

Vigor-Cal™

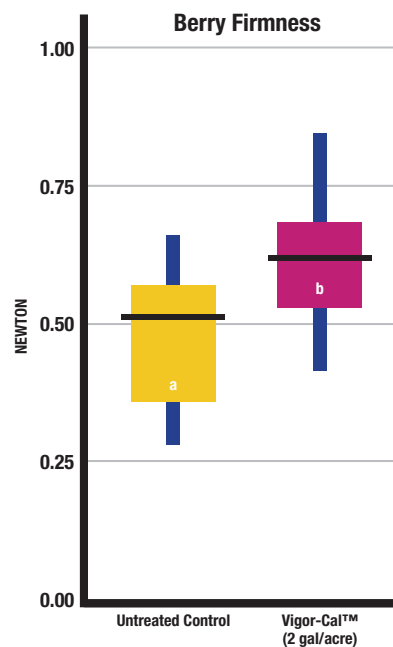
Science-Driven NutritionSM

Agro-K's Vigor-Cal is a foliar calcium spray derived from calcium carbonate. A series of proprietary manufacturing processes are used to separate the calcium from the carbonate molecule and link it to a polysaccharide molecule creating sugar based nutrient product. This process creates a calcium material that can quickly penetrate a variety of plant tissue - leaves, emerging buds and fruit skin. Nutrient uptake happens directly through the cell wall and via stomata. Once inside the cell, the calcium polysaccharide molecule is easily metabolized and utilized as needed by the plant system. Vigor-Cal contains the name "vigor" as Agro-K's sugar-based calcium effectively promotes plant vigor.

CALCIUM is probably the most important element in maximizing fruit quality. Plants low in calcium will produce fruit with thinner cell walls and poor cell wall integrity. This can lead to splitting during sizing, internal breakdown post-harvest and

poor shelf life. Achieving adequate or high levels of calcium in fruit is critical to producing a quality crop, maximizing a grower's pack-out and maintaining overall plant health. Increasing calcium levels in the tissue optimizes leaf cuticle and fruit skin development leading to bigger, firmer, better quality fruit that travels and stores longer.

Physiologically, plant demand for calcium is highest during the early season from bloom through early fruit development when most cell division and elongation happens. It is during this period that calcium is most easily incorporated into the cell wall structure. Appropriately timed applications of Vigor-Cal, as part of a complete calcium and overall fertility program, can result in thicker cell walls of both the leaf and fruit tissue helping growers maximize fruit firmness and quality and minimizing problems related to calcium deficiencies.



Different letters are significantly different at 5% level.

Research conducted by Dirk Uys, Ph.D., 1997, University of Stellenbosch, South Africa.

Mean for Untreated Control = 0.483 and Vigor-Cal™ = 0.629. Std. Error for Untreated Control = 0.0287 and Vigor-Cal™ = 0.031. A significant increase in firmness was recorded.

	Control	Calcium Treated
Berry skin thickness	185 µm	218.5 µm
Berry skin cell layers	4.65	5.13

Suggested Uses

Tomatoes, Peppers, Cucumbers

Apply 1 to 4 quarts per acre (2.5 to 10 liters/hectare) per application. Apply the first application 7 days after transplanting, thinning or at second true leaf stage. Apply subsequent applications at 14 day intervals as needed to correct deficiencies or supplement nutritional requirements.

Lettuce, Spinach and Other Leafy Vegetables as well as Broccoli, Cauliflower and Other Brassica Varieties

Apply 1 to 4 quarts per acre (2.5 to 10 liters/hectare) per application. Apply the first application 7 days after transplanting, thinning, or at second true leaf stage. Apply one or two subsequent applications at 10 to 14 day intervals or as needed to supplement nutritional requirements.

Corn, Beans and Peas

Apply 2 to 4 quarts per acre (5 to 10 liters/hectare) per application. Apply the first application at the fourth to fifth leaf. Apply one to two subsequent applications at 10 to 14 day intervals or as needed to supplement nutritional requirements.

Strawberries

Apply 1 to 4 quarts per acre (2.5 to 10 liters/hectare) per application. Apply the first application 7-10 days after transplanting. Reapply at 7-14 day intervals or as needed to supplement nutritional requirements.

Potatoes, Onions and Other Vegetable Root, Bulb or Tuber Crops

Apply 2 to 4 quarts per acre (5 to 10 liters/hectare) per application. Apply the first application 2-3 weeks post emergence. Apply one to two subsequent applications at 10 to 14 day intervals or as needed to supplement nutritional requirements.

Almonds, Walnuts and Other Nut Crops

Apply 2 to 4 quarts per acre (5 to 10 liters/hectare) per application. Apply first application at bud break. Apply subsequent applications at petal fall and nut fill or as needed to supplement nutritional requirements.

Plums, Peaches, Cherries and Other Stone Fruits

Apply 2 to 4 quarts per acre (5 to 10 liters/hectare) per application. Apply first application at green tip on plums and at pink bud on nectarines and other stone fruit. Apply subsequent applications at 30 day intervals up to pit hardening or as needed to supplement nutritional requirements.

Apples, Pears and Other Pome Fruits

Apply 1 to 4 quarts per acre (2.5 to 10 liters/hectare) per application. Apply first application at green tip or bud break. Apply subsequent applications at petal fall and post thinning as needed to supplement nutritional requirements.

Citrus and Avocados

Apply 2 to 4 quarts per acre (5 to 10 liters/hectare) per application. Apply first application pre-bloom. Apply subsequent applications at 30 day intervals up to harvest or as needed to supplement nutritional requirements.

Grapes

Apply 2 to 4 quarts per acre (5 to 10 liters/hectare) per application. Apply first application two weeks prior to bloom. Apply subsequent applications as needed and determined by leaf analysis.

Raspberries, Blackberries and Other Caneberries

Apply 2 to 4 quarts per acre (5 to 10 liters/hectare) per application. Apply first application pre-bloom. Apply subsequent applications at 7-14 day intervals as needed to supplement nutritional requirements.

