PROTOCOL FOR

ORGANIC ROW CROPS

THE POWER OF WE®

WILBUR-ELLIS.

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PROTOCOL FOR ORGANIC CROPS

This guide serves as a resource to help you navigate the National Organic Program (NOP) requirements. At Wilbur-Ellis, we understand that building healthy soil and promoting biodiversity are essential components of successful organic farming. Achieving this requires expert agronomy and a close partnership with your grower. Wilbur-Ellis is here to be your partner and set you up for an organic and sustainable future.

Organic is a label that signifies products have been produced following approved methods. To carry the USDA Organic seal, products must meet specific requirements verified by a USDA-accredited certifying agent. For a full overview of the USDA organic standards, explore the complete set of resources here. https://www.ams.usda.gov/rules-regulations/organic

Organic Crop Standards

The organic crop production standards require that:

- Land must have had no prohibited substances applied to it for at least 3 years before the harvest of an organic crop.
- Soil fertility and crop nutrients will be managed through tillage and cultivation practices, crop rotations, and cover crops, supplemented with animal and crop waste materials and allowed synthetic materials.
- Crop pests, weeds, and diseases will be controlled primarily through management practices including physical, mechanical, and biological controls. When these practices are not sufficient, a biological, botanical, or synthetic substance approved for use on the National List may be used.
- Operations must use organic seeds and other planting stock when available.
- The use of genetic engineering, ionizing radiation and sewage sludge is prohibited.

Regenerative Organic Certification (ROC) Standards

There are many definitions out in the market attempting to define regenerative farming practices. The Regenerative Organic Alliance, ROA certification, is the most widely recognized of these certifications that mandates certified organic farming as the Baseline for ROC.

- Organic Certification is the Baseline - https://regenorganic.org/
- Three pillars to ROC – Soil Health, Animal Welfare and Social Justice
- For a baseline soil health analysis - https://regenorganic.org/wp-content/uploads/2020/10/ROC-Soil-Sampling-Guidelines.pdf

Consult the Wilbur-Ellis Organic Crop Guide to determine the best organic nutrition and pest management program for your organic grower.

Things to Know

Prior to recommending and selling a product that will be applied to organically certified ground:

1. The input product must be on the Growers Organic Materials List.

2. The input product must have an up to date, valid OMRI or WSDA organic certificate. https://www.omri.org/omri-lists, https://cms.agr.wa.gov/getmedia/6322228c-c949-44a2-926c-2a86739269e3/WSDA_Organic_Input_Material_List

3. An organic fertilizer being sold in California must have a current CDFA OIM certificate. https://www.cdfa.ca.gov/

4. An organic fertilizer or bio stimulant being sold into the leafy greens market in CA or AZ must have a Certificate of Analysis that corresponds with LGMA requirements. https://lgma.ca.gov/

5. When supplying and using application equipment, i.e. Ball tanks, foliar ground rigs, ensure the equipment has undergone a clean out and the documentation is easily accessible for the grower.

6. When the equipment is dedicated to organic only, have equipment labeled as such and have a descriptive document identifying that equipment for traceback purposes.

7. In the product warehouse, it is recommended that all Organic Products be kept in a separate area, labeled for Organic Products Only.

GLOSSARY

Organic Fertilizers

There are many different formulations of organic fertilizers, either dry or liquid, that fit many different cropping systems. Depending on the Nitrogen and fertility requirements for the crop, apply sufficient up-front dry pelleted fertilizer, manure or compost to establish a good Carbon: Nitrogen (C:N) ratio base for that crop. For optimum nitrogen efficiency, apply a liquid fertilizer following the preplant that supplies nitrogen and microbial food needed to jump start the mineralization process from the carbon and nitrogen applied from the dry fertilizer or cover crop residue. Follow with timely fertigation and a foliar regime that includes high quality liquid nutrition and bio stimulants that are appropriate for your crop's needs for optimum growth, resilience and productivity.

When applying soil and foliar applications of Calcium or any Micronutrient, the grower must demonstrate a deficiency or physiological disorder that corresponds with the applied nutrient. The grower should have available a current soil, tissue or SAP analysis for that crop or block demonstrating a reason for application.

Organic Pesticides

Diseases, weeds, insects and other pests will always try to find the weakness in the system and attempt to exploit it. This is why prevention and intervention are always recommended. Monitor crops diligently, and at the first sign of pest pressure, or if environmental conditions are conducive for insect or disease development, implement a preventative spray program. It is best to go early, prior to heavy infestation for most efficacious results.

It is mandatory to consult the label and registration of the approved organic pesticide for specific crop use recommendations. Every label is different for every crop and not all states will have registration. Keep diligent records of pest levels and reason for preventative applications for your growers' records for paper trail traceback.

Biological Control Agents

BCAs such as predators and parasitoids are important control agents for specific pests on the farm. Augmentation is an option for increased predatory and parasitic beneficial insects and can be applied via drone. Do not apply until after using broad spectrum organic insecticides, such as Pyrethrums or Spinosad, as these will harm the beneficial populations. Vendors such as Beneficial Insectaries, BioBee or Koppert are available to learn more and source BCAs. Refer to **Appendix "Biocontrol Agents — Who They Are and What They Do" on page 13**.

Combine early augmentative control with parasitoids and predators to build early populations to keep up with early pest infestations. Augment into insectary strips, field edges and in field.

Cover Crop

It is known that each grower and ranch will have different soil and cropping systems. When a cover crop can be incorporated into the system, microbial biomass will increase, increasing soils resiliency to stressors. A blend rather than a single species cover crop is recommended to help build biodiversity in the soil.

The cover crop, when managed properly, can mine residual Nitrate Nitrogen, reduce NO_3-N leaching, reduce soil erosion (wind, water), improve organic matter, increase microbial biodiversity, reduce weed populations, act as a refuge for beneficial insects, and when incorporated, return N for the following crop, and if mowed, left as a mulch to smother weeds and preserve soil moisture. See **Appendix "Recommended Cover Crop Seed" on page 16** for blend ideas and to source from your local seed supplier.

The NOP rule for sourcing organic seed is, if available, to always choose organic seed. If organic seed is not available, the grower must obtain three letters from seed suppliers stating no organic seed for that request is available along with a letter of assurance stating the seed is non-GMO and not treated with any synthetic coating. If the seed is organic, then the organic certificate must accompany that seed lot number and if coated, the organic certificate for that seed coat. This documentation must be kept for the growers' paper trail audit that is conducted yearly by their accredited organic certifier.

