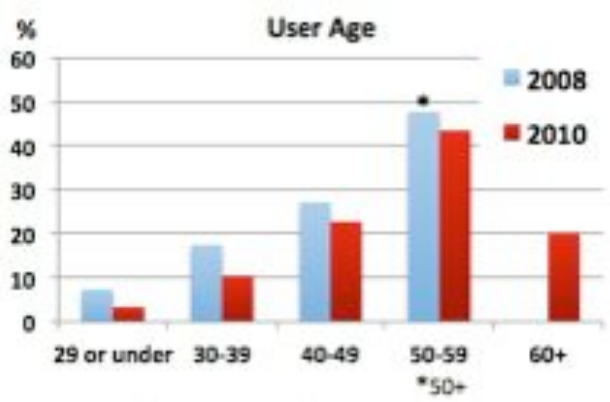
DAS User Survey 2010: *Results Summary*

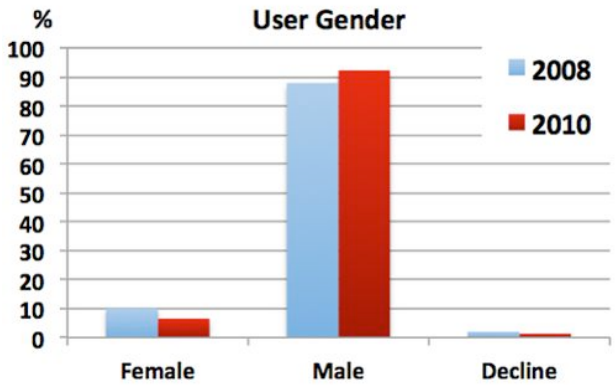
Survey Methods

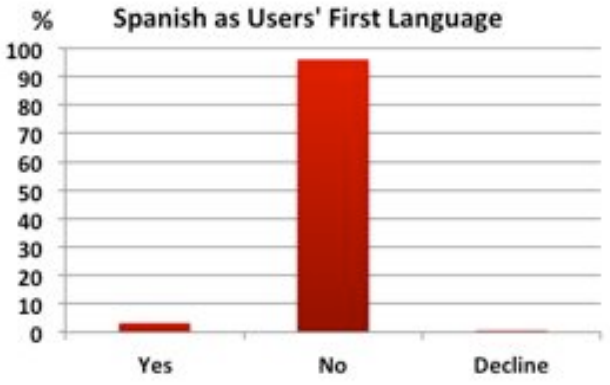
An online survey of WSU-DAS users was conducted from July through September 2010. Of all registered DAS users, 154 participants responded to our survey and 134 participants completed all questions. The response rate was 34.4% based on 447 users that logged in at least 3 times in 2010. Graphs presented here show comparative results of the 2008 and 2010 surveys where data for both years exist.

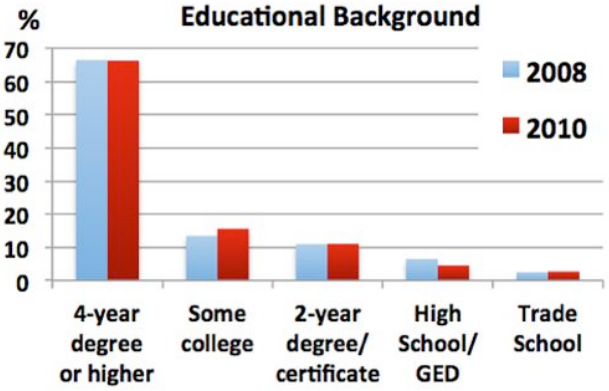
User background/demographics

Most respondents were between 50 and 59 years of age (44%), 23% were 40-49 years old, and 20% were 60+ years of age. Ninety-two percent were male, and 7% were female. Spanish was the first language of 3% respondents, English for 96%. The majority (66%) of respondents have a 4-year degree or higher, followed by some college (16%), a 2-year degree (11%), high school/GED (4%), and trade school (3%).



