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Research activities

- Hop breeding
- Biotechnology and genome analyses
- Hop chemistry
- Hop protection, GEP certificate
- Agricultural technology
- Experimental farm
- Pilot brewery
- Integrated & Organic hop production
- Transfer of innovations, seminars and workshops

Production of hop rootstocks, hop production

Advisory and training service

Commercial activities

- Control of cultivar authenticity (proof of counterfeit hops)
- Hop merchant & retail sale via website
- Chemical analyses – accredited methods according to ČSN EN ISO/IEC 17025:2018:
 - EBC 7.2 (determination of moisture)
 - EBC 7.5 & 7.6 (lead conductance v.) & EBC 7.7 (α-, β-acids)
 - pesticide residues (QuEChERS method with HPLC-MS/MS)



www.zateckychmel.eu



Czech Beer

https://beerresearch.cz/en/pgi-ceske-pivo-czech-beer



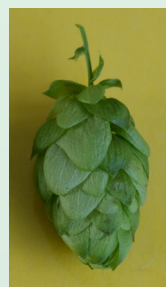
Aroma hop varieties for Czech Beer



4801 (Saaz Brilliant)
 Semi-early aroma variety, selected from Saaz progeny, with fine hoppy aroma and middle large cones, very dense seeded. It is useful for the second and late hopping of lager beers.
 Alpha acids: 3,0 – 5,0% Beta acids: 2,5 – 4,0%
 Cohumulone: 22,0 – 26,0% of AA
 Total oils: 0,3 – 0,4 g/100 g



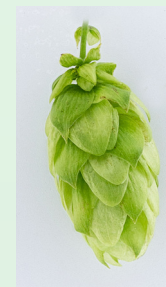
4975 (Saaz Comfort)
 Semi-early aroma variety, selected from Serebrianka and Saaz progeny, with fine hoppy aroma and middle large cones, dense seeded. It is suitable for the second and late hopping of lager beers.
 Alpha acids: 5,0 – 6,5% Beta acids: 4,5 – 6,0%
 Cohumulone: 14,0 – 18,0% of AA
 Total oils: 0,7 – 0,9 g/100 g



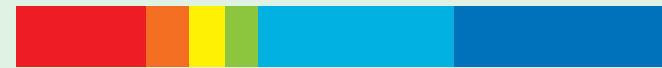
5045 (Saaz Shine)
 Semi-early aroma variety, selected from Sládek and Saaz progeny, with high yield, fine hoppy aroma and middle large cones, dense seeded. It is useful for the second and late hopping of lager beers.
 Alpha acids: 3,0 – 5,0% Beta acids: 2,0 – 4,0%
 Cohumulone: 20,0 – 25,0% of AA
 Total oils: 0,8 – 0,9 g/100 g



Dwarf hop varieties for music in low trellis



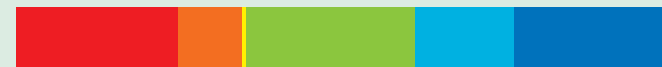
Country (N5)
 Middle early dwarf aroma variety, selected from Minstrel progeny, with low intense hoppy aroma and grassy, herbal and spicy tones. It is useful for the second and late hopping of beers and ales.
 Alpha acids: 3,0 – 4,5% Beta acids: 1,5 – 2,5%
 Cohumulone: 18,0 – 28,0% of AA
 Total oils: 0,2 – 0,6 g/100 g



Jazz (N33)
 Semi-late dwarf aroma variety, selected from First Gold progeny, with more intense aroma of spicy, citrusy, woody, piny, fruity and slight hoppy tones. It is suitable for the second and late hopping of beers and ales. It can be used as for special beers and ales as for dry hopping.
 Alpha acids: 3,5 – 6,0% Beta acids: 2,0 – 4,0%
 Cohumulone: 23,0 – 30,0% of AA
 Total oils: 0,6 – 1,2 g/100 g



N3 (Blues)
 Early dwarf aroma variety, selected from First Gold progeny, with middle intense hoppy and spicy aroma. It is suitable for the second and late hopping of beers and ales.
 Alpha acids: 5,0 – 8,5% Beta acids: 3,0 – 4,5%
 Cohumulone: 19,0 – 26,0% of AA
 Total oils: 0,6 – 1,5 g/100 g



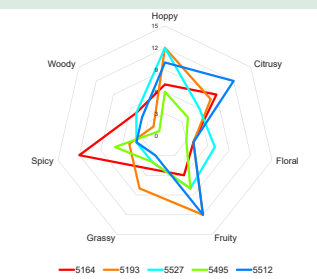
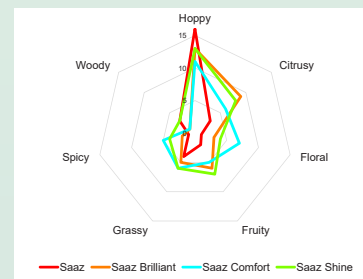
Member of



www.cz hops

www.chizatec.cz

www.bohemiahop.cz



Bitter hop varieties for basic beer bitterness



Gaia (4849)

Bitter variety, selected from Agnus progeny for its vigorous growth and yield, with high intense hoppy aroma and gentle spicy and earth tones. It is useful for the first and second hopping of lager beers.