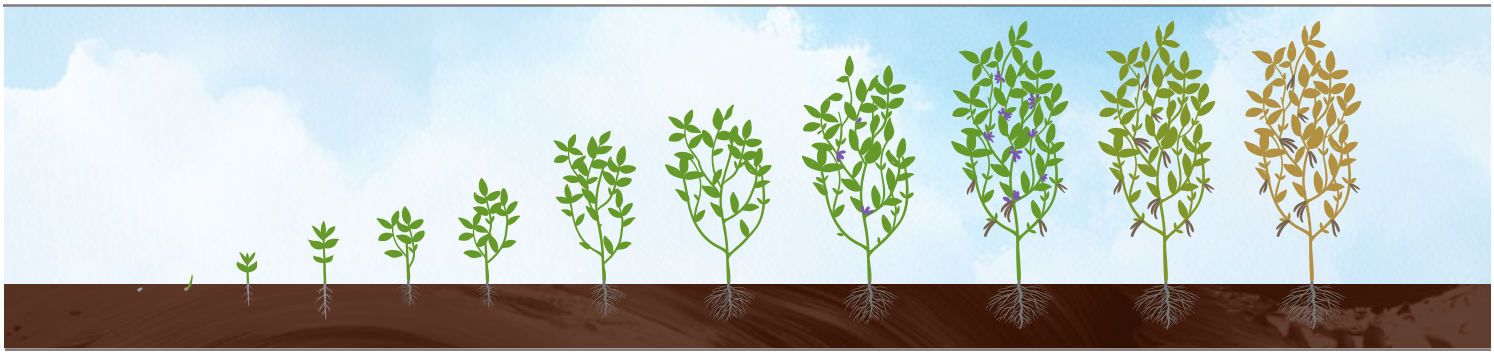
Cover Crops can build organic matter by adding large amounts of carbon to the soil, reducing erosion and increasing water holding capacity and water infiltration.

Insectary Habitat

Creating and maintaining insectary habitat in and around the crop is an important management tool for adding above ground Biodiversity. A floral insectary habitat will add pollen (protein) and nectar (carbohydrate) as a food source for adult predatory and parasitic Bio Control Agents. See **Appendix "Recommended Insectary Habitat Seeds" on page 17** for ideas and source from local seed vendors for local native blends. The same NOP seed rule applies to insectary habitat seeds.

Insectary Habitat will add diversity to the farm giving the beneficial insects a place of refuge and a diverse food source. Plant in strips, along ditches, open areas with irrigation and mixed within the crop.

ORGANIC ROW CROPS



Dry Fertilizer - Preplant and Side Dress Applications

Pellcarb 4-3-2

@ 500 - 4000 lb/A

N (lb/A)	P (lb/A)	K (lb/A)
20 - 160	20 - 160	10 - 80

MFG: Hello Nature

Dehydrated Poultry Manure

8:1 C:N ratio with 4% N, 4% P and 2% K. Mineralization and solubilization of these nutrients are dependent on many factors such as temperature, soil O.M. and moisture. Microbes in the soil break down these nutrients into usable forms for the plant to take up and utilize.

Organic Farms 4-4-2

@ 500 - 4000 lb/A

N (lb/A)	P (lb/A)	K (lb/A)
20 - 160	20 - 160	10 - 80

MFG: Foster Farms

Dehydrated Poultry Manure, Meat and Bone Meal, Rock Phosphate, Potassium Sulfate

8:1 C:N ratio with 4% N, 4% P and 2% K. Mineralization and solubilization of these nutrients are dependent on many factors such as temperature, soil O.M. and moisture. Microbes in the soil break down these nutrients into usable forms for the plant to take up and utilize.

Organic Farms 6-3-2

@ 500 - 2000 lb/A

N (lb/A)	P (lb/A)	K (lb/A)
30 - 120	15-60	10-40

MFG: Foster Farms

Dehydrated Poultry Manure, Feather Meal, Meat and Bone Meal, Rock Phosphate and Potassium Sulfate

6:1 C:N ratio, moderate N release under optimum conditions.

Organic Farms 8-5-1

@ 500 - 2000 lb/A

N (lb/A)	P (lb/A)	K (lb/A)
40 - 150	25-100	5-20

MFG: Foster Farms

Feather Meal, Meat and Bone Meal, Dehydrated Poultry Manure, Rock Phosphate, Potassium Sulfate

5:1 C:N with moderate N release rate under optimum soil temperatures.

BenVireo® NSentials® 13-0-0 (WE)

@ 275 - 1000 lb/A

N (lb/A)	P (lb/A)	K (lb/A)
36 - 130	0	0

MFG: WILBUR-ELLIS exclusive

Feather Meal and Blood Meal

3:1 C:N, quickest dry pellet N release under optimal soil temperatures. Apply as a preplant for short season crops (30 days) to front load carbon and nitrogen for mineralization.

HumiK WSG 0-0-10

@ 4 - 10 lb/A

N (lb/A)	P (lb/A)	K (lb/A)
0	0	0.4 - 1

MFG: HGS BioScience

60% Humic Acids derived from leonardite, Soluble Potash 10% derived from Potassium Hydroxide

A proprietary dry water soluble granule comprised of extracted humic acids which contain high amounts of carbon and soluble potassium. Apply at time of dry fertilizer application.

Not all analysis are appropriate for the soil type, please consult a soil analysis and local research and knowledge.

SOP 0-0-50

@ 100 - 500 lb

N (lb/A)	P (lb/A)	K (lb/A)
0	0	50 - 250

MFG: Diamond K

Sulfate of Potash 50% K

Sulfate of Potash 50% Soluble fines that go into solution readily. Can also be applied as a dry and irrigated in.

Microna Prilled Gypsum

@ 250 - 1000 lb

N (lb/A)	P (lb/A)	K (lb/A)
0	0	0

MFG: Columbia River Carbonates

Calcium Sulfate dihydrate CaSO42H2O 92%, Ca 21%, S 17% Derived from Gypsum

Dust free, can be applied anytime in the season as a blend with dry fertilizers to improve soil structure and aid in leaching out salts.

Mineralization rates vary dependent on soil temperature, soil O.M. content, moisture content and fertilizer placement.

The C:N ratio of a material will help determine the availability of that Nitrogen applied, the higher the C:N ratio, the slower to release, the lower the C:N, the faster the release.

Microbial populations have a C:N Ratio of 8:1, 25% of C is used for new tissue growth, 75% C for energy. Keep microbes active with plenty of carbon in the system and Nitrogen.

(WE) = A WILBUR-ELLIS BRANDED PRODUCT. See "Wilbur-Ellis Featured Organic Products" on page 19

Water Run, Side Dress, and Foliar Applications

BenVireo® FoliSentials® 3-0-3 WE

@ 1 - 10 gal

N (lb/A)	P (lb/A)	K (lb/A)
0.3 - 3	0	0.3 - 3

MFG: WILBUR-ELLIS exclusive

Molasses, Beet Extract, Soy Protein Hydrolysate

A rapid food source for microbial populations. Use when soils are depleted to jumpstart populations. Use in conjunction with humic acid to balance the carbon source for increased diversity.

BenVireo® TerraLux™ 7-0-0 (CA Only) WE

@ 2 - 40 gal/A

N (lb/A)	P (lb/A)	K (lb/A)
1.3 - 25.6	0	0

MFG: WILBUR-ELLIS exclusive

100% Plant Available Nitrogen for the plant to utilize immediately.

100% Plant Available Nitrogen as ammonium nitrate. Apply and adjust rates according to the plants need with optimum timing. Ideal to spoon feed as the crop requires nitrogen at specific growth stages.

BenVireo® TerraLux™ 10-0-0 WE

@ 2 - 30 gal/A

N (lb/A)	P (lb/A)	K (lb/A)
1.9 - 28.2	0	0

MFG: WILBUR-ELLIS exclusive

100% Plant Available Nitrogen for the plant to utilize immediately.

100% Plant Available Nitrogen as ammonium nitrate. Apply and adjust rates according to the plants need with optimum timing. Ideal to spoon feed as the crop requires nitrogen at specific growth stages.