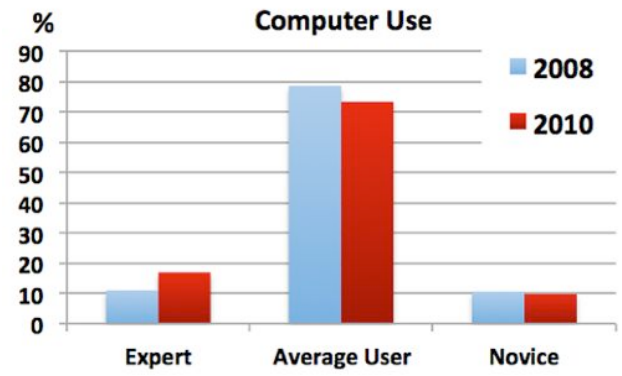


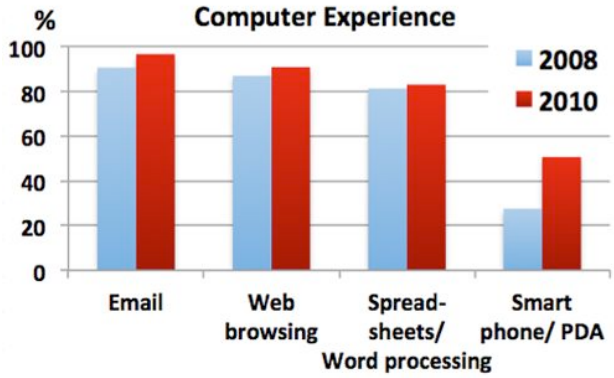


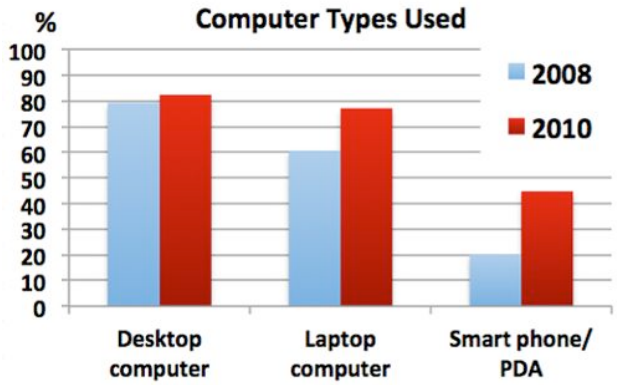


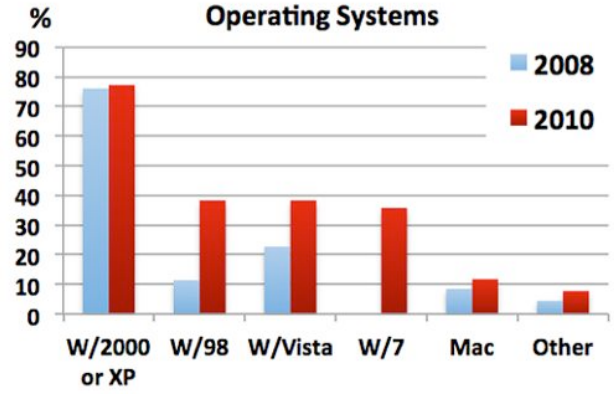
Nearly three quarters (73%) of respondents describe themselves as average computer user, 17% as computer experts (compared to 11% in 2008), and 10% as novice. Desktop and laptop computers are used by 82% and 77% of the survey respondents, respectively. The use of smart phones/PDA's has more than doubled from 20% in 2008 to 45% in 2010.

The majority of the survey respondents (61%) were growers/orchardists, 38% were orchard managers, 20% worked as Ag Chem distributor consultants, 16% were Packinghouse or Company fieldmen, 14% worked in research and/or extension, 10% were private crop consultants, and 9% had other full-time or part-time occupations.

