

HAZELNUT CROP PROGRAM

January-February Pollination

Description Provides key nutrients for energy and pollination success
Foliar Applied
Transit Foliar® at 6 ounces/acre Phosron® Foliar at 1-3 quarts/acre* CellMate® Foliar at 1-3 quarts/acre
Soil Applied
Transit Soil® at 8 ounces/acre Phosron® Soil at 5-10 gallons/acre FBS Humate Plus™ at 1 quart/acre

March-April Ovule Development

Provides key nutrients for ovule development
Foliar Applied
Transit Foliar at 6 ounces/acre CellMate Foliar at 1-3 quarts/acre
Soil Applied
Transit Soil at 8 ounces/acre

May-June Fertilization

Provides key nutrients for photosynthetic capacity and fertilization success
Foliar Applied
Transit Foliar at 6 ounces/acre K-Surge™ at 3-4 quarts/acre MicroBlend Foliar™ Zn-Mn-Cu at 2-3 quarts/acre Zicron® Foliar at 2 quarts/acre
Soil Applied
Transit Soil at 8 ounces/acre Zicron Soil® at 2-3 quarts/acre FBS Humate Plus at 1 pint/acre

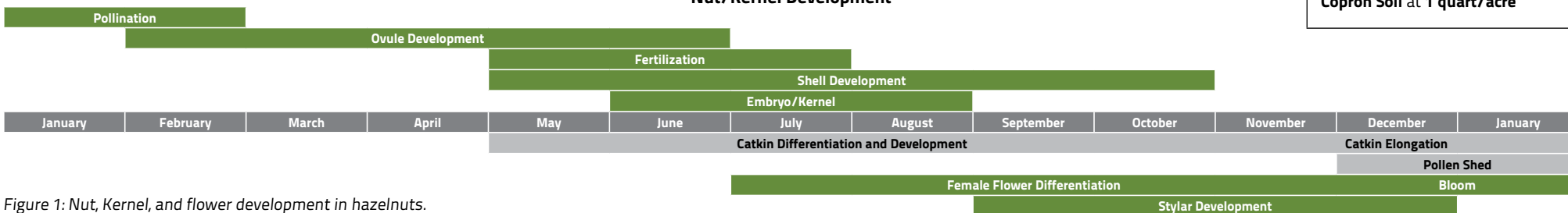
July-August Shell and Nut Development

Provides key nutrients for shell and nut development
Foliar Applied
Transit Foliar at 6 ounces/acre K-Surge at 3-4 quarts/acre BounceBack® Foliar at 1-3 quarts/acre Copron® Foliar at 1-2 pints/acre
Soil Applied
Transit Soil at 8 ounces/acre Copron® Soil at 1-2 quarts/acre

September-October Catkin Elongation and Female Flower Differentiation

Provides key nutrients for female flower differentiation
Foliar Applied
Transit Foliar at 6 ounces/acre BoronBoost® Foliar at 3-4 pints/acre
Soil Applied
Transit Soil at 8 ounces/acre BoronBoost® Soil at 2 quarts/acre Phosron Soil at 5-10 gallons/acre Zicron Soil at 2-4 quarts/acre Copron Soil at 1 quart/acre

Nut/Kernel Development



Flower Development

Figure 1: Nut, Kernel, and flower development in hazelnuts.

Jeff Olsen, Extension horticulturist, Willamette Valley, Oregon State University

*Always add **FBS Harmony™** at 1 pint for every 2 pints of **Phosron Foliar** to improve compatibility and uptake. This program can be adapted to individual field or farm conditions based upon soil and tissue tests. Rates can vary and additional FBS products can be substituted to address specific nutrient deficiencies or stress situations.



Other nutrients as required. See back page for more details.