NUTRIO® UNLOCK® WE

@ 1 qt - 1 pt

N (lb/A)	P (lb/A)	K (lb/A)
0	0	0

MFG: WILBUR-ELLIS exclusive

R. palustris, B. brevis, Lactob. plantarum, B. licheniformis, B. megaterium, R. rhodochrous, S. griseus

Seven species of PGPR's designed to liberate and solubilize tied up phosphorous and micro nutrients in the soil. Apply 1 qt early followed with 1 pt in combination with Puric and TerraLux.

Oceano Max 0-0-1 WE

@ 1 qt - 1 gal

MFG: WILBUR-ELLIS exclusive

Kelp - *Ecklonia maxima* and sulfate of potash 1%

Kelp contains many phytochemicals and hormones to regulate stress in the plant and add carbon to help promote soil health. Use to enhance microbial activity and stimulate plant health response.

PURIC® 0-0-2 WE

@ 1 qt - 1 gal

N (lb/A)	P (lb/A)	K (lb/A)
0	0	0.005 - 0.02

MFG: WILBUR-ELLIS exclusive

Humic Acid from Leonardite 12%

12% Humic Acid derived from Leonardite and 2% soluble potash. Aids in building soil fertility, water holding capacity and microbial food source. Apply early in the season to prime soil and spoon feed in combination with nitrogen to slow release rates.

WE = A WILBUR-ELLIS BRANDED PRODUCT. See "Wilbur-Ellis Featured Organic Products" on page 19

Nutrition Foliar Applications

BenVireo® Calcium WE

@ 1 - 2 qt

MFG: WILBUR-ELLIS exclusive

4% CaCl complexed with SPH

Use when Ca deficiencies are documented or physiological disorders warrant, such as bitter pit in apples or tip burn in lettuce.

BenVireo® FoliSentials® 3-0-3 WE

@ 1 qt - 2 gal

N (lb/A)	P (lb/A)	K (lb/A)
0.075 - 0.6	0	0.075 - 0.6

MFG: WILBUR-ELLIS exclusive

Molasses, Beet Extract, Soy Protein Hydrolysate

Use as a feeding stimulant for insects and mites when using an insect stomach disruptor.

BenVireo® Iron WE

@ 1 - 2 qt

MFG: WILBUR-ELLIS exclusive

4% Fe, 2.3% S complexed w/ SPH

Per NOP, must have a Fe deficiency documented either with a soil or tissue test. High quality chelation with amino acids, very available.

BenVireo® Manganese WE

@ 1 - 2 qt

MFG: WILBUR-ELLIS exclusive

4% Mn, 2.4% Sulfur complexed w/ SPH

Per NOP, must have a Mn deficiency documented either with a soil or tissue test. High quality chelation with amino acids, very available.

BenVireo Multus® WE

@ 1 - 2 qt

MFG: WILBUR-ELLIS exclusive

0.5% Mg, 1% Mn, 1% Zn, 4% S complexed w/ SPH

Per NOP, must have a Mg, Mn, Zn and S deficiency documented either with a soil or tissue test. High quality chelation with amino acids, very available.

BenVireo® Stimtide® 5-0-0 WE

@ 1 - 2 pt

N (lb/A)	P (lb/A)	K (lb/A)
0.125 - 0.25	0	0

MFG: WILBUR-ELLIS exclusive

Soy Protein Hydrolysate - Peptide

A proprietary peptide formulation designed as a stress mitigator. Use prior to a stress event to help mitigate damage caused by that event.

BenVireo® TerraLux™ 7-0-0 (CA Only) WE

@ 1 qt - 2 gal

N (lb/A)	P (lb/A)	K (lb/A)
0.16 - 1.28	0	0

MFG: WILBUR-ELLIS exclusive

50% Ammonium, 50% Nitrate Nitrogen derived from manure

100% Plant Available Nitrogen as ammonium nitrate. Apply and adjust rates according to the plants need with optimum timing. Ideal to spoon feed as the crop requires nitrogen at specific growth stages.

BenVireo® TerraLux™ 10-0-0 WE

@ 1 qt - 2 gal

N (lb/A)	P (lb/A)	K (lb/A)
0.24 - 1.9	0	0

MFG: WILBUR-ELLIS exclusive

50% Ammonium, 50% Nitrate Nitrogen derived from manure

100% Plant Available Nitrogen as ammonium nitrate. Apply and adjust rates according to the plants need with optimum timing. Ideal to spoon feed as the crop requires nitrogen at specific growth stages.

BenVireo® Zinc WE

@ 1 - 2 qt

MFG: WILBUR-ELLIS exclusive

4% Zn, 2% S complexed w/ SPH

Per NOP, must have a Zn deficiency documented either with a soil or tissue test. High quality chelation with amino acids, very available.

BIOLINK® Moly

@ 1 - 2 qt

MFG: San Agrow

1% N, 4% Mo complexed with citric acid

Per NOP, must have a Mo deficiency documented either with a soil or tissue test. Complexed with citric acid, very available.

BIOLINK® Boron

@ 1 - 2 qt

MFG: San Agrow

2% N, 3% B, SPH plus sodium borate

Per NOP, must have a B deficiency documented either with a soil or tissue test.

FOLI-GRO® Zinc 7% WE

@ 1 - 2 qt

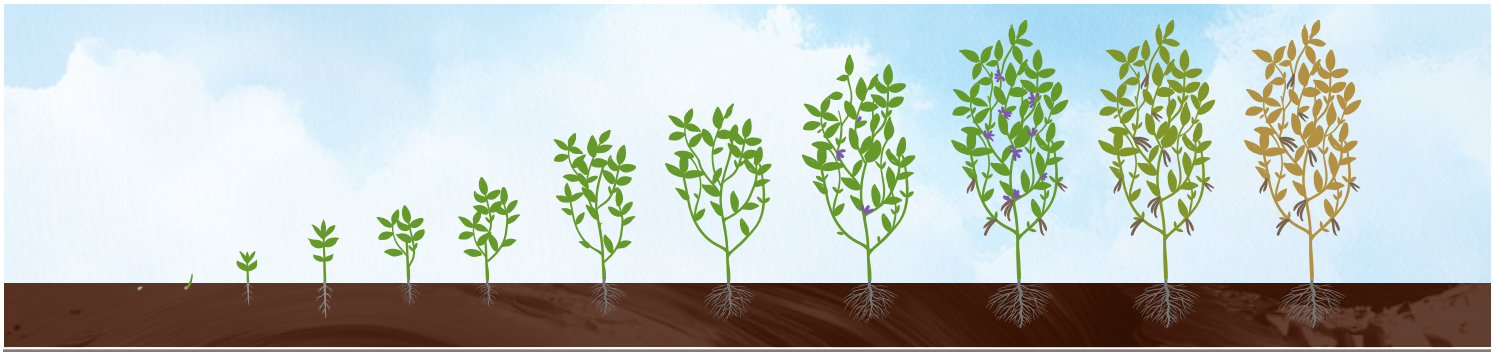
MFG: WILBUR-ELLIS exclusive

7% Zn, 3% S complexed with lignosulfonate

Per NOP, must have a Zn and S deficiency documented either with a soil or tissue test. Complexed chelation with lignosulfonate.

Apply micronutrients at night when deliquescence is at it's highest for optimum absorption into the leaf tissue and use with SYL-COAT® or INFOLIUM-EA® organosilicone spreader.