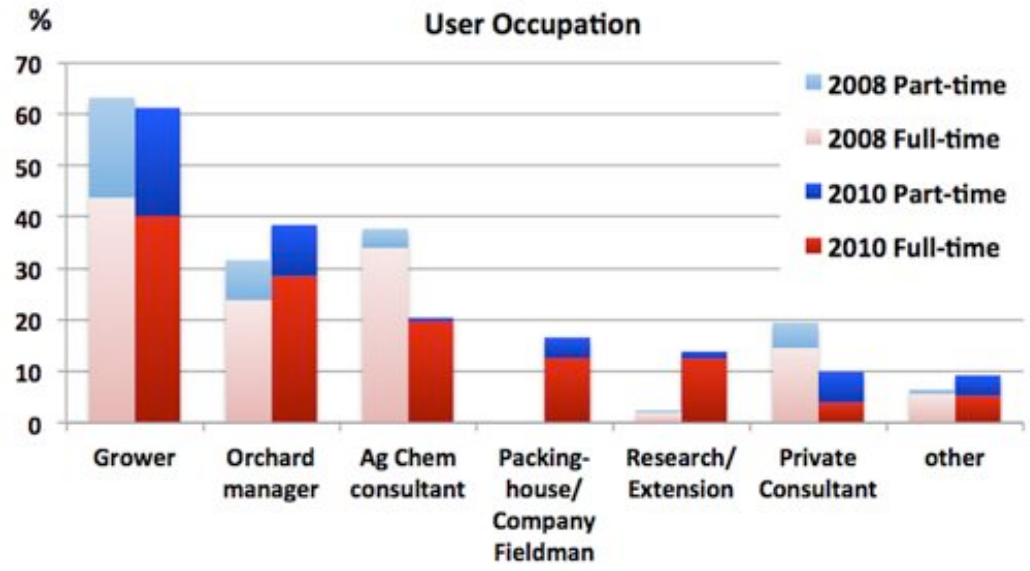




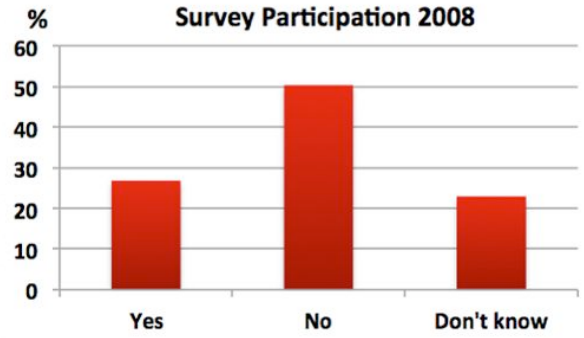


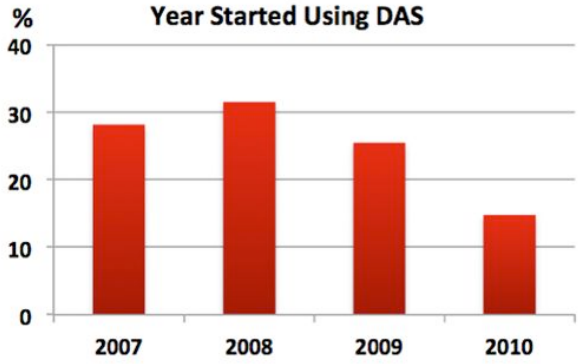


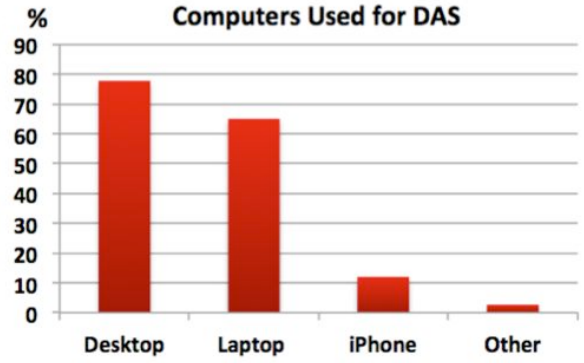
Over a quarter (26.8%) of the survey respondents also participated in the 2008 survey. The survey respondents comprised experienced as well as new DAS users; 15% registered with DAS in 2010, 25% in 2009, 32% in 2008, and 28% in 2007.

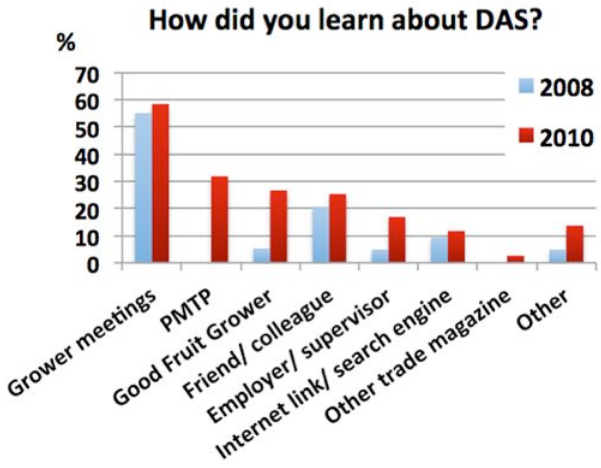


The majority of respondents learned about DAS through grower meetings (58%), followed by PMTP meetings (32%), Good Fruit Grower articles (27%), friends/colleagues (25%), employer/supervisor (17%), internet links/search engine (12%), and/or other sources (14%).