Alpha acids: 12,0 – 15,0% Beta acids: 5,0 – 10,0%
Cohumulone: 20,0 – 29,0% of AA Total oils: 1,5 – 2,5 g/100 g



Boomerang (4914)

Bitter variety, selected from complex breeding progenies of Agnus, Magnum and Premiant, with high intense aroma of strong spicy and gentle hoppy, citrusy and fruity notes. It is applicable for the first and second hopping of lager beers and for dry hopping of special beers and ales.

Alpha acids: 10,0 – 14,0% Beta acids: 5,0 – 10,0%
Cohumulone: 27,0 – 32,0% of AA Total oils: 1,5 – 3,0 g/100 g



Flavour hop varieties from aroma universe

5164 (Uran)

Seedling of Columbus. High intense spicy (black pepper, curry, star anise) and vegetal (garlic, onion, olive) aroma with piny (needles), green herbal and citrusy notes in background.

Alpha acids: 10,0 – 13,0% Beta acids: 5,0 – 6,5%
Cohumulone: 26,0 – 35,0% of AA Total oils: 1,3 – 1,8 g/100 g

5193 (Venus)

Seedling of Columbus. Intense aroma of red (blackberry, cranberry), green (apple), citrus (lemon, lime, grapefruit, orange), sweet and tropical (mango, melon, kiwi fruit) fruits with herbal (mint, rosemary) and grassy (hemp, nettle) notes in background.

Alpha acids: 6,0 – 8,0% Beta acids: 4,0 – 6,0%
Cohumulone: 27,0 – 32,0% of AA Total oils: 1,0 – 1,7 g/100 g

5227 (Mimosa)

Seedling of Agnus daughter and South African male. Gentle aroma of black currant, citrus (lemon, lime, grapefruit) and tropical (banana, mango, papaya, maracuja) fruits mixed with floral (chamomile, jasmine, lily), herbal (mint, green tea) and grassy aroma.

Alpha acids: 1,5 – 2,5% Beta acids: 5,0 – 7,0%
Cohumulone: 26,0 – 35,0% of AA Total oils: 0,5 – 1,0 g/100 g

5495 (Juno)

Seedling of Kazbek and wild Canadian male. High intense aroma of apple, citrus (lemon, lime zest, tangerine, orange), sweet and tropical (banana, mango, honeydew melon) fruits with gentle floral, piny and spicy notes in background.

Alpha acids: 4,0 – 5,5% Beta acids: 4,0 – 4,5%
Cohumulone: 39,0 – 45,0% of AA Total oils: 0,9 – 1,1 g/100 g

5512 (Ceres)

Seedling of Kazbek. Intense aroma of green (apple, pear), citrus (lemon, lime, grapefruit, orange) and sweet (apricot) fruits mixed with herbal (mint), spicy (star anise), woody (bark, tobacco) and grassy (tomato leaves, fresh cut grass, nettle) aroma.

Alpha acids: 6,5 – 8,5% Beta acids: 3,0 – 4,5%
Cohumulone: 35,0 – 43,0% of AA Total oils: 0,6 – 1,2 g/100 g

5520 (Saturn)

Seedling of Kazbek. Intense aroma of citrus (lemon, lime zest, tangerine, grapefruit, orange, ginger), sweet and tropical (apricot, peach, watermelon, mango) fruits mixed with floral (citrus, rose), spicy (chilli, black pepper, anise), vegetal (garlic, parsley green) and woody (pine, needles) notes.

Alpha acids: 6,0 – 8,5% Beta acids: 3,5 – 4,5%
Cohumulone: 40,0 – 52,0% of AA Total oils: 2,0 – 3,0 g/100 g

5540 (Jupiter)

Seedling of Kazbek. High intense citrusy and fruity (apple, pear, sweets) aroma with floral (jasmine, rose), herbal (mint, lemon balm), spicy (star anise, bay leaf) and woody (resin, pine, needles) notes in background.