WE = A WILBUR-ELLIS BRANDED PRODUCT. See "Wilbur-Ellis Featured Organic Products" on page 19



Fungicide - OMRI Listed

Actinovate AG

MFG: Novozymes

Streptomyces lydicus WYEC 108

Produces siderophores and secondary metabolite Chitinase, an enzyme that breaks down chitin in the pathogens cell walls. With this combination, it actively seeks out and kills labeled pathogens.

AVIV®

MFG: Summit Agro

Bacillus subtilis strain IAB/BS03 0.08%

For soil and foliar fungal and bacterial pathogens. Preventative and tank mix, no residue

Badge® X2

MFG: Gowan

Copper Oxychloride 23.82 %, copper hydroxide 21.49%

Inhibits the growth of certain fungal and bacterial pathogens if used in a preventative manner, and as a curative if infections are present.

Double Nickel® 55

MFG: Certis

Bacillus amyloliquefaciens strain D747 25%

For soil and foliar fungal and bacterial pathogens. Preventative and tank mix, no residue

Cinnerate®

MFG: Sym Agro

Cinnamon Oil 60%, Potassium Oleate 40%

Effective on powdery mildew, botrytis and rust, along with miticide on certain crops.

Contans® WG

MFG: SipCam Agro

Coniothyrium minitans CON/M/91-08 - 5 %

Living fungi, must be refrigerated. For the control and reduction of sclerotium of Sclerotinia sclerotium and S. minor

Cueva®

MFG: Certis

Copper Octanoate, Copper Soap 10%

Inhibits the growth of certain fungal and bacterial pathogens if used in a preventative manner, and as a curative if infections are present.

EcoSwing®

MFG: Gowan

Extract of *Swinglea gluinosa* 82%

Use for the management and control of selected fungal pathogens.

FUN-THYME™ WE

MFG: WILBUR-ELLIS exclusive

Thyme Oil 26%

This thyme oil is encapsulated with the AgroSpheres technology creating a long lasting thyme oil aromatic within the plant canopy, increasing efficacy and residual of the active ingredient, controlling powdery mildew, botrytis and other plant pathogens.

Kaligreen®

MFG: AOT Agrio

Potassium bicarbonate 81.9%

Curative contact fungicide against powdery mildew

Kocide® 3000-O

MFG: Certis

Copper Hydroxide

Inhibits the growth of certain fungal and bacterial pathogens if used in a preventative manner, and as a curative if infections are present.

M-Pede®

MFG: Gowan

Potassium Salts of Fatty Acids 49%

Curative contact fungicide against powdery mildew

MilStop®

MFG: Gowan

Potassium bicarbonate 85%

Curative contact fungicide against powdery mildew

Nordox WG

MFG: Monterey Ag Resources

Cuprous Oxide 83.9%

Inhibits the growth of certain fungal and bacterial pathogens if used in a preventative manner, and as a curative if infections are present.

OSO® 5% SC

MFG: Certis

Polyoxin D Zinc salt 5%

Apply as a preventative for many diseases, and follow with subsequent applications.

OxiDate® 5.0

MFG: BioSafe Systems

Hydrogen Peroxide 27.1%, Peroxyacetic acid 2%

Use if there is active infection as a curative, danger label for skin and eye contact.

Regalia®

MFG: ProFarm

Extract of *Reynoutria sachalinensis* 5%

ISR for the induction of plant defense mechanisms for certain pathogens.

Romeo WE

MFG: WILBUR-ELLIS exclusive with Agrauxine

Cerevisane (cell walls of *Saccharomyces cerevisiae* strain LAS 117) 94.1%.

ISR inducer for P. mildew, D. mildew and Monolinia pathogens, use as a tank mix partner.

Serenade® ASO

MFG: Bayer

Bacillus subtilis strain QST 713 1.34%

For soil and foliar fungal and bacterial pathogens. Preventative and tank mix, can leave some residue

SULFUR DRY FLOWABLE WE

MFG: WILBUR-ELLIS exclusive

Sulfur 80%

A sulfur dry flowable for the prevention and curative action on powdery mildew and some leaf spots, foliar applied.

T34 Biocontrol® WE

MFG: WILBUR-ELLIS exclusive with Biocontrol Technologies

Trichoderma asperellum Strain T34 12%

A plant protectant and preventative fungicide and bacteriacide utilizing multiple modes of action by colonization and parasitism. Can be used as a foliar or soil applied. This is a live fungi, do not apply with other fungicides or Chlorine.

Timorex Act®

MFG: Summit Agro

Tee Tree Oil 12.5%

Do not apply Timorex Act within 7 days of sulfur application. For fungal and bacterial diseases.

Zayin

MFG: GroPro

Geraniol 16.70%

Broad spectrum foliar fungicide of various diseases for listed crops. Acts as a protectant and curative when used preventively and at low levels of disease to prevent major outbreaks.

WE = A WILBUR-ELLIS BRANDED PRODUCT. See "Wilbur-Ellis Featured Organic Products" on page 19

Insecticide - OMRI Listed

Agree®
MFG: Certis

Bacillus thuringiensis, subsp. Aizawai strain GC-91 50%

Use for the control of various lepidopteran pests, control is best with early instars and Bt must be ingested to be effective. Trade off or combine the aizawai and kurstaki strains, dependent on pest and pressure.

Aza-Direct®
MFG: Gowan

Azadirachtin 1.2%

IGR, repellent, must use subsequent applications for optimum efficacy, Use at earliest spray, moderately hard on Beneficials. Consult Koppert info on toxicity to beneficial organisms. Buffer water to pH 6.5

AzaGuard®
MFG: BioSafe

Azadirachtin 3%

IGR, repellent, must use subsequent applications for optimum efficacy, Use at earliest spray, moderately hard on Beneficials. Consult Koppert info on toxicity to beneficial organisms. Buffer water to pH 6.5

BotheGHA®
MFG: Certis

Beauveria bassiana GHA 11.3%

This is a fungus that infects the insect if the spore comes into contact with the insect. Best under humid conditions, do not apply with other fungicides. Use as a foliar at night only and as a drip application for soil born insects.

Bug-N-Sluggo®
MFG: Neurdorf

Iron Phosphate 0.97%, Spinosad 0.07%

A bait for the control of slugs, snails and soil dwelling insects that chew on crops.

Celite® 610
MFG: Brandt

Diatomaceous Earth consisting of Silicon Dioxide 85%

Works by removing and absorbing protective waxy cuticle of insect when in contact with the material, coverage is essential.

DeBug® Tres
MFG: Valent

Fats and Glyceridic Oils of Margosa 4.7%, Azadiractin 3%

IGR, repellent, must use subsequent applications for optimum efficacy, Use at earliest spray, moderately hard on Beneficials. Consult Koppert info on toxicity to beneficial organisms. Buffer water to pH 6.5

DeBug® Turbo
MFG: Valent

Oils Margosa 65.8%, Azadiractin 0.7%

IGR, repellent, must use subsequent applications for optimum efficacy, Use at earliest spray, moderately hard on Beneficials. Consult Koppert info on toxicity to beneficial organisms. Buffer water to pH 6.5

DiPel®
MFG: Valent

Bacillus thuringiensis, subsp. Kurstaki strain ABTS-351 54%

Use for the control of various lepidopteran pests, control is best with early instars and Bt must be ingested to be effective. Trade off or combine the aizawai and kurstaki strains, dependent on pest and pressure.