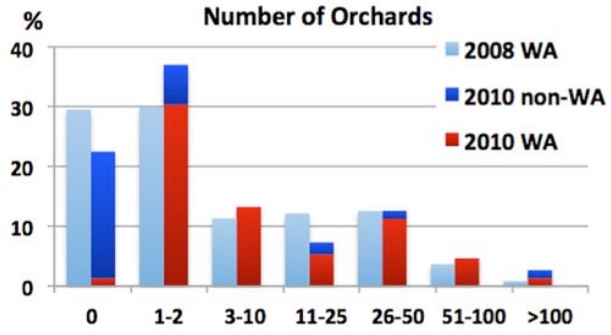


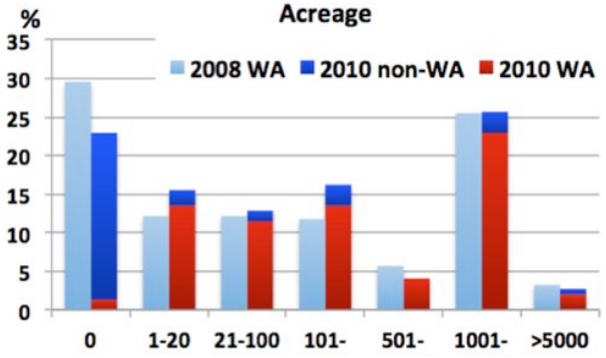


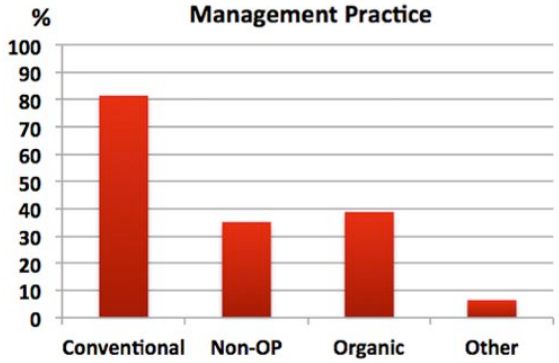


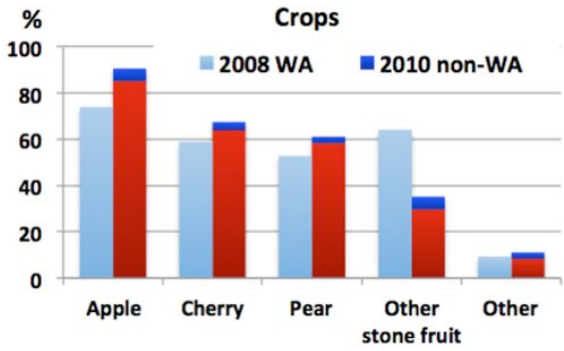
Orchard characteristics

The survey respondents from WA State provided pest control management or recommendations for a total of approximately 182,044 acres (ranging from 0 to 75,000 acres) in 2,909 orchards (ranging from 0 to 1,400 orchards). Of the respondents from WA State that provided management or recommendations, 92% did so for apples, 63% for pears, 69% for cherries, 32% for other stone fruit, and 11% for other crops including grapes and other small fruit. The majority of survey respondents described their management practice as conventional (82%), followed by organic (39%), non-OP (35%), and other (6%).