PRODUCT SOLUTION BY GROWING CONDITION

Condition	Solution
Nitrogen (N) Low	SloN Plus
Nitrogen (N) High	Copron Soil, Copron Foliar, MicroBlend Foliar Zn-Mn-Cu, DriveKP
Phosphorus (P) Low	Phosron Soil, Phosron Foliar, DriveKP
Phosphorus (P) High	PhotoGreen Soil, PhotoGreen Foliar, Zicron Soil, Zicron Foliar, Manron Soil, Manron Foliar, Copron Soil, Copron Foliar, MicroBlend Foliar Zn-Mn-Cu
Potassium (K₂O) Low	K-Surge, DriveKP
Potassium (K₂O) High	GreenSurge Foliar, Calron Soil, CellMate Foliar Plus Mo, BounceBack Foliar
Calcium (Ca) Low	Calron Soil, CellMate Foliar Plus Mo, BounceBack Foliar
Calcium (Ca) High	GreenSurge Foliar, GreenSurge Soil, ChloroDrive Foliar
Magnesium (Mg) Low	GreenSurge Foliar, GreenSurge Soil, ChloroDrive Foliar
Magnesium (Mg) High	Calron Soil, CellMate Foliar Plus Mo, BounceBack Foliar
Sulfate (SO₄) High	Calron Soil, CellMate Foliar Plus Mo, BounceBack Foliar
Sodium (Na) High	K-Surge, Transit Soil, FBS Humate Plus, Calron Soil
Boron (B) Low	BoronBoost Soil, Boron Boost Foliar, CellMate Foliar Plus Mo
Boron (B) High	Calron Soil, BounceBack Foliar
Copper (Cu) Low	Copron Soil, Copron Soil, MicroBlend Foliar Zn-Mn-Cu
Copper (Cu) High	Zicron Soil, Zicron Foliar, ZiCAN Soil, PhotoGreen Soil, PhotoGreen Foliar
Iron (Fe) Low	PhotoGreen Soil, PhotoGreen Foliar, FlexForce Foliar, FlexForce Soil
Iron (Fe) High	Zicron Soil, Zicron Foliar, ZiCAN Soil
Manganese (Mn) Low	Manron Soil, Manron Foliar, FlexForce Foliar, FlexForce Soil
Manganese (Mn) High	Zicron Soil, Zicron Foliar, ZiCAN Soil, PhotoGreen Soil, PhotoGreen Foliar
Zinc (Zn) Low	Zicron Soil, Zicron Foliar, ZiCAN Soil, FlexForce Foliar, FlexForce Soil
Zinc (Zn) High	PhotoGreen Soil, PhotoGreen Foliar, Manron Soil, Manron Foliar
Micronutrients Low	MicroBlend Foliar Zn-Mn-Cu, MicroBlend Foliar Zn-Mn-B, ChloroDrive Foliar, FlexForce Foliar, FlexForce Soil, ChloroDrive Foliar, BenePhite Expand
Chloride (Cl) High	Transit Soil, Transit Foliar, FBS Humate Plus
Silicon (Si) High	Calron Soil, CellMate Foliar Plus Mo, BounceBack Foliar
Acidifier (Tank Buffer)	FBS Harmony
Compatibilty Aid (Tank Mixing)	FBS Harmony, FBS Marshal

Condition	Solution
Bicarbonates HCO₃ High	Transit Soil, Transit Foliar, FBS Humate Plus, PhotoGreen Foliar, FlexForce Foliar, FlexForce Soil
"Hydrogen (H) Percent Base Saturation High"	FBS Humate Plus, Transit Soil, Calron Soil
CEC Low	FBS Humate Plus, Transit Soil
Organic Matter Low	FBS Humate Plus, Transit Soil
Organic Matter High	FBS Humate Plus, Transit Soil
Light Sandy Soils	FBS Humate Plus, Transit Soil
Heavy Clay Soils	FBS Humate Plus, Transit Soil
Soil Conditioning	FBS Humate Plus
Alternate Bearing	Transit Soil, Transit Foliar, FBS Humate Plus, DriveKP, K-Surge, SloN Plus, Ocean Swell
Bud/Blossom Set	CellMate Foliar Plus Mo, MicroBlend Foliar Zn-Mn-B, BoronBoost Foliar, MicroBlend Foliar Zn-Mn-Cu, FlexForce Foliar, FlexForce Soil
Bulking	K-Surge, Calron Soil, BounceBack Foliar, CellMate Foliar Plus Mo, DriveKP
Chlorosis	PhotoGreen Foliar, PhotoGreen Soil, Zicron Foliar, Zicron Soil, Manron Foliar, Manron Soil, MicroBlend Foliar Zn-Mn-Cu, MicroBlend Foliar Zn-Mn-B, ChloroDrive Foliar, GreenSurge Foliar, FlexForce Foliar, FlexForce Soil
Cold Stress	Phosron Soil, Phosron Foliar, FBS Humate Plus, Transit Soil, Transit Foliar, DriveKP, Ocean Swell
Crop Damage	Phosron Foliar, Phosron Soil, FBS Humate Plus, Transit Foliar, Transit Soil, K-Surge
Drought Stress	K-Surge, Transit Soil, Transit Foliar, FBS Humate Plus
Fungal Disease	Carbon Defense, DriveKP, K-Surge, BenePhite Expand
Germination Enhancement	Transit Soil, Humate Plus, Ocean Swell, SuperSede Line, Soil Energy Line
Heat Stress	BounceBack Foliar, K-Surge, Transit Foliar, Ocean Swell
Lignin Synthesis	Copron Soil, Copron Foliar, MicroBlend Foliar Zn-Mn-Cu
Moisture Stress	FBS Humate Plus, K-Surge, Transit Foliar, Ocean Swell
Nutrient Use Efficiency (NUE)	Transit Soil, Transit Foliar, FBS Organics Transit Soil, FBS Humate Plus, Ocean Swell, Soil Energy Line
Pesticide Residue/Damage	FBS Humate Plus, Transit Soil
Plant Health/Strength	Transit Soil, Transit Foliar, FBS Humate Plus, DriveKP, K-Surge, SloN Plus, Ocean Swell, Soil Energy Line
Rooting Enhancement	Transit Soil, Phosron Soil, Phosron Foliar, K-Surge, FBS Humate Plus, Ocean Swell, DriveKP
Salt Stress	Transit Soil, Transit Foliar, FBS Humate Plus, Ocean Swell

Verify these conditions with soil and tissue testing accompanied by field inspections.