Ecotec® Plus
MFG: Brandt

Rosemary Oil 10%, Geraniol 5%, Peppermint Oil 2%

Must come in contact with the insects for any type of control, low residual activity.

ECOZIN® PLUS
MFG: AmVac

Azadirachtin 1.2%

IGR, repellent, must use subsequent applications for optimum efficacy, Use at earliest spray, moderately hard on Beneficials. Consult Koppert info on toxicity to beneficial organisms. Buffer water to pH 6.5

Entrust® SC
MFG: Corteva

Spinosad (a mixture of spinosyn A and D) 22.5%

Effective on a variety of piercing sucking insects, lepidopteran and beetles. Very detrimental to beneficial insects, use restrictions apply.

Grandevo® WDG
MFG: ProFarm

Chromobacterium subtsugae strain PRAA4-1 30%

Toxic to aquatic organisms and bees, avoid drift. Must be ingested to disrupt feeding and egg fecundity. Use early to target immatures to disrupt future generations. Use as a tank mix partner and rotate with Venerate XC.

Javelin® WG
MFG: Certis

Bacillus thuringiensis, subsp. Kurstaki strain SA-11 85%

Use for the control of various lepidopteran pests, control is best with early instars and Bt must be ingested to be effective. Trade off or combine the aizawai and kurstaki strains, dependent on pest and pressure.

M-Pede®
MFG: Valent

Potassium Salts of Fatty Acids 49%

Use as a suffocant or to soften the insects exoskeleton to act as a tank mix partner with other contact insecticides.

Neemix® 4.5
MFG: Certis

Azadirachtin 4.5%

IGR, repellent, must use subsequent applications for optimum efficacy, Use at earliest spray, moderately hard on Beneficials. Consult Koppert info on toxicity to beneficial organisms. Buffer water to pH 6.5

PFR-97™
MFG: Certis

Isaria fumosorosea Apopka Strain 97 20%

This is a fungus that infects the insect if the spore comes into contact with the insect. Best under humid conditions, do not apply with other fungicides. Use as a foliar at night only and as a drip application for soil born insects.

Principle™ WP
MFG: Bioworks

Beauveria bassiana strain BW149 21%

Pyganic® 5.0
MFG: Valent

Pyrethrins 5%

Effective on a variety of piercing sucking insects and beetles. Very detrimental to beneficial insects, a choice for first spray, hard on beneficials. Buffer spray tank to pH 6.5 with TRI-FOL.

Seican™
MFG: Summit Agrow

Cinnamaldehyde 22.5%

Cinnamon derivatives, not an oil. Softens the exoskeleton of certain insects and alters their nervous system.

Venerate® XC
MFG: ProFarm

Heat killed *Burkholderia spp. Strain A396* 94.46%

Contains enzymes that disrupt the molting ability of the insect, must come into contact with pest, use as a tank mix partner with other insecticides. Rotate with Grandevo WDG for optimum efficacy.

Wrath
MFG: GroPro

Geraniol Oil 30%, Peppermint oil 1%, Cottonseed oil, 0.1%, Rosemary oil 0.01%

Encapsulated geraniol derivatives, not an oil. Acts as a nerve agent, repellency and ovicide. Use at first spray and repeat as necessary. Coverage is very important, use SYL-COAT at 6 oz/100.

XenTari®
MFG: Valent

Bacillus thuringiensis, subsp. Aizawai, strain ABTS-1857 54%

Use for the control of various lepidopteran pests, control is best with early instars and Bt must be ingested to be effective. Trade off or combine the aizawai and kurstaki strains, dependent on pest and pressure.

WE = A WILBUR-ELLIS BRANDED PRODUCT. See "Wilbur-Ellis Featured Organic Products" on page 19

Herbicides

Homeplate®

MFG: Certis

Caprylic Acid 45.14%, Capric Acid 34.76%

Buffer water solution to pH 4 with TRI-FOL®, use INFOLIUM-EA® as an adjuvant. 3-9% v/v depending on size of weed, contact is necessary.

Suppress®

MFG: San Agrow

Caprylic Acid 47%, Capric Acid 21%

Buffer water solution to pH 4 with TRI-FOL®, use INFOLIUM-EA® as an adjuvant and agitate vigorously through out application. 3-9% v/v depending on size of weed, contact is necessary.

Adjuvants

INFOLIUM-EA® WE

MFG: WILBUR-ELLIS exclusive

Polyoxylethylene polyol fatty acid ester, Butyl lactate and Alcohol ethoxylate phosphate ester 98%

Nonionic-Anionic Surfactant Activator and penetrant. Helps to increase organic herbicide efficacy.

SYL-COAT® WE

MFG: WILBUR-ELLIS exclusive

Polyether-Polymethylsiloxane-Copolymer and Polyether 100%

Nonionic Organo Silicone Spreader to reduce water surface tension and add spreadability to the spray mixture.

TRI-FOL® WE

MFG: WILBUR-ELLIS exclusive

2-Hydroxy-1,2,3-Propanetricarboxylic Acid 25%, Calcium Chloride 9%

Acidifying and buffering agent for lowering the pH of spray solutions. Add TRI-FOL® to spray tank first while agitating before pesticides are added.

WE = A WILBUR-ELLIS BRANDED PRODUCT. See "Wilbur-Ellis Featured Organic Products" on page 19

