

## **Work Group on Weather Systems 2007 Progress Report**

The Western IPM Weather Workgroup is maturing into a highly collaborative and effective group. In the past year, we have met twice, had several conference calls, and will meet on September 24-26, 2007 to form a partnership with researchers outside the western region. The group's efforts have resulted in the development and submission of research proposals worth approximately \$4 million. Due to the diverse membership of the group and the ability and willingness of numerous members to assume leadership roles, the group can and has pursued various funding opportunities and established outreach activities with several grower groups. For instance; the group just submitted a proposal to the Agriculture Research Service Area Wide IPM program. This proposal will endeavor to implement numerous ideas and tools developed as a result of the collaborations formed because of group meetings. If funded, the project will demonstrate the utility of interpolate weather and forecast data to numerous stakeholder groups across California, Oregon, and Washington. Group members have given 22 presentations to various stakeholders groups relaying the vision and research activities of the group.

The group's purpose continues to evolve but is still centered on the development of knowledge and methods to expand access to, and use of weather data, forecasts and models to enhance the precision and sustainability of agriculture producer decisions and future expansion to other societal uses. We were not successful in recruiting new members within the western region in 2006 but did establish collaborations with researchers (Mark Gleason and Forest Nutter) outside of the western region. These individuals bring expertise in parameter estimation and remote sensing. These skills could further enhance efforts to interpolate weather data and forecasts between weather stations. Currently the group is weak in expertise in pest and crop phenology modeling, and arthropod and weed biology. The group will seek to continue Western Region IPM support to further develop our vision, research objectives, and grant proposals, and address technical issues related to acquisition, utilization, and delivery of weather data and analyses of that data.

This workgroup is continuing to provide the conceptual and technical basis for the integration of model-based and climate-based weather forecast technologies at very fine GIS-scales. Adding this integration to existing weather network technologies in the group, provides a unique mix of approaches that has significant potential to advance the predictability of weather in spatial and temporal scales useful to precision agricultural applications.