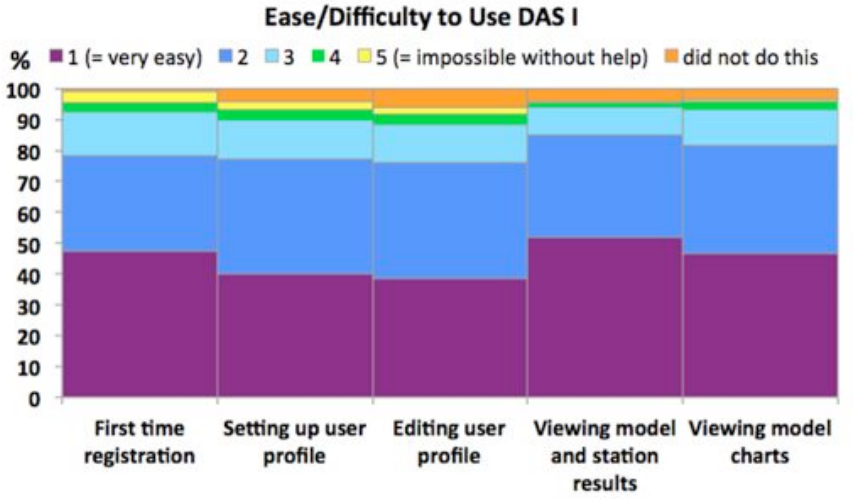


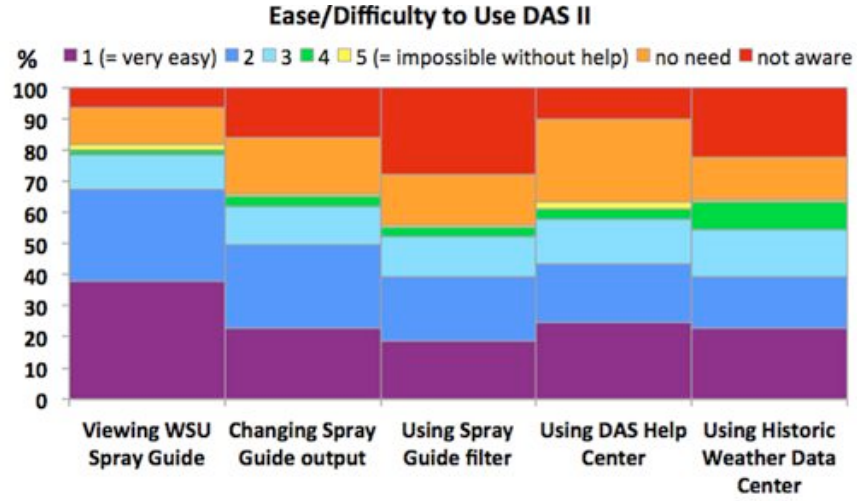




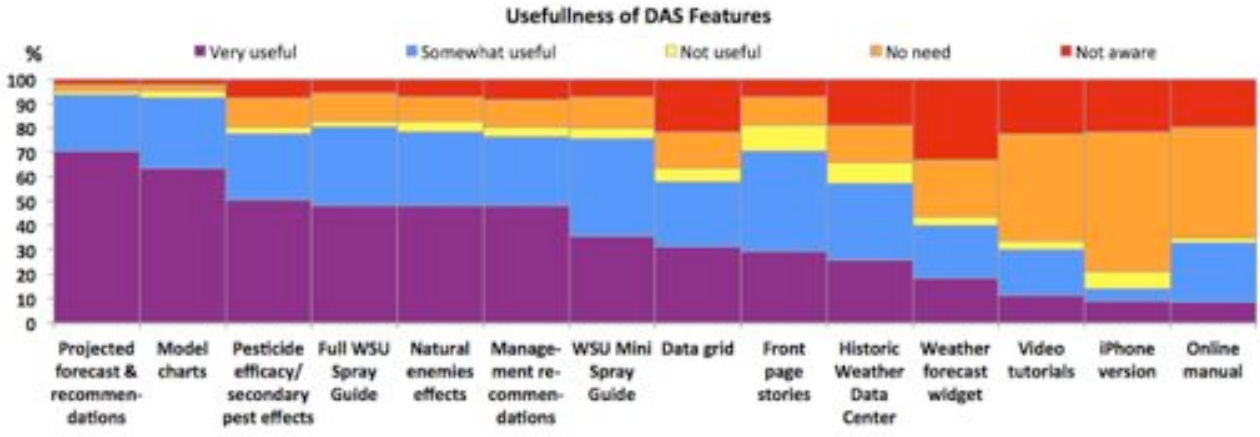
Use of DAS

Ease of use of DAS features: Most respondents rated the use of various features of DAS as “easy” or “very easy.” Between 6% and 27% of users indicated that they were not aware of the some of the DAS features. The respondents rated the various insect, disease and disorder models as “easy” or “very easy” to use.

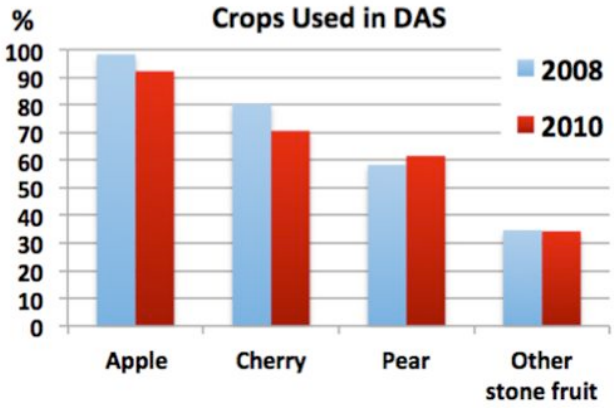




Usefulness of DAS features: Survey respondents rated various features on DAS on average between ”somewhat useful” and “very useful.” Best average ratings were given to projected model forecast with

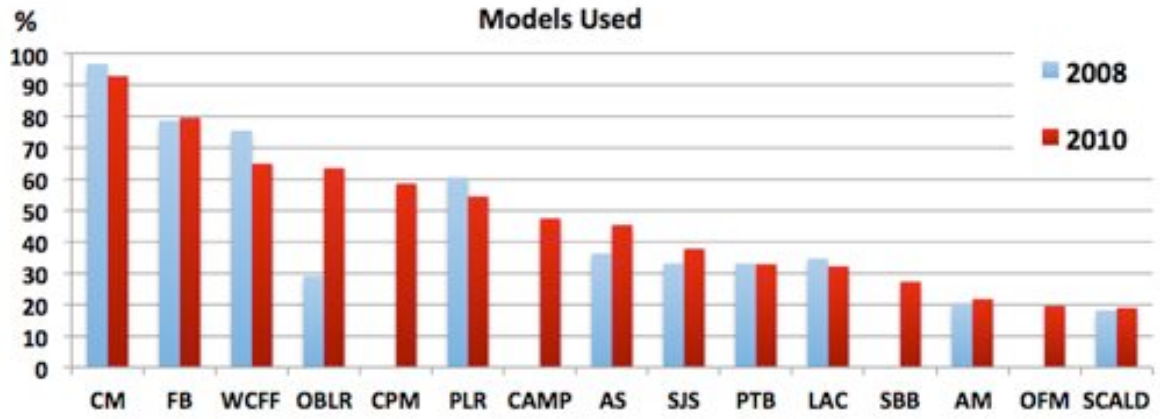


management recommendations, model charts, and the overall full WSU Spray Guide. New features, such as video tutorials, online manual, front page stories, and iPhone version were rated on average ”somewhat useful.”

