

# LUPOMAX<sup>®</sup> Hop Pellets

## General Use Guide

### Product Description:

LUPOMAX<sup>®</sup> pellets are an enriched-lupulin hop product that provides enhanced hop flavor and aroma to beer while reducing pellet use and beer loss. LUPOMAX<sup>®</sup> pellets are designed for dry hop addition on the cold side or to the brewhouse whirlpool to achieve the greatest impact. Raw hop materials are selected through our exclusive Sensory Plus<sup>™</sup> process each crop year to ensure that LUPOMAX<sup>®</sup> products meet or exceed performance expectations. A consistent decrease in vegetal and grassy attributes via the mechanical enrichment of lupulin under highly controlled conditions and low temperatures protects the sensitive hop components and provides a standardized product that will provide reliable results, year after year.

### Available Hops:

CY22 LUPOMAX <sup>®</sup> Specifications			
Pellet Brand/Variety	Crop Year	Average Oil (mL/100 g)	Average Alpha +/- (%)
LUPOMAX <sup>®</sup> Amarillo <sup>®</sup> HBC VGXP01 c.v.	2022	2.1	14
LUPOMAX <sup>®</sup> Azacca <sup>®</sup> ADHA 483 c.v.	2022	2	17
LUPOMAX <sup>®</sup> BRU-1 <sup>™</sup>	2022	2.2	20
LUPOMAX <sup>®</sup> Cascade	2022	1.5	12
LUPOMAX <sup>®</sup> Cashmere	2022	1.5	13.5
LUPOMAX <sup>®</sup> Centennial	2022	2.2	14
LUPOMAX <sup>®</sup> Chinook	2022	2.1	18
LUPOMAX <sup>®</sup> Citra <sup>®</sup> HBC 394 c.v.	2022	2.7	18.5
LUPOMAX <sup>®</sup> Columbus	2022	3.3	20.5
LUPOMAX <sup>®</sup> Ekuanot <sup>®</sup> HBC 366 c.v.	2022	4.6	19
LUPOMAX <sup>®</sup> El Dorado <sup>®</sup>	2022	2.9	19.5
LUPOMAX <sup>®</sup> HBC 586 c.v.	2022	1.5	16.5
LUPOMAX <sup>®</sup> HBC 1019 c.v.	2022	1.5	15
LUPOMAX <sup>®</sup> Idaho 7 <sup>™</sup>	2022	2.8	20
LUPOMAX <sup>®</sup> McKenzie <sup>™</sup> C-148 c.v.	2022	2.3	17
LUPOMAX <sup>®</sup> Mosaic <sup>®</sup> HBC 369 c.v.	2022	2.2	18
LUPOMAX <sup>®</sup> Sabro <sup>®</sup> HBC 438 c.v.	2022	2.2	19.5
LUPOMAX <sup>®</sup> Talus <sup>®</sup> HBC 692 c.v.	2022	2.2	12

## Product Specifications<sup>1</sup>:

<b>Description:</b>	Cylindrical pellets of approximately 6 mm (0.24 inch) diameter
<b>Consistency:</b>	A formed solid that will generally disintegrate into a powder during use
<b>Color:</b>	Ranges from dark green to olive green (variety dependent)
<b><math>\alpha</math>-Acids:</b>	Standardized to meet a predetermined and narrow specification range (variety dependent)
<b><math>\beta</math>-Acids:</b>	Variety dependent
<b>Hop oils:</b>	Variety dependent
<b>Moisture:</b>	7 - 12% (variety dependent)

## Dosing:

**To ensure optimal flavor and aroma utilization, LUPOMAX® pellets are designed to be added during dry hopping on the cold side or to the brewhouse whirlpool.** Timing of addition can influence final beer flavor and aroma; brewer's discretion will dictate dosage timing and addition rate.

**As a guideline, LUPOMAX® pellets are designed to be used at a replacement rate of 70%, relative to standard Type 90 (T90) pellets.** In other words, if a recipe would normally call for 1 lbs. per barrel of T90 hop pellets, it is recommended to use 0.7 lbs. per barrel of LUPOMAX® enriched-lupulin pellets.

## Storage and Best-By Recommendation:

LUPOMAX® pellets should be stored cold at 0 – 5 °C (32 – 41 °F) and are best when used within three years after processing. If stored at –20 °C (–4 °F) they should be used within five years. Foils, once opened, should be used within a few days to avoid deterioration of hop resins and essential oils.

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<sup>1</sup> Further information on hop varieties is available at [www.johnihaas.com](http://www.johnihaas.com).