



The patented US variety Amarillo® VGXP01 from Virgil Gamache Farms (VGF) enriches the spectrum of special flavor hop varieties. Within just a few years, it has become one of the most successful hop varieties in the craft beer segment. The origins of this variety can be traced back to the early 1990s, to one of the large hop-growing regions in the United States, namely Washington State, in the north-western part of the country. Amarillo® hops are characterized by their strong fruit and citrus aromas. When used for dry hopping, this hop imparts aromas reminiscent of stone fruit, orange and lemon to the beer, depending upon the beer style, the amount of hops and the timing of the addition. Together with HVG, Virgil Gamache Farms decided to cultivate Amarillo® in three hop growing regions in Germany, in order to satisfy the ongoing increase in demand.



Mother

Father

German Amarillo®

In-house as well as independent commercial brewing trials have demonstrated that German Amarillo® hops are equal in quality to US Amarillo® hops. More and more brewers are expressing interest in brewing with this hop due to its distinctive aroma profile.



Analytical Values

Bitter Substances

α -acid [EBC 7.4]	9.1 % w/w
β -acid [EBC 7.7]	4.5 % w/w
β/α [EBC 7.7]	0.6
Co-Humulone [EBC 7.7]	25 % rel.

Aroma Substances

Total Oil [EBC 7.10]	1.65 ml/100 g
Myrcene [GC-FID]	699 mg/100 g
β -Caryophyllene [GC-FID]	68 mg/100 g
Farnesen [GC-FID]	73.00 mg/100 g
α -Humulene [GC-FID]	200 mg/100 g
Σ Hydrocarbon fraction [GC-FID]	1091 mg/100 g
Linalool [GC-FID]	10 mg/100 g
Geraniol [GC-FID]	6 mg/100 g
Geranyl acetate [GC-FID]	23 mg/100 g
2-methylbutyl 2-methylpropanoate [GC-FID]	32 mg/100 g
Σ Oxygen fraction [GC-FID]	201 mg/100 g
Σ Monoterpene alcohols and esters [GC-FID]	43 mg/100 g
Σ Propanoate [GC-FID]	45 mg/100 g
Σ unsaturated esters [GC-FID]	27 mg/100 g
Σ Esters [GC-FID]	109 mg/100 g
Σ Sesquiterpene alcohols [GC-FID]	379 mg/100 g
Σ Ketone [GC-FID]	19 mg/100 g
Σ Hydrocarbon fraction + Oxygen fraction [GC-FID]	1292 mg/100 g

Polyphenols

Polyphenols [EBC 7.14]	4.2 % w/w
Σ Low-molecular polyphenols [EBC 7.7]	12007 mg/l
Xanthohumol [EBC 7.7]	0.46 % w/w



Usage in Brewing

Often Used

	rarely	medium	frequently
Boil – Beginning	<div></div>		
Boil – Midpoint	<div></div>		
Boil – End & Whirlpool			<div></div>
Dry Hopping			<div></div>

Recommended Beer Styles

	rarely	medium	frequently
Lager	<div></div>		
Ale			<div></div>
Heavily dry-hopped beers			<div></div>
Dark Beer	<div></div>		
Wheat Beer		<div></div>	
Belgian Origin Styles		<div></div>	

Agronomic Aspects

	low		medium	high	
Climate Tolerance			<div></div>		
	low		medium	good	very good
Plant Health			<div></div>		
	early	medium early	medium	medium late	late
Maturity				<div></div>	
			low	medium	high
Storage Stability					<div></div>