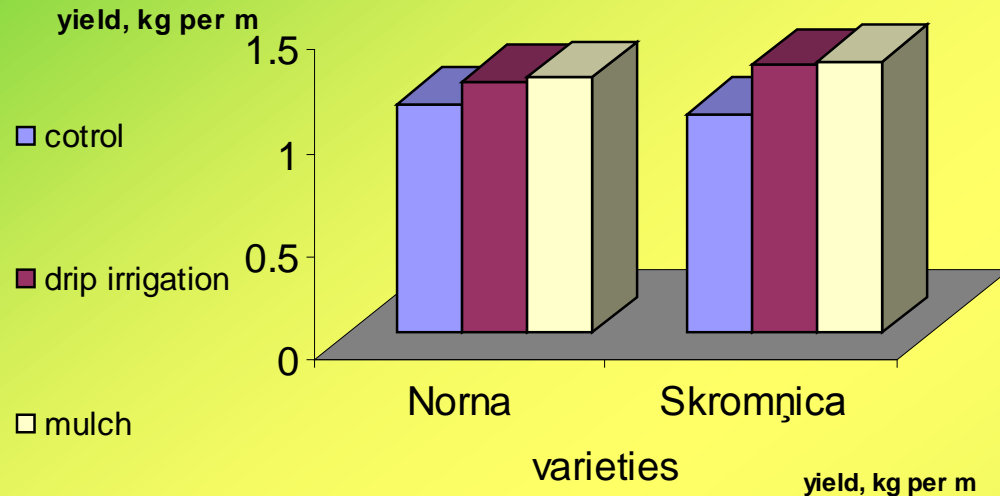
The most important **problems** in growing are winterhardiness of cultivars, disease resistance, yield, fruit quality, storage and quality of plant material, growing management. Using of drip irrigation or mulching system in plantations increases the yield to 12 t/ha, and the weight of berries by 7-15 %. For autumn raspberry the irrigation increases the yield and fruit weight by 30% .

Most important in commercial growing of raspberries are Russian **cultivars**: ‘Meteor’, ‘Balsam’, ‘Lazarevskaya’, ‘Skromnitsa’, ‘Sputnitsa’ Bulgarian cultivar ‘Bulgarski Rubin’ and Norwegian cultivar ‘Norna’, Scottish ‘Glen Ample’ . . From autumn raspberries the best for growing in Latvia are ‘Polka’, ‘Polana’ and ‘Babye Leto’.

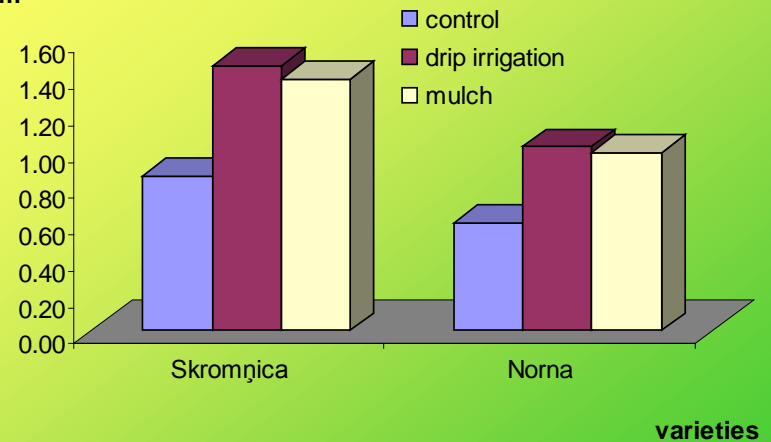


# Effect of moisture regime on yield of raspberries

Average yield of raspberries, kg per row's meter (2001- 2003)