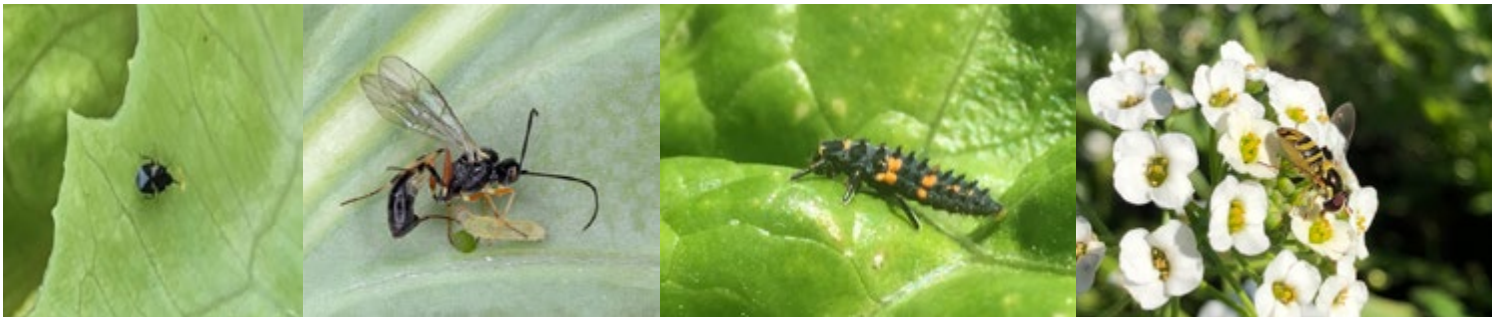
APPENDIX

Biocontrol Agents — Who They Are and What They Do

Beneficial	Description	Target	Crop
Aphidius colemani	Parasitoid wasp for controlling smaller aphid species	• Green Peach Aphids (*Myzus persicae*) • Black Bean Aphids (*Aphis fabae*) • Cannabis Aphids (*Phorodon cannabis*) • Melon/Cotton Aphids (*Aphis gossypii*)	• Ornamentals • Hemp/Cannabis • Vegetable Crops • Soft Fruits • Tree Nurseries
Aphidius ervi	Parasitoid wasp for controlling large aphid species	• Potato Aphid (*Macrosiphum euphorbiae*) • Fox Glove Aphid (*Aulacorthum solani*) • Cannabis Aphid (*Phorodon cannabis*) • Pea Aphid (*Acyrthosiphon pisum*)	• Ornamentals • Hemp/Cannabis • Vegetable Crops • Soft Fruits • Tree Nurseries
Aphidius matricariae	Aphid parasitoid wasp	• Green Peach Aphid (*Myzus persicae*) • Tobacco Aphid (*Myzus persicae nicotianae*)	• Ornamentals • Hemp/Cannabis • Vegetable Crops • Soft Fruits • Tree Nurseries
Aphidius abdominalis		• Potato Aphid (*Macrosiphum euphorbiae*) • Fox Glove Aphid (*Aulacorthum solani*) • Cannabis Aphid (*Phorodon cannabis*) • Pea Aphid (*Acyrthosiphon pisum*) • Lettuce Aphid (*Nasonovia ribisnigri*)	• Soft Fruits • Tree Nurseries
Aphidoletes aphidimyza	Midge in their larval stage will kill and eat over 60 species of aphids	• Green Peach Aphids (*Myzus persicae*) • Melon/Cotton Aphids (*Aphis gossypii*) • Potato Aphid (*Macrosiphum euphorbiae*) • Fox Glove Aphid (*Aulacorthum solani*) • Cannabis Aphid (*Phorodon cannabis*)	• Ornamentals • Hemp/Cannabis • Vegetable Crops • Soft Fruits • Tree Nurseries
Chrysoperla carnea Lacewing	Will eat anything and everything they can catch; does not control root aphids	• Many Aphid Species • Many Mealybug Species • Spider mites • Many Thrips Species • Whiteflies (*eggs/juveniles*) • Eggs of Many Pests Species	• Ornamentals • Hemp/Cannabis • Vegetable Crops • Soft Fruits • Tree Nurseries
Neoseiulus cucumeris	Predatory mite, useful for the prevention, control, and management of various thrips species	• Western Flower Thrip (*Frankliniella occidentalis*) • Flower or Eastern Thrips (*F tritici*) • Onion Thrip (*Thrips tabaci*) • Greenhouse Thrips (*Heliothrips haemorrhoidalis*) • Melon Thrips (*Thrips palmi*) • Cyclamen Mite (*Polyphagotarsenomus = Hemitarsonemus latus*) • Tomato Russet Mite (*Aculops lycopersici*) • Broad Mite (*Polyphagotarsonemus latus*)	• Ornamentals • Hemp/Cannabis • Field Crops • Row Crops • Orchard Crops

Beneficial	Description	Target	Crop
Amblyseius swirskii	Predatory mite is helpful in the control of whitefly, with some impact on spider mite populations	• Greenhouse Whitefly (*Trialeurodes vaporariorum*) • Certain Thrips spp. • Tobacco Whitefly (*Bemisia tabaci*) • Two-Spotted Spider Mite (*Tetranychus urticae*) • Tarsonemid Mites	• Vegetable Crops • Soft Fruits • Ornamentals • Hemp/Cannabis
Neoseiulus californicus		• Two-spotted Spider Mite (*Tetranychus urticae*) • Carmine Mite (*T. cinnabarinus*) • Lewis Mite (*Eotetranychus lewisi*) • Banks Grass Mite (*Oligonychus pratensis*) • European/Citrus Red Mite (*Panonychus spp.*)	• Vegetable Crops • Soft Fruits • Ornamentals • Hemp/Cannabis • Tree Nursery
Feltiela acarisuga	Midge in their larval stage will kill and eat spider mites	• Two-spotted Spider Mite (*Tetranychus urticae*) • Carmine Mite (*T. cinnabarinus*) • Other Spider Mite spp.	• Ornamentals • Hemp/Cannabis • Vegetable Crops • Soft Fruits • Tree Nurseries
Phytoseiulus persimilis	Predatory mite used in the management of spider mites	• Two-spotted Spider Mite (*Tetranychus urticae*) • Other Spider Mite species such as the Carmine Red Mite (*T. cinnabarinus*) and the Pacific Mite (*T. pacificus)* can also be controlled, but higher than normal rates will be required	• Vegetable Crops • Fruit Crops • Ornamentals • Hemp/Cannabis • Tree & Shrub Nurseries
Steinernema feltiae	Contains an insect-killing symbiotic bacteria, *xenorhabdus sp.* Optimal soil temperature range is 50-78°F. Intermediate forager, they prefer to live 1-2" below the media surface.	• Fungus Gnat Larvae • Shore Fly Larvae • Mushroom Fly Larvae • Western Flower Thrips, Onion Thrips, other Thrips spp. Adults, Larvae, and Pupae	• Ornamentals • Hemp/Cannabis • Vegetables • Mushrooms • Soft Fruits • Tree Nurseries
Stratiolaelaps scimitus	Predatory mite that is used for the prevention, control and management of fungus gnats and certain thrips species that pupate in the soil/on the ground	• Fungus Gnat spp. • Thrips spp. • Some Shore Fly spp. • Springtails • And Other Soil Pests	• Vegetable Crops • Soft Fruits • Ornamentals • Hemp/Cannabis
Dalotia coriaria	Predatory rove beetle that lives mostly in the top half inch of soil	• Fungus Gnats • Shore Flies • Certain thrips species that pupate in soil/on the ground	• Ornamentals • Hemp/Cannabis • Covered Crops • Mushrooms • Soft Fruits • Tree Nurseries
Mamestra brassicae	Tiny wasps can parasitize over 150 species of moth eggs	• European Corn Borer Armyworm • Cabbage Loopers • Tent Caterpillars • Climbing Cutworm • And Many More Pests	• Cole Crops • Field & Row Crops • Ornamentals

Beneficial	Description	Target	Crop
Trichogramma platneri	Tiny wasps can parasitize over 150 species of moth eggs	• Codling Moth • Diamondback Moth • Western Avocado Leafroller • Budworm • Bud Moth • Hemlock Looper • Cranberry Fireworm	• Cole Crops • Field & Row Crops • Ornamentals
Trichogramma minutum	Tiny wasps can parasitize over 150 species of moth eggs	• Codling Moth • Diamondback Moth • Western Avocado Leafroller • Budworm • Bud Moth • Hemlock Looper • Cranberry Fireworm	• Cole Crops • Field & Row Crops • Ornamentals
Cryptolaemus montrouzieri		• Citrus Mealybug (*Planococcus citri*) • Comstock Mealybug (*Pseudococcus comstocki*) • Obscure Mealybug (*Pseudococcus obscurus*) • Solenopsis Mealybug (*Phenacoccus solenopsis*) • Vine Mealy Bug • Long-Tailed Mealybug (*Pseudococcus longispinus*) • Crawling and Immature Stages of Some Scale Insects	• Fruit Crops • Ornamentals • Vegetable Crops • Grapes
Anagyrus pseudoccoci	Parasitic wasp helpful in the parasitation of vine mealy bug		• Grapes
Eretmocerus eremicus	Parasitic wasp which is helpful in the control of whitefly species	• Tobacco Whitefly (*Bemesia tabaci*) • Other Whitefly spp.	• Vegetable Crops • Soft Fruits • Ornamentals • Hemp/Cannabis
Encarsia formosa	Parasitic wasp which is helpful in the control of whitefly species	• Greenhouse Whitefly (*Trialeurodes vaporariorum*) • Other Whitefly spp.	• Vegetable Crops • Soft Fruits • Ornamentals • Hemp/Cannabis
Orius insidiosus Minute pirate bug	Generalist predators. They will kill/eat a wide variety of tiny arthropod pests	• Thrips spp • Mites spp • Aphids spp • Many soft-bodied pests	• Vegetable Crops • Fruit Crops • Ornamentals • Hemp/Cannabis • Tree & Shrub Nursery