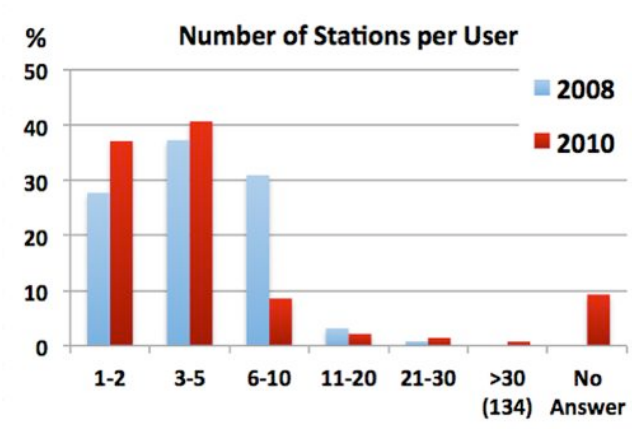


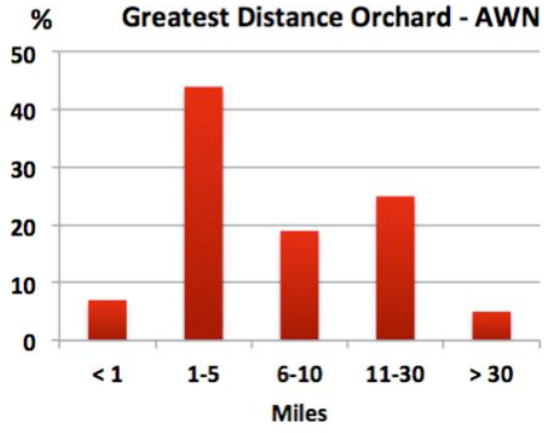
Crops used in DAS: All crops were used in DAS by the survey respondents, most importantly apple (92%), followed by cherry (71%), pear (62%), and other stone fruit (34%).

Models used in DAS: The most used models on DAS were codling moth (93%), fireblight (80%), western cherry fruit fly (65%), oblique-banded leafroller (64%), cherry powdery mildew (59%), and *Pandemis* leafroller (55%). For 62% of the survey respondents, the codling moth model was the most important model, while the fireblight model and western cherry fruit fly model were most important for 22% and 5% of the respondents, respectively.

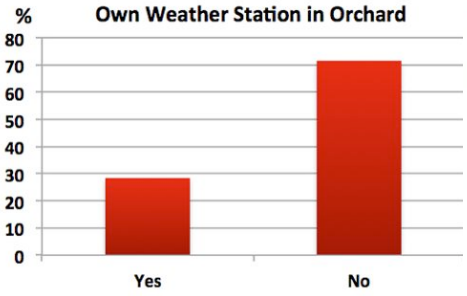


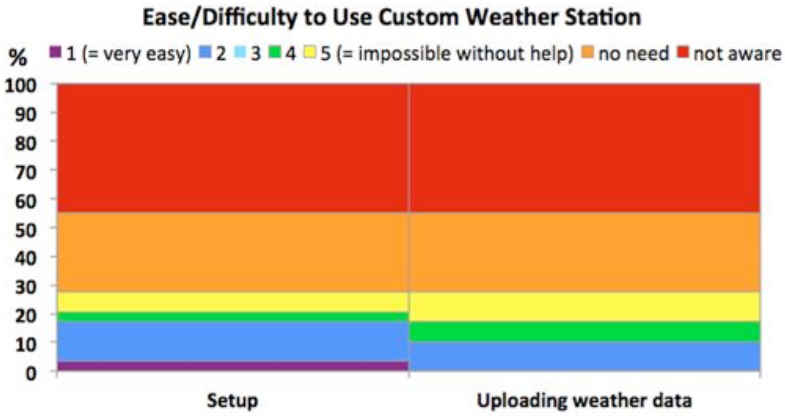
Number of AWN stations: The number of AgWeatherNet stations used in DAS per user ranges between 1 and 134. The majority of respondents (77%) looked at 1 to 5 weather stations. the majority of the orchards were between one and five miles of an AWN station.

