

Online Fertilization Guidelines for Major Crops in California

Daniel Geisseler and William R. Horwath

Department of Land, Air and Water Resources, UC Davis

Background

Numerous research projects have investigated different aspects of fertilizer management for crops grown in California. However, a comprehensive, research-based overview of fertilizer management in California is missing for many crops.

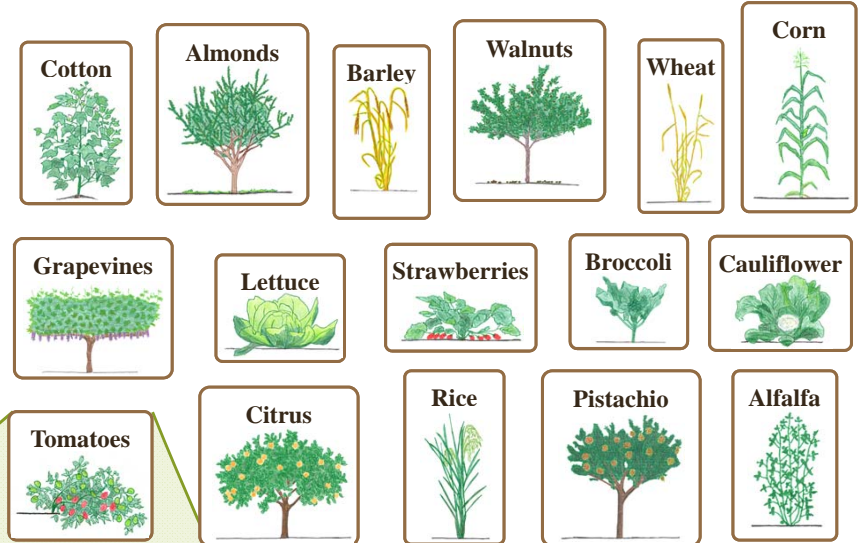
In collaboration with CDFA-FREP we are synthesizing peer reviewed journal articles and research reports. The resulting fertilization guidelines are available online in a user-friendly interface.

The guidelines include information about:

- Fertilization (rate, time, placement, and material)
- Deficiency symptoms
- Soil testing
- Plant tissue analyses

The guidelines provide a basis for in-depth discussions with local farm advisors or fertilization experts about site-specific adjustments.

Crops Currently Available



Additional crops will be added on a flow basis

<http://apps.cdfa.ca.gov/frep/docs/guidelines.html>

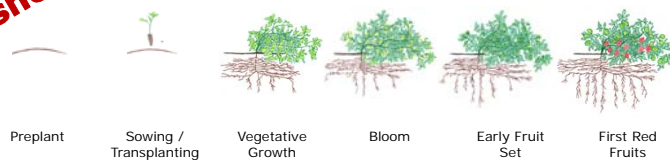


Processing Tomatoes Fertilization Guidelines

Funding provided by:



Screenshot



| | | |
|---|-------------------------|---------------------------|
| Nitrogen (N) | Soil Test | Leaf Analysis |
| | Preplant N Starter N | Soil Applied N / Foliar N |
| Phosphorus (P ₂ O ₅) | Soil Test | Soil Applied N / Foliar N |
| | Application Rate | |
| Potassium (K ₂ O) | Mode of Application | |
| | Fertilizer Type | |
| Time of Application | | |

For drip-irrigated processing tomatoes, Hartz and Bottoms¹ found that a seasonal rate of approximately 175 lbs N/acre is adequate to maximize fruit yields in most soils. Contact your local [farm advisor](#) for more information.

Krusekopf and coworkers² carried out a study in the Central Valley in ten furrow irrigated fields. A response to N fertilization was observed in only four fields. In the responsive fields, no significant yield increase with sidedress N application rates above 100 lbs/acre was observed. The total available N in these fields, which included the pre-sidedress nitrate-N in the top 2 feet of the profile and the sidedress N, averaged 170 lbs/acre². Based on this and other studies, the recommended seasonal N application rate for furrow irrigated tomatoes is 100-150 lbs N/acre².

Acknowledgements

- FREP
- Farm advisors, scientists and experts who reviewed the guidelines
- Amrith Gunasekara, Asif Maan, Amadou Ba

This project is a collaboration between



UC DAVIS
UNIVERSITY OF CALIFORNIA



Department of
LAND, AIR AND WATER RESOURCES
University of California, Davis
Climate Change • Sustainable Agriculture
Environmental Quality • Landscape Processes

Funding is provided by FREP