

AGGRAND[®]

Natural Organic Products
Lawn • Garden • Agriculture

Citrus

Nitrogen is typically the limiting macronutrient in citrus production. One quarter to one-half pound of actual nitrogen per tree per year is recommended when using chemical fertilizers. However, when growing citrus organically only a fraction (5-10%) of that amount needs to be applied because biological activity in the soil fixes nitrogen from the atmosphere and releases nitrogen from organic matter that is applied as compost, cover crops, and AGGRAND fish and kelp products

Minor nutrient deficiencies are normally the only other disorders necessitating the application of corrective measures. In the majority of cases the application of AGGRAND fertilizers corrects any deficiencies.

Applications of AGGRAND fertilizers stimulate soil biological activity, supply macro and micronutrients, and release nutrients from the soil. When AGGRAND products are applied along with organic matter plant cell structure and soil water holding capacity are improved.

Foliar applications:

The foliar application of AGGRAND fish and kelp fertilizers corrects many micronutrient deficiencies and increases drought, heat, and cold tolerance of citrus. Foliar applications of AGGRAND fertilizers reduces pest problems in citrus production. The foliar application of AGGRAND products as a part of the early bloom, summer and fall spray programs is effective in reducing the number of insect pests.

- 1.) Mix 1-2 gallons AGGRAND 4-3-3 with 50-100 gals. of water. Apply as a fine mist with enough solution to thoroughly cover leaves. Apply with pre-bloom, post-bloom, and summer sprays. Optimize results by adding 1-2 qts. of AGGRAND 0-0-8 to the mix.
- 2.) Mix 1-2 qts. of AGGRAND 0-0-8 in 50-100 gals. of water. Apply with fall spray and 1-2 months before harvest (pre-harvest application increases the shelf-life of fruit).

The addition of fulvic acid increases penetration of the leaf cuticle. Add 1-2 pints to the spray tank along with the fertilizer. Use 1 pint when applying AGGRAND 4-3-3 and 0-0-8 products together.

Rates vary according to soil fertility and other inputs used. Higher dilution rates are more effective than lower dilution rates. Do not exceed a 3% dilution rate (3 gals. of AGGRAND to 100 gals. of water).

The addition of a biodegradable surfactant increases uptake by increasing adhesion to the leaf surface. Apply AGGRAND in early morning or late evening. Do not apply before or after rainfall or irrigation. On standard sprayers use turbo flood jet nozzles when applying AGGRAND to reduce clogging.

Soil applications:

Apply 2-3 gals. AGGRAND Natural Fertilizer 4-3-3 diluted in 20-80 gals. of water. Apply to 1 acre with a field sprayer in spring and fall.

The addition of a biological activator increases soil biological activity. Add activator to the spray tank or irrigation water along with the fertilizer.

Root applications:

Apply with irrigation water 2-4 times per month between pre-bloom period to one month after harvest (apply more often on lighter soils with low organic matter content). When applying AGGRAND with irrigation water use a dilution rate that results in 6-20 gals./acre/year.

General applications:

- 1.) Apply ½-1 ½ quarts per tree per year or 12-45 gals./acre/year (rates depend on tree population, soil fertility, and the use of cover crops and/or application of compost or manure). The total amount includes soil and foliar applications.

The application of compost, composted manure, and incorporation of green manure crops improves soil structure, nutrient, and water holding capacity of desert soils. Annual medics (*medicago spp*) such as barrel medic (*medicago truncatula*), strand medic (*m. littoralis*) and snail medic (*m. scutellata*) are low growing and adapted to neutral to alkaline soils. These species will grow during the cool season and go to seed before summer. They add organic matter and nitrogen to the soil. They must be kept short by mowing to 3-5" in height.

Organic Citrus Production in Desert Climates

Soil Factors:

- Coarser textured soils with good drainage produce the highest yields, but citrus production is also possible with finer textured soils with good drainage.