

Hi-Cal™ Liquid Calcium for Peanuts

Announcement for South Eastern Peanut Growers:

TETRA Technologies, Inc. introduces Hi-Cal™ liquid calcium as the most readily available nutrient for peanuts. This application gives the southeastern peanut growers a liquid calcium choice that is soil applied, not foliar, in the pegging zone as a replacement for land plaster.

Hi-Cal liquid calcium is a clear liquid derived from calcium chloride and contains 12% soluble calcium. It can be used to replace water as a carrier for pre-emerge herbicide in peanuts or to be injected into irrigation water 0 to 30 days after planting. They are both excellent ways of applying additional calcium to the pegging zone, where it is needed without making extra trips across the field.

It has been established that larger the size of the peanut, the higher the calcium requirement. Growers in the Southeast are moving away from growing small seeded runner variety peanuts, such as Georgia Green, to large seeded runner variety, such as Georgia 06G, Florida 07, and Tifguard. For these large seeded varieties, a timely and adequate amount of calcium has become critical for both yield and grade.

Soil calcium being present in a poorly soluble form is not always available to a plant. Once calcium is taken up and translocated to the growing points, it is immobile within plants. Calcium moves in the transpirations stream so plant parts, such as peanut pods that are not part of the transpiration stream, are more subject to calcium deficiency. This helps explain why peanuts planted in soils with an adequate level of calcium can still exhibit calcium deficiency. The peanut pod takes up needed calcium through the developing pod and receives no calcium from plants, explaining why foliar applied calcium is not effective on peanuts.

Hi-Cal liquid calcium has performed better than land plaster in grower trials in both Georgia and Alabama in 2010. It is an easy to handle, cost effective soluble calcium source for southeastern crops.

For further information, contact your local distributor:

North West Texas Large Scale Field Trial in 2006:

Unlike the southeastern region of the US, in North West Texas, introduction of nitrogen with calcium is beneficial. N-Cal® 212, an ammonium calcium product, is preferred over Hi-Cal liquid calcium.

Fifty grower fields of North West Texas were sampled for the calcium level in the soil. There were some fields that had a high calcium level of 3000 ppm (mg/kg) with base saturation of 80% or higher. As the Extension Services of the region recommends for calcium nutrient addition to the fields that have lower than 600 ppm calcium, only the fields that had lower than 600 ppm of calcium were treated with N-Cal® 212. In the current field test program, Valencia and Virginia varieties of peanut were planted. Based on recommendations from the consultant, it was applied through irrigation at the first bloom.

Crop yields were determined and, on the basis of statistical computation, data are summarized as follows.

TABLE 1: PEANUTS CROP YIELDS IN NORTH WEST TEXAS

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Treatment (N-Cal Rate)	Number of Fields	Average Yield (lb/Acre)
16 to 30 gallons per acre (Low Calcium Level Fields)	21	4,413
No Treatment (High Calcium Level Fields)	10	3,544
No Treatment (Low Calcium Level Fields)	10	3,398

Field test data reveal that the use of N-Cal 212 has the following effects:

- For low calcium (< 600 ppm) soil, there is increase in the crop yield of the order of 1,105 lb/Acre (28.6%).
- The treated fields produced greater yield (869 lb/Acre or 24.5%) than those of the untreated high calcium (3000 ppm) fields.
- Lower yield for high calcium (3000 ppm) fields than those of N-Cal treated low calcium (< 600 ppm) fields suggests that, although the calcium level in soil was determined to be high, there was lack of adequate available calcium to the crops.
- It suggests that N-Cal treatment of even the high calcium fields could improve the crop yields.
- Use of N-Cal produces net income of the order of \$150-\$250/ Acre.



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