

APPLICATION GUIDELINES

ACADIAN[®] Marine Plant Extract Powder 1-1-17

ACADIAN[®] Powder 1-1-17 is a pure extract of fresh *Ascophyllum nodosum* marine plants from the cold and clean North Atlantic coast of Nova Scotia, Canada. Judicious use of **ACADIAN[®] Powder 1-1-17** supplements a well-balanced crop nutrition program. Increased productivity is a result of proper utilization of the nutrients provided. To achieve the desired results, the levels of major and minor nutrients must be adequate to support the increase in production. Timing and rates of application are very important for maximum efficacy.

Compatibility: **ACADIAN[®] Powder 1-1-17** is compatible with most insecticides, fungicides and fertilizers. Some pH adjustments may be required with acidic mixtures. Use of glycol surfactants is not recommended. When interaction of chemicals is unknown, a "jar" compatibility test is recommended.

Storage and Handling: This product has excellent storage qualities, however, open containers should be stored closed in a dry location away from direct sunlight. It is a natural product which contains no preservatives, hence its shelf life will diminish after it has been mixed with water. Dissolve only as much powder as required at a time; if not used immediately, store dissolved solutions in a cool place for a maximum of six hours. Avoid spillages on floor as product becomes very slippery when mixed with water and may create a hazard.

Directions for Use: **ACADIAN[®] Powder 1-1-17** is designed for use in agricultural input formulations. **ACADIAN[®] Powder 1-1-17** is water soluble and can be used in conventional liquid foliar and irrigation water applications. **Crop recommendations for foliar applications are provided on the following pages.**

Foliar Applications: Fill half the spray tank with water, begin agitating and gradually add recommended amount of **ACADIAN[®] Powder 1-1-17** with remainder of water and spray solution. Dilution rates will be determined by the nature of the crop, the equipment used and other compounds mixed with this product. Higher dilution rates are recommended for best crop coverage. Product can be applied in 50 to 500 gallons of water per acre or 500 to 5000 liters per hectare for ground sprayers, or 10 to 20 gallons of water per acre or 100 to 200 liters per hectare for low volume ground sprayers or aerial applications. The foliar spray should be applied as a fine mist, with low fluid velocity until the foliage is wet. For best results, apply in early morning or late evening; do not spray just before or after rainfall or sprinkler irrigation. Use a biodegradable surfactant for maximum dispersal and leaf adherence.

Irrigation Water Applications: Apply **ACADIAN[®] Powder 1-1-17** in furrow-run irrigation water by dripping a solution of dissolved powder (1 gallon of water per 1 pound or 10 liters of water per 1 kilogram of **ACADIAN[®] Powder 1-1-17**) into the irrigation water. Each nozzle should be calibrated to drip at a constant rate into the irrigation water.

Seed Treatment: To apply as a seed treatment, apply **ACADIAN[®] Powder 1-1-17** at the rate of 8 ounces per 50 gallons of water or 3 grams per 10 liters of water, prior to planting; or apply directly to seed bed at the rate of 4 ounces per 50 gallons of water or 1.5 grams per 10 liters of water.

Rooting/Transplant Solution: For use as a rooting medium, use **ACADIAN[®] Powder 1-1-17** at the rate of 4 ounces per 50 gallons of water or 1.5 grams per 10 liters of water; to use at the time of transplanting, dip roots in a solution of 8 ounces per 50 gallons of water or 3 grams per 10 liters of water.

Post-harvest Application: **ACADIAN[®]** is an excellent way to stimulate root growth and prepare perennial crops for next season's early growth. **See recommended rates on page 4.**

ACADIAN® Marine Plant Extract Powder for General Use

Suggested rates and dosages are approximate and may vary depending on the climatic region, soil type and fertility. Additional applications can be made immediately prior or following stress periods such as frost or drought. It is preferable to increase the frequency of applications rather than the concentration of the solution. **Lower dilution rates should be applied to less dense foliage. Increase to higher rates as foliage matures.**

FRUIT CROPS	Dosage per application	Foliar application stages
Pome Fruits (Apples and Pears)	850 g to 1.4kg/ha or 12 to 20 ounces per acre	1st: At green tip (tight cluster) 2nd: At pre-bloom/pink buds 3rd: At full bloom 4th: At early fruit formation Optional: Every 21 days until harvest
Berries	850g per hectare or 12 ounces per acre	1st: At pre-bloom (1 to 2 applications) 2nd: Every 2 to 3 weeks throughout season 3rd: 2-3 weeks post-harvest
Citrus (Grapefruit, Lemons, Limes, Mandarins, and Oranges)	1.1 to 1.4kg/ha or 16 to 20 ounces per acre	1st: At early bloom 2nd: At petal fall 3rd: With summer spray 4th: With fall spray Fresh Market: 6 to 8 weeks prior to harvest
Wine Grapes	1.4kg per hectare or 20 ounces per acre	1st: Soil: 2 applications from start of re-growth 2nd: Foliar: 10-15 cm cane 3rd: Foliar 25-30 cm cane (2-4 weeks pre-bloom) 4th: Foliar: 5 days pre-bloom 5th: Foliar: 1st sizing stage (2-3 mm) 6th: Foliar: veraison (berry softening) 7th: Soil: veraison (berry softening) to harvest 8th: Post harvest (1-2 weeks)
Grapes (Table, Raisin and Juice)	850g per hectare or 12 ounces per acre	1st: Post harvest (1-2 weeks) 2nd: At 4 to 6 inch cane growth 3rd: At 8 to 14 inch cane growth 4th: At 1st sizing stage (2-3 mm) 5th: At 2nd sizing stage 6th: At 3rd sizing stage 7th: At veraison (berry softening)
Stone Fruits (Peaches, Nectarines, Apricots, Cherries, Plums, and Prunes)	1.4 to 1.6kg/ha or 20 to 23 ounces per acre	1st: At pink or white bud 2nd: At full bloom 3rd: Young fruit (2 to 3 weeks later) 4th: 3 weeks later Fresh Market Varieties: 3 weeks later
Strawberries	750 to 850g per hectare or 11 to 12 ounces per acre	1st: Prior to transplant 2nd: At soil application 3rd: At early spring growth 4th: At 1 st pre-bloom 5th: At 1 st fruit set 6th and next: Every 14 days to harvest
Tree Nuts (Almonds, Cashews, Hazelnuts, Pecans, and Walnuts)	1.4 to 1.6kg/ha or 20 to 23 ounces per acre	1st: Post harvest 2nd: Pink tip 3rd: Petal fall 4th and next: Every 2-3 weeks