Alpha acids: 4,0 – 7,0% Beta acids: 2,5 – 3,5%
Cohumulone: 28,0 – 32,0% of AA Total oils: 0,6 – 0,8 g/100 g

5571 (Eris)

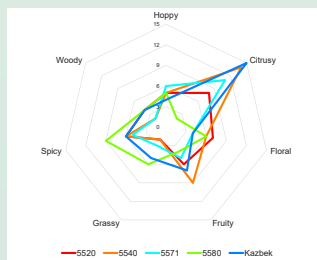
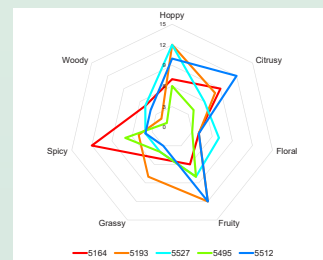
Seedling of Kazbek. High intense aroma of citrus (lime, grapefruit, tangerine, orange) and tropical fruits with floral (lemon, orange, black currant, elder), herbal (lavage, lemon balm, green herb) and piny notes.

Alpha acids: 7,0 – 9,0% Beta acids: 5,0 – 6,5%
Cohumulone: 30,0 – 36,0% of AA Total oils: 1,2 – 2,0 g/100 g

5580 (Pluto)

Seedling of Harmonie and Saazer male. High intense fruity (green fruits, lemon, pineapple, banana), sweet (yoghurt, almond, vanilla) and woody (needles) aroma with herbal (mint, menthol, basil, chamomile, green tea) and vegetal (root vegetable, asparagus) notes in background.

Alpha acids: 5,5 – 6,5% Beta acids: 4,5 – 5,5%
Cohumulone: 19,0 – 25,0% of AA Total oils: 0,9 – 1,2 g/100 g



Czech hop varieties



Saaz

Traditional high quality fine aroma hop for the second and late hopping of excellent lager beers.

Alpha acids: 2,5 – 4,5% Beta acids: 4,0 – 6,0%
Cohumulone: 23,0 – 26,0% of AA Total oils: 0,4 – 0,8 g/100 g



Saaz Late

Bred alternative of Saaz with similar high quality fine aroma for the second and late hopping of lager beers.

Alpha acids: 3,5 – 6,0% Beta acids: 4,0 – 6,5%
Cohumulone: 20,0 – 25,0% of AA Total oils: 0,5 – 1,0 g/100 g



Sládek

High standard aroma hop with excellent influence on well-balanced bitterness and fine hoppy aroma in lager beers.

Alpha acids: 4,5 – 8,0% Beta acids: 4,0 – 7,0%
Cohumulone: 23,0 – 30,0% of AA Total oils: 1,0 – 2,0 g/100 g



Bohemie

Selected from Sládek progeny for higher bitterness as supplement of Premiant. Suitable for the second hopping of lager beers.

Alpha acids: 5,0 – 8,0% Beta acids: 6,0 – 9,0%
Cohumulone: 23,0 – 26,0% of AA Total oils: 1,0 – 1,5 g/100 g



Harmonie

Aroma hop with spicy tones and harmony bitterness in beers. Useful for hopping of lager beers and dark beers and ales.

Alpha acids: 5,0 – 8,0% Beta acids: 5,0 – 8,0%
Cohumulone: 17,0 – 21,0% of AA Total oils: 1,0 – 2,0 g/100 g



Premiant

Popular dual-purpose hop with pleasant hoppy aroma. It adds stable bitterness, full taste and nice long bitter aftertaste in beers and ales.

Alpha acids: 7,0 – 10,0% Beta acids: 3,5 – 5,5%
Cohumulone: 18,0 – 23,0% of AA Total oils: 1,0 – 2,0 g/100 g



Agnus

Standard bitter hop with intense hoppy aroma, pleasant bitterness and long aftertaste in beers and ales. Applicable for basic and the second hopping.

Alpha acids: 9,0 – 12,0% Beta acids: 4,0 – 5,5%
Cohumulone: 29,0 – 38,0% of AA Total oils: 2,0 – 3,0 g/100 g



Rubín

Bitter hop with herbal and spicy aroma, useful for basic and the second hopping of beers and ales. Well-paired with dark malts and dry hopping adds spicy, herbal and fruity notes.

Alpha acids: 9,0 – 12,0% Beta acids: 3,5 – 5,0%
Cohumulone: 25,0 – 33,0% of AA Total oils: 3,0 – 4,5 g/100 g



Vital

Bitter hop, selected from Agnus progeny for high content of polyphenols as pharmaceutical hop. Suitable for basic and the second hopping of beers and ales.

Alpha acids: 10,0 – 15,0% Beta acids: 6,0 – 10,0%
Cohumulone: 21,0 – 26,0% of AA Total oils: 1,5 – 2,5 g/100 g



Kazbek

The first flavour aroma hop with herbal, floral, spicy and intense citrusy aroma. Applicable for the second, late and dry hopping of beers and ales, excellent in wheat beers.

Alpha acids: 5,0 – 8,0% Beta acids: 4,0 – 6,0%
Cohumulone: 35,0 – 40,0% of AA Total oils: 0,9 – 1,8 g/100 g



■ Myrcene ■ Caryophyllene ■ Farnesene ■ Humulene ■ Selinene ■ others