



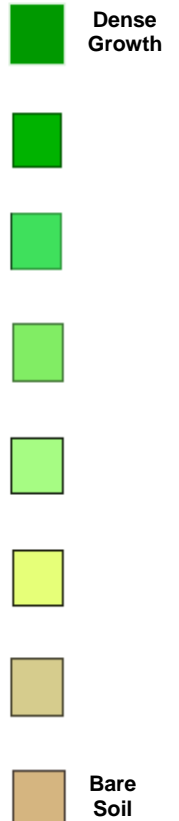
TM

GROWTHMAP™

GROWTHMAP™ images define areas of variability in crop growth density. Variability in crop growth indicates an opportunity for improved crop performance and therefore warrants management investigation and characterization. There are up to eight categories of different growth densities in an extremely variable field or as few as two in a uniform field. Acreage is totaled for the field by each growth density category.

The **GROWTHMAP™** image shows the location, severity and extensiveness of growth problems in your field. To utilize the information, you need to identify the cause and quantify the severity of a representative area for each category on the map. How you quantify the severity depends on the cause. For example, if the cause is a nutrient deficiency, a targeted plant tissue sample analysis will quantify the difference or a yield sample of representative areas will also quantify the economic impact of the crop production problem.

Field variables that **REDUCE** crop growth density include: missing, small or thin plants; chlorosis; nutrient deficiencies; insect or disease damage; new growth; wilting or leaf cupping; moisture stress or spray damage. Field variables that **INCREASE** crop growth density include: dense crop growth; old growth; weeds; recent irrigation; drainage problems; wet foliage or lodging. Field variables that can increase OR decrease crop growth density include: growth regulators; physiological maturity; different rootstocks; plant population or variety. Please note that **GROWTHMAP™** does not discriminate crop chlorophyll from weed or ground cover chlorophyll.



Once the mapped crop growth variability causes have been identified and characterized in their severity, you have the information to:

- Select locations for representative sampling for yields, crop quality, plant tissue nutrient status, bud fruitfulness analysis, and plant diseases
- Site specifically apply fertilizers, growth regulators, herbicides and pesticides
- Site selectively make pruning and fruit load management decisions
- Define selective harvest areas
- Estimate yield and perform production economic analyses
- Quantify field profitability and profitability by area within fields
- Modify field boundaries to optimize profitability (based on yield potential by area and by commodity price vs. production costs)
- Evaluate the effectiveness of cultural practices or the economic returns from crop inputs