Left to right: *Orius insidiosus* feeding on a western flower thrip immature, parasitic wasp attacks the larva of a diamondback moth, lady bird larvae, and syrphid fly adult on alyssum

Recommended Cover Crop Seed

The NOP rule for sourcing organic seed is, if available, to always choose organic seed. If organic seed is not available, the grower must obtain three letters from seed suppliers stating no organic seed for that request is available along with a letter of assurance stating the seed is non-GMO and not treated with any synthetic coating. If the seed is organic, then the organic certificate must accompany that seed lot number and if coated, the organic certificate for that seed coat. This documentation must be kept for the growers' paper trail audit that is conducted yearly by their accredited organic certifier.

%	IS #1 Soil Builder #1	100 lb/A
35	Bell Beans	Plow Down or Green Manure Type Mix similar to most plow down mixes but with a higher percentage of small grain. Triticale will be deeper rooted than others and widely adapted.
15	Biomaster Peas	
15	Common Vetch	
35	Triticale	

%	IS #2 Soil Builder #2	100 lb/A
30	Cayuse Oats	Plow Down or Green Manure Type Mix that will provide better erosion control than a mix with more legumes. Net increase in soil nitrogen after incorporation.
30	Common Barley	
20	Dundale Peas	
20	Faba Beans	

%	IS #3 All Legume Soil Builder	100 lb/A
40	Bell Beans	An all legume mix that will fix a lot of nitrogen, useful for weak soils, or to build up a soil between field crops or permanent crops.
40	Peas	
20	Common Vetch	

%	IS #4 KISS Blend	100 lb/A
20	Red Oats	Forage Mix or High Carbon Biomass Mix all small grains or grasses so it doesn't fix any nitrogen but can help with retaining soil nitrates in root zone. Good for incorporation or mow/mulch management.
30	White Oats	
10	Beardless Barley	
40	Beardless Wheat	

%	IS #5 Drip Clover Blend	20-25 lb/A
20	Crimson Clover	Mix of annual reseeding and perennial clovers, more popular in orchards than in vineyards. Managed to make the annuals reseed, prefers flood or solid set sprinklers over drip or micro sprinkler systems. Fixes nitrogen, provides pollinator forage.
10	Persian Clover	
10	Balansa Clover	
15	Rose Clover	
30	Sub Clovers	
15	Medics	

%	IS #6 Grass and Clover Sod Blend	35 lb/A
35	Turf Type Perennial Ryegrass	A good, diverse Sod Mix for low tillage perennial crops or roadways, will limit dust, increase access and self sustain with limited irrigation
25	Creeping Red Fescue	
10	Chewings Fescue	
10	PK New Zealand White Clover	
10	PK Hykon Rose Clover	
10	PK Trefoil	

%	IS #7 Double Clover Blend	20 lb/A
70	PK New Zealand White Clover	Both perennial clovers that need water. Provides nitrogen, access and dust control, but can be tough to control and aggressive in certain situations, very specific recommendation.
30	PK Strawberry Clover	

%	IS #8 Low Sod Blend	35 lb/A
50	Fine Fescue Blend	Simple Sod Mix for perennial crops and roads, reduces dust. Increased access requires some extra irrigation to survive, but doesn't require a lot of mowing or other inputs.
50	Turf type Perennial Ryegrass	

%	IS #9 Brome Blend	25-30 lb/A
20	Annual Ryegrass	Long-lasting, semi-perennial Sod Mix managed to reseed the annual grasses. Well adapted to clay soils and high water table situations. Improves access and reduces dust.
25	Smooth Brome	
25	Prairie Brome	
30	Blando Brome	

%	IS #10 Erosion/Drip mix	25-35 lb/A
35	Blando Brome	A diverse blend of annual grasses and legumes that is intended to quickly stabilize soil yet establishes with limited amounts of rainfall. When managed to allow it to reseed, these plants would be in place for several years. Once dry, it can be mowed and the plant material will continue to protect the soil surface.
25	Annual Ryegrass	
10	Rose Clover	
3	Balansa Clover	
3	Persian Clover	
15	Crimson Clover	
7	Medic	
2	California Poppy	

%	IS #11 'Hot Stuff' Mustard blend	10-15 lb/A
30	BRACO White Mustard	Mix of Brassica varieties that does several things: a. provide bee forage early in the spring b. increasing water infiltration from their aggressive tap root systems. Equally good for sequestering soil nitrates c. potential for soil pest reduction via 'bio fumigation' after incorporating top growth
30	Nemfix Black Mustard	
10	Canola	
10	Daikon Radish	
20	Oriental Mustard	

%	IS #12 Fallow Bed Improvement Mix	60-100 lb/A
50	Winter Triticale	A mix designed to improve soil tilth on fallow beds. Managed by termination of growth at a specific date or amount of growth prior to Conservation Tillage transplanting.
50	Spring Peas	

Individual varieties of seed for cover cropping are available, as well as custom mixes. Some blends are available with organic seed, consult your seed salesman for organic availability and pricing. If using a legume cover crop on organic ground, use NCO (organic) inoculant.

Recommended Insectary Habitat Seeds

The NOP rule for sourcing organic seed is, if available, to always choose organic seed. If organic seed is not available, the grower must obtain three letters from seed suppliers stating no organic seed for that request is available along with a letter of assurance stating the seed is non-GMO and not treated with any synthetic coating. If the seed is organic, then the organic certificate must accompany that seed lot number and if coated, the organic certificate for that seed coat. This documentation must be kept for the growers' paper trail audit that is conducted yearly by their accredited organic certifier.

Wilbur-Ellis Annual Flower Blend

Plant this blend at the end of rows, in open spaces or along fence lines to supply pollen and nectar to beneficial insects. Supplying additional food will increase reproductive potential and vigor and encourage increased insect predation and parasitism. Attract beneficial insects, such as Syrphid Fly, Lacewing, Big-eyed Bugs, Minute Pirate Bugs, Ladybird Beetles and Parasitic Wasps.

Sow at 12-15 lb/A just below the soil line, do not incorporate deep. Irrigate after planting and throughout the summer for prolonged blooming.

This blend is available without Sweet Alyssum, which in a baby lettuce growing fields could become a weed problem.