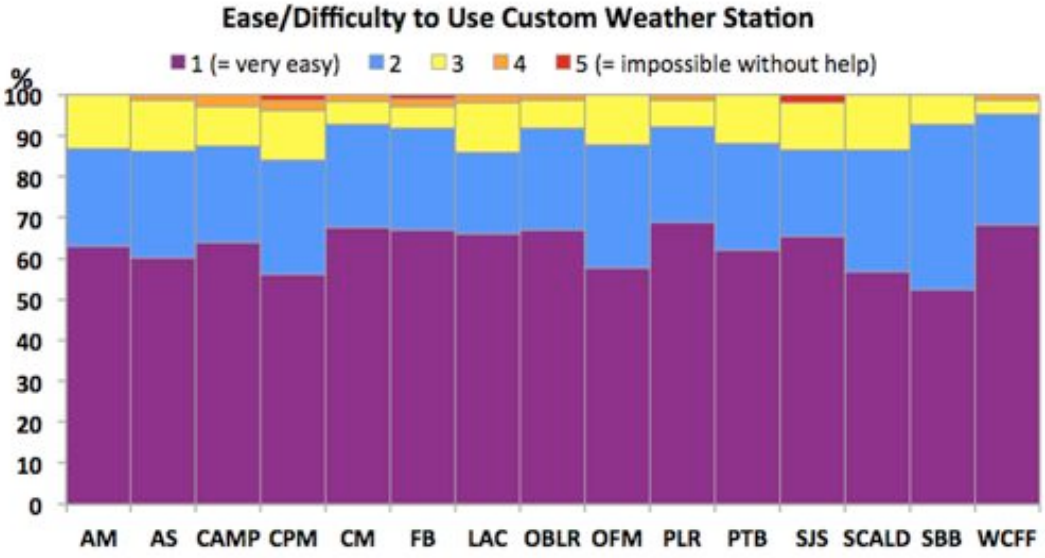




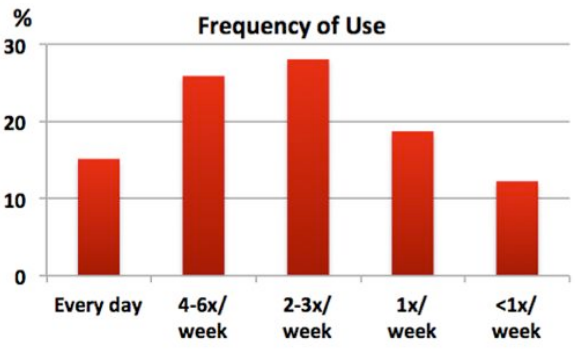
Use of Custom Weather Stations. DAS allows users to upload and use weather data from their own stations. About 28% of the respondents idicated that they had their own weathter data. Respodents were then asked to rate the level of ease or difficulty in setting up their own stations within DAS.

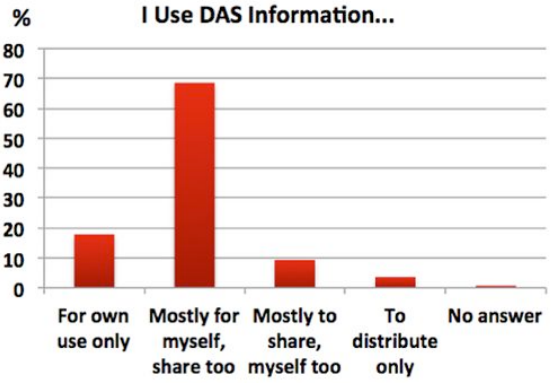




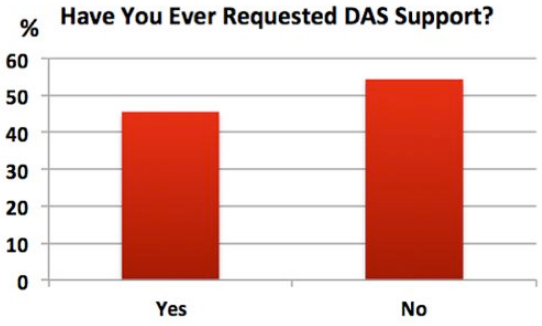


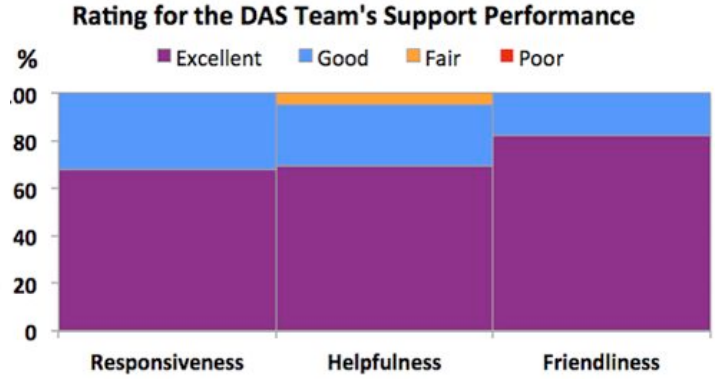
Use of DAS: The majority of DAS users check their stations and models between once per week up to 4 to 6 times a week. When asked how sharing DAS information, the majority (68%) reported that the information is mostly for themselves, but they also share it with others.





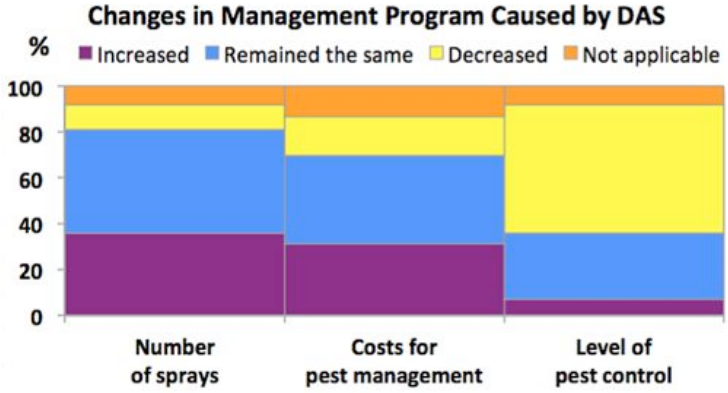
DAS support: Almost half of the survey participants (46%) have requested any kind of support from the DAS team and rated the responsiveness, helpfulness, and friendliness as “good” or “excellent.”



