Variety	Usage	Admiral	Ahtanum	Amarillo	Bramling Cross	Brewer's Gold	Bullion	Cascade	Centennial	Challenger	Chinook	Cluster	Columbus	Crystal	Eroica	First Gold	Fuggle	Galena	Golding	Green Bullet	Hallertauer Magnum	Hallertauer Mittelfruh	Hallertauer Tradition	Hersbrucker	Horizon	Kent Golding	Liberty	Lublin/Lubelski	Mount Hood	Northdown	Northern Brewer	Nugget	Olympic	Perle	Phoenix	Pioneer	Pride of Ringwood	Progress	Saaz	Santium	Spalter	Spalter Select	Sterling	Strisselspalt	Styrian Golding	Target	Tettnanger, Ger	Tettnang, US	Tomahawk	Ultra	Vanguard	Whitbred Golding	Willamette	Zeus
Admiral	Bittering									2																																			1								
Ahtanum	Aroma			2				1																																													
Amarillo	Aroma		4					1	2		3																																										
Bramling Cross	Dual																		2																		1																
Brewer's Gold	Dual						1																																														
Bullion	Bittering					1																																															
Cascade	Dual			2					1				3																																								
Centennial	Dual							1*			2		1*																																								
Challenger	Dual																													2			1																				
Chinook	Dual												2																	3	1													4									
Cluster	Dual												2																	3	1													4									
Columbus	Bittering										2																			4	1													3			5					6
Crystal	Aroma																					3	2			4		1																								
Eroica	Bittering										3						1														2																						
First Gold	Dual													2											1																												
Fuggle	Dual																																											2		3					1	
Galena	Bittering										2																				1					3																	
Golding	Aroma																3								1												2							1								1		
Green Bullet	Dual													4								3				1		3																					2				
Hallertauer Magnum	Bittering												1																		2																						
Hallertauer Mittelfruh	Aroma																					2				1																							3				
Hallertauer Tradition	Aroma													1												2																											
Hersbrucker	Aroma																											1															2										
Horizon	Dual																			1																																	
Kent Golding	Aroma																		1																		2							1								1		
Liberty	Aroma																				1	2						3																									
Lublin/Lubelski	Aroma																																					1				2											
Mount Hood	Aroma													1									2																				3										
Northdown	Dual																																	1																				
Northern Brewer	Bittering										2																				1																							
Nugget	Bittering										2		1					4																											3									
Olympic	Dual										1																																											
Perle	Dual										4	3						2												1																								
Phoenix	Dual									3															2				1																									
Pioneer	Dual																								1																													
Pride of Ringwood	Dual											2						1																																				
Progress	Dual																2								1																													
Saaz	Aroma																										1																											
Santium	Aroma																																							2	3					1								
Spalter	Aroma																																						3		2					1								
Spalter Select	Aroma																																						3	2						1								
Sterling	Aroma																										2											1																
Strisselspalt	Aroma													2									3					1																										
Styrian Golding	Aroma																1																																			2		
Target	Bittering																1																																			2		
Tettnanger, Ger	Aroma																																					3		1	2													
Tettnang, US	Aroma																																							2	3					1								
Tomahawk	Bittering												1																																								2
Ultra	Aroma																					2				1												3																
Vanguard	Aroma																				2																	1																
Whitbred Golding	Dual																		1						1													2																
Willamette	Dual																1																											3		2	2							
Zeus	Bittering												1																																			2					

NOTE: Numbers indicate preference, but consider usage. If a dual-use hop is used for bittering, sustitute with a bittering hop, as indicated above.
* When substituting for Centennial, use a blend of 70% Cascade and 30% Columbus.