CA Poppy – *Eschscholzia californica*	14%
Arroyo Lupine – *Lupinus succulentus*	14%
Zinnia – *Zinnia elegans*	18%
Cosmos – *Cosmos bipinnatus*	18%
Sulphur Cosmos – *Cosmos sulphureus*	15%
Plains Coreopsis – *Coreopsis tinctora*	15%
NCO Crimson Clover – *Trifolium incarnatum*	4%
Sweet Alyssum – *Lobular maritima*	2%

Wilbur-Ellis CA Native Grass Blend

Plant this blend at 25-30 lb/A broadcast or drilled and slightly worked into the soil in the fall prior to winter rains. Irrigate to stand establishment until winter rains begin. Manage breakthrough weeds the first year of growth. This blend is ideal for ditch banks and hillsides prone to erosion. This blend will establish as a wintertime grass and brown back during the summer, to form low dense bunches. Will regenerate when rains return in the fall/winter.

Molate Red Fescue – *Festuca rubra molate*	50%
Blue Wildrye – *Elymus glaucus*	45%
Tufted Hairgrass – *Deschampsia cespitosa*	5%

Wilbur-Ellis CA Native Habitat Blend

Broadcast or drill at 12-15 lb/A into weed-free soil just below the soil line in the fall prior to the first rains. Irrigate to stand establishment and maintain moisture until rains begin. Monitor and remove breakthrough weeds. Mow in the fall to promote vigorous wintertime growth and to manage weeds. Plant in areas that are undisturbed and where a perennial system can thrive.

CA Poppy – *Eschschoizia californica*	16%
Tidy Tips – *Layia platyglossa*	6%
Golden Lupine – *Lupine densiflorus*	35%
Globe Gilia – *Gillia capitata*	6%
Tomcat Clover – *Trifolium willdenovii*	8%
CA Bluebells – *Phacelia campulara*	10%
Blue Flax – *Linum lewisii*	16%
GoldFields – *Lasthenia californica*	3%

Wilbur-Ellis Flower/Herb Blend

This blend can be direct seeded with any crop or supplied to the transplant company to begin transplant trays. The trays can then go out at the same time as the crop and transplanted either in designated beds or scatter planted randomly throughout the crop. If direct seeding at time of planting, this blend contains 224,500 seeds/lb. Plant on designated beds every 20-40 beds, dependent on population density that is desired. Scatter planting this blend is more difficult because of the seed size difference. Alyssum will flower within 20 days of planting, Dill and Cilantro will flower after bolting, dependent on weather. Available in 10 lb bags. **Plant this blend at 10-15 lb/A.**

Cilantro – *Coriandrum sativum*	70%
Dill – *Anethum graveolens*	20%
Sweet Alyssum – *Lobular maritima*	10%

Wilbur-Ellis Sweet Alyssum

This flower seed can be direct seeded with any crop or supplied to the transplant company to begin transplant trays. The trays can then go out at the same time as the crop and transplanted either in designated beds or scatter planted randomly throughout the crop. If direct seeding at time of planting, this flower contains 1,200,000 seeds/lb. Plant on designated beds every 20-40 beds, dependent on population density that is desired. Scatter planting this blend is more difficult because of the seed size difference, but some seed companies will coat this seed to the same size of the crop, so direct seeding is possible within the crop. With this technique, a 0.5% plant population is sufficient. Alyssum will flower within 20 days of planting and provide nectar and pollen for a broad diversity of adult predator and parasitic biological control agents. Available in 5 lb bags. **Plant at 1-2 lb/A.**

Sweet Alyssum – *Lobular maritima*	100%

Some of these seeds are available organically, please consult with your seed rep when purchasing. Always, on organic ground, use NCO organic inoculant on legume seed.

Wilbur-Ellis Featured Organic Products

BenVireo® Botanic® 8-0-0

- Sustainable, slow-release source of plant-derived nitrogen that reduces nitrogen loss to the environment.
- An important nitrogen source that also promotes nitrogen assimilation.

BenVireo® Botanic® Dry 16-0-0

- Sustainable source of plant-derived nitrogen with slow release characteristics that reduces nitrogen loss to the environment
- An important nitrogen source that also promotes nitrogen assimilation

BenVireo® FoliSentials® 3-0-3

- Superior quality liquid fertilizer designed for foliar applications to a wide variety of agronomic crops, turf and horticultural plants
- Long shelf life stability and mixes well with most other products

BenVireo® NSentials® 13-0-0

- Slow release source of Nitrogen
- Pellets are easy to apply
- Very low levels of salt

BenVireo® TerraLux™ 10-0-0

- Immediate nitrogen uptake: ensures plants receive 100% plant-available nitrogen for rapid absorption, even in challenging cool soil conditions
- Versatile application: can be applied via multiple method ensuring flexibility for various farming operations

BenVireo® TerraLux™ 7-0-0

- Immediate nitrogen uptake: ensures plants receive 100% plant-available nitrogen for rapid absorption, even in challenging cool soil conditions
- Versatile application: can be applied via multiple method ensuring flexibility for various farming operations
- CDFA OIM

INFOLIUM-EA®

- Increases absorption, penetration, and translocation
- Aids in complete coverage of plant tissue and pests

NUTRIO® UNLOCK®

- Seven pure strains of beneficial microbes selected for nutrient solubilizing ability and hardiness
- Compatible with all starter fertilizers for in-furrow and 2x2 applications

PURIC®

- Contains 12% humic acid
- May be applied through irrigation systems

Romeo

- Preventative disease control: triggers plants' natural defenses that prevent onset of plant diseases
- Plant strengthening: Romeo increases concentration of disease-fighting anti-microbial compounds for 7-10 days
- Complements with other chemistries: improved plant function enables tank mixed chemistries to perform better

SULFUR DRY FLOWABLE

- Spreader-Sticker qualities, that increase adherence, keeping your product on leaves and fruit longer while decreasing potential for wash-off from heavy rain
- Dust free spider mite control, with a dry flowable sulfur in a granular form that increases the number of sulfur particles, giving you top-tier coverage and adherence

SYL-COAT®

- Foliar-applied surfactant
- Plus-up the power of post emergence herbicides

TRI-FOL®

- Reduces pH of alkaline water
- Reduces pesticide degradation caused by alkaline hydrolysis
- Organic acidulant
- No corrosive mineral acids
- Does not contain heavy metals
- Contains calcium for plant growth and development

This guide is not intended to replace product labels or the individualized recommendation of a crop advisor.

Always read the product label for complete instructions and proper usage. Although Wilbur-Ellis has made every effort to verify the information and guidance contained in this guide using chemical manufacturers' information and labels, those labels and associated information do change over time, and Wilbur-Ellis cannot guarantee that the guidance provided herein is complete or accurate. WILBUR-ELLIS EXPRESSLY DISCLAIMS ANY WARRANTY OF COMPLETENESS OR ACCURACY, AND ANY AND ALL STATUTORY WARRANTIES, INCLUDING ANY WARRANTY OF FITNESS FOR A PARTICULAR USE OR WARRANTY OF MERCHANTABILITY. WILBUR-ELLIS SHALL NOT BE LIABLE FOR ANY DIRECT, INDIRECT, CONSEQUENTIAL, SPECIAL, OR INCIDENTAL DAMAGES ARISING OUT OF USE OF THIS GUIDE OR ANY FAILURE TO FOLLOW THE CURRENT PRODUCT LABEL.

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Please contact your local Wilbur-Ellis representative if you have any questions about this guide.

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