VEGETABLES and FIELD CROPS	Dosage per application	Foliar application stages
Legume Vegetables <i>(fresh, dry and processing)</i> <i>(Beans, Garbanzos, Lentils, Peas, and Soybeans)</i>	750 to 850g/ha or 11 to 12 ounces per acre	1st: At 4 to 6 leaf stage 2nd: At first bloom 3rd: At first pods
Root and Tuber Vegetables <i>(Beets, Carrots, Ginger, Potatoes, Radishes, Sweet Potatoes, and Leeks)</i>	750 to 850g/ha or 11 to 12 ounces per acre	1st: 2 to 3 weeks after emergence 2nd: At root enlargement 3rd and next: Every 10 to 14 days until harvest
Brassica Vegetables <i>(Broccoli, Brussels Sprouts, Cauliflower, Collards, Cabbage Kale, and Mustard Cauliflower Greens)</i>	750 to 850g/ha or 11 to 12 ounces per acre	1st: At 4 to 6 true leaf stage 2nd: 10 to 14 days later 3rd: At head initiation
Sweet Corn	750 to 850g/ha or 11 to 12 ounces per acre	1st: At 2 to 6 leaf stage 2nd: At 50 to 75 cm (20" to 30") growth 3rd: Just prior to tasselling
Cucurbit Vegetables <i>(Cantaloupe, Cucumbers, Gourds, Honeydew, Muskmelons, Squash, Pumpkins, and Watermelons)</i>	750 to 850g/ha or 11 to 12 ounces per acre	1st: At first 4 true leaves 2nd: First pre-bloom 3rd: 7 to 14 days later Optional: Within 48 hours of each picking
Fruiting Vegetables <i>(Eggplant, Fresh Tomatoes, and Peppers)</i>	850g to 1.3kg/ha or 12 to 19 ounces per acre	1st: At transplant 2nd: 7 days later 3rd: At Pre-bloom 4th: At fruit set 5th: 14 days later Optional: Within 48 hours of each picking
Tomatoes <i>(Processing Varieties)</i>	850g to 1.3kg/ha or 12 to 19 ounces per acre	1st: At transplant 2nd: At sidress 3rd: At 1 st bloom 4th: At fruit-set Optional: 14 days later
Leafy Vegetables <i>(Celery, Endive, Lettuce, Radicchio, Rhubarb, Spinach, and Swiss Chard)</i>	750 to 850g/ha or 11 to 12 ounces per acre	1st: At 4 leaf stage 2nd and next: Regularly, every 14 days
Potatoes	750 to 850g/ha or 11 to 12 ounces per acre	1st: At tuber set 2nd: 10 to 14 days later 3rd: Early bloom

VEGETABLES and FIELD CROPS <i>continued</i>	Dosage per application	Foliar application stages
Bulb Vegetables (Garlic, Leeks, Onions, and Shallots)	850g to 1.3kg/ha or 12 to 19 ounces per acre	1st: At 2-3 leaf stage 2nd: At 6-7 leaf stage 3rd: At initial bulb formation
Alfalfa	850g to 1.3kg/ha or 12 to 19 ounces per acre	1st: At early season re-growth 2nd: At 2 to 3 weeks prior to first cut 3rd: Following each cut Note: Allow for 2.5 to 3" (6 to 7cm) re-growth before making applications
Asparagus	850g to 1.3kg/ha or 12 to 19 ounces per acre	1st: For newly established plants, make one application to new flush or fern growth in spring 2nd: For mature crops, make one application to new fern growth after cuttings have stopped.
Avocados	850g per hectare or 12 ounces per acre	1st: Early season soil applications (via drip) 2nd: Pre-bloom (2 weeks prior to bloom) 3rd: 2 weeks following petal fall 4th: Early fruit development (before summer fruit drop) 5th: 30-45 days before harvest 6th: Post-harvest (via drip)
Cotton	850g to 1.3kg/ha or 12 to 19 ounces per acre	1st: At first bloom 2nd: At peak bloom 3rd: At peak boll (before opening)
Peanuts	850g to 1.3kg/ha or 12 to 19 ounces per acre	1st: 3 weeks after emergence 2nd to 4th: Every 1-2 weeks
Rice	850g to 1.3kg/ha or 12 to 19 ounces per acre	1st: At 3 to 5 leaf stage 2nd: At panicle initiation

IRRIGATION WATER APPLICATIONS	Dosage per application	Application stages
Processing Tomatoes	1.1kg per hectare or 16 ounces per acre	1st: At lay-by (first bloom) 2nd: At full bloom 3rd: At fruit set

POST-HARVEST APPLICATIONS	Dosage
Perennial Crops	850g to 1.6kg/ha (12 to 23 ounces per acre) per week for 2 to 4 weeks following harvest, applied via the drip irrigation system.