Development of a Comprehensive Web Map Platform for Viewing and Use of 2014 and 2016 Statewide Almond Mapping Results and Other Spatial Data Resources

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PROJECT SUMMARY

Objectives:

- Design, build, maintain, and update a web map application to be used by the Almond Board of California staff and designated affiliates/entities
- Provide a web map to ABC as a private and secure web-based system viewable with any computer or mobile device
- Provide the capacity to integrate multiple datasets into this web map including:
  - 2010, 2012, 2014, and ultimately 2016 base mapping products
  - Individual orchard planting year
  - Irrigation district boundaries
  - Various regulatory boundaries
  - Political boundaries
  - Groundwater recharge potential
  - Soil type
  - Surface hydrology
  - ET zones

Background and Discussion:

Accurate and current information on constantly changing acreage and location of crops is critical for environmental, market, and production applications. Growers and commodity groups need to understand the impacts of land use, crop location, crop change, acreage, tree age and best management practices on environmental attributes and impacts such as water quality, air quality, disease, and/or pest vectors. Conversely, environmental factors, such as climate change and sensitive habitats, increasingly influence how much and where these crops are grown. For these purposes, as well as many others, as these spatial mapping layers continue to be developed, it is important for the information to be accessible by designated end users to aid in effective decision-making and other applications.

In response to this need for information by the Almond Board of California, a statewide, orchard by orchard map was developed for 2010, 2012, 2014 and soon 2016. These results have been achieved in a timely and cost-effective manner using remote sensing crop mapping methodology in combination with agronomic knowledge, ground truth data, and an overall comprehensive orchard by orchard approach.

The next step is to develop a platform in which the data can be viewed, used, queried, and interpreted within the Almond Board of California (ABC), associated researchers, and other designated end users. The ABC has finalized a data management protocol in which to use and share this information as a result of statewide mapping efforts and generated applications. This work was designed to complete this next step, so the data can be used by the ABC and its designees in a comprehensive, efficient, protected, updateable, and seamless manner.

This effort would develop an on-line web mapping viewer and analysis tool that simplifies access and use of spatial information and incorporates the statewide almond mapping efforts along with other valuable background mapping layers. The web map will serve as a central, efficient means of communicating results of spatial mapping and analysis efforts based on the objectives of data communication, maintaining data integrity and data security. Access to the web map is available for public intended users only.

The main requirements of the web map are that it is accessible over the internet on any desktop or mobile device, it is user-friendly, and it is developed in a functional manner as to quickly and efficient answer questions generated from within and outside the commodity organizations as well as the ability to answer spatially relational queries.

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For More Details, Visit

- Poster location 54, Exhibit A + B during the Almond Conference; or on the web (after January 2017) at Almonds.com/Research Database
- Related projects: 14-PREC1-DeJong, 12-STEWCROP4-Kimmelshue, 16.PREC9.Shackel/Dahlke