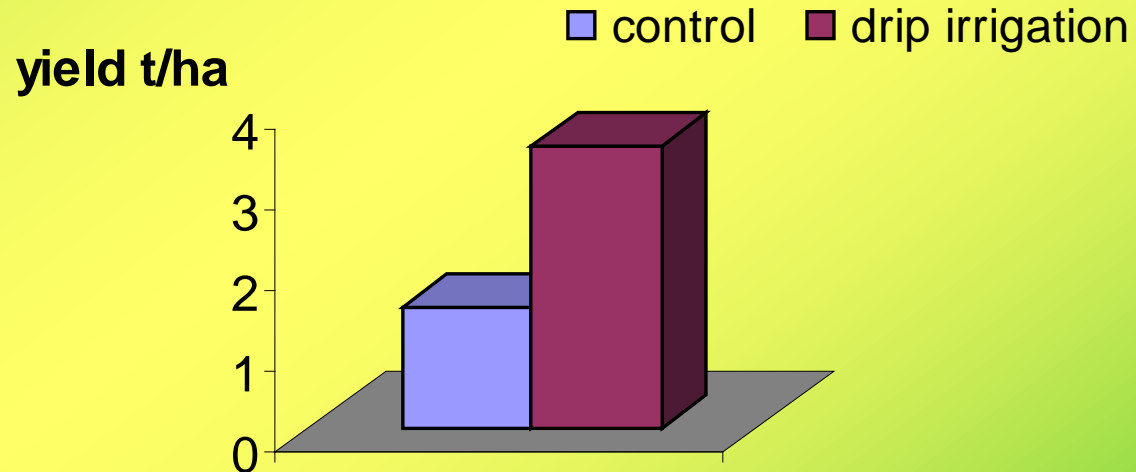


Average yield,kg per row's m 2003



# Effect of drip irrigation on yield of autumn raspberries t/ha 2001-2003

## Average yield of autumn raspberries 'Ariadne' t/ha 2001-2003



## Red and white currants

The area of plantations in 2009 was 130 ha.

Average yield 3 t/ha.

They are mostly grown for mechanical harvesting and only for processing. Growing for fresh market isn't popular for this crop.

Most important **cultivars** are 'Jonkheer van Tets', 'Red Dutch', 'White Imperial', 'Werdavia', 'Zitawia', 'Vīksnes Sarkanās'



# Gooseberries

Gooseberries are less important for commercial growing . Plantings using subsidies during the period 1998-2009 were only a few hectares.

The most important **problems** : plant material and processing possibilities

The most important **cultivars** are 'Lepaan Valio', 'Lepaan Punainen', 'Kursu Dzintars', 'Koknese', 'Perse', 'Veldze', 'Masheka'.



## Highbush blueberries and cranberries

The subsidized plantations of **highbush blueberries** in 2009 reached 220ha.

The most important problems are winterhardiness and suitable soils.

The subsidized plantations of **cranberries** in 2009 reached 105 ha  
The most important problem is spring frost.

For commercial growing Canadian and USA cultivars are used.



## Seabuckthorn

The subsidized plantations in 2009 reached 180 ha.

The most important **problem** : harvesting.

The most important **cultivars** for commercial growing are ‘Botanicheskaya Lubitelskaya’ and ‘Prozrachnaya’





**Selected small fruits cultivars  
at the Latvian Institute of Fruit Growing  
registred in Latvia in period  
1999-2004**

Raspberries : ‘Ivars’, ‘Dita’, ‘Arta’, ‘Ina’, ‘Lina’



**Selected small fruits cultivars  
at the Latvian Institute of Fruit Growing  
registered in Latvia in period  
1999-2004**

Black currant : 'Mara'



**Selected small fruits cultivars  
at the Latvian Institute of Fruit Growing  
submitted for the registration in Latvia in  
2008**

‘Viktorija’



‘Liene’



**Selected small fruits cultivars  
at the Latvian Institute of Fruit Growing  
submitted for the registration in Latvia in  
2008**

**‘Karina’**



**‘Rita’**



**Thank you for your  
attention!**