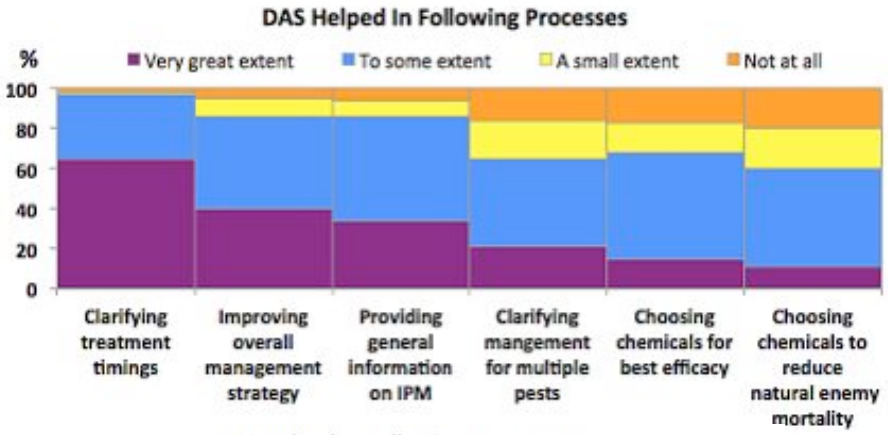


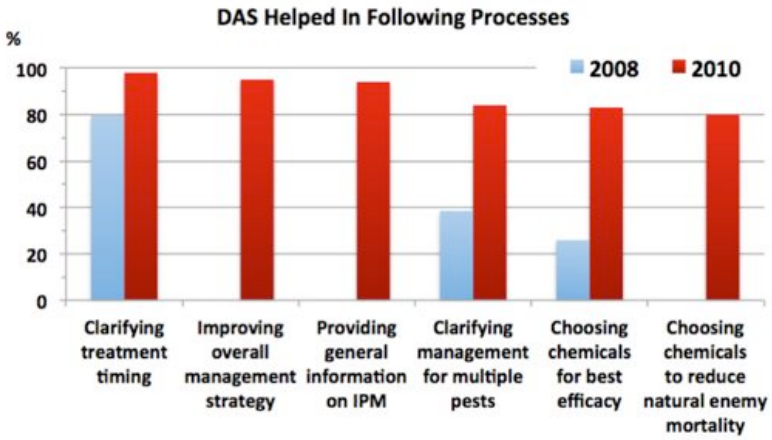
Impact of DAS

Almost half of the respondents (48%) said they were asked for information from DAS, and 81% of all respondents shared the information with others.



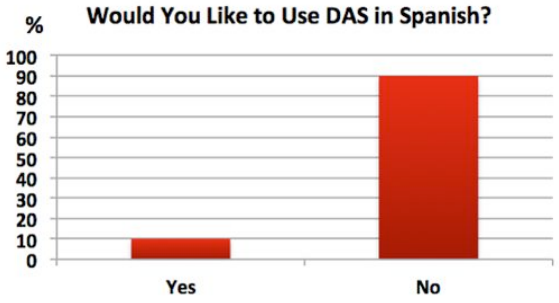
The use of DAS resulted in an increase in the level of pest control for 56% of the respondents, reduced number of sprays (36%), reduced cost for pest management (31%). DAS helped 97% of the survey respondents to "some extent" or a "very great extent" with clarifying treatment timings, 68% with choosing chemicals for best efficacy, and 65% with clarifying management for multiple pests. In addition, 86% of the survey participants indicated that DAS helped with improving the their overall management strategy, with providing general information on IPM (86%), and with choosing chemicals to reduce natural enemy mortality (60%). A comparison was then made between 2008 and 2010 for those stating the DAS was helpful in the various processes showing an overall increase in DAS usefullness.

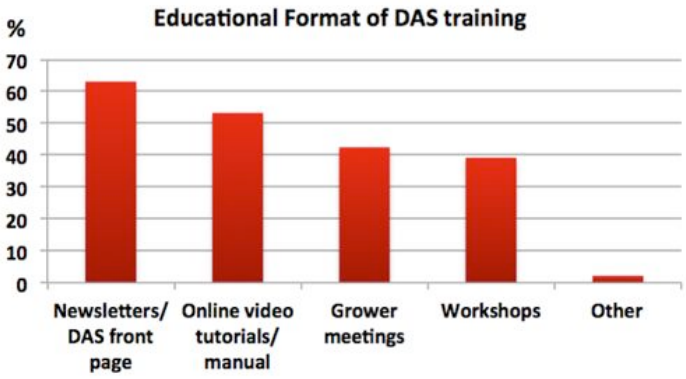


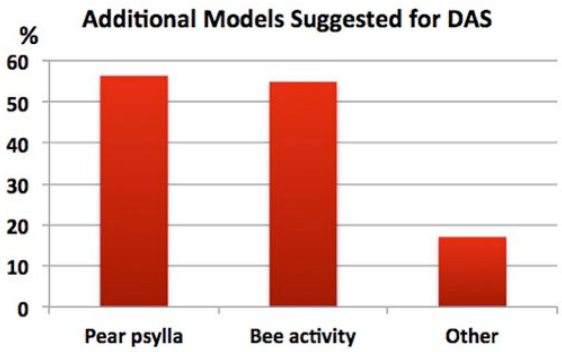


User feedback

Of the 66% of the respondents who would like to learn more about DAS, 63% would prefer newsletters and updates on the DAS front page, 53% online video tutorials and manual, 42% grower meetings, and 39% workshops. Other suggestions included online workshops and interactive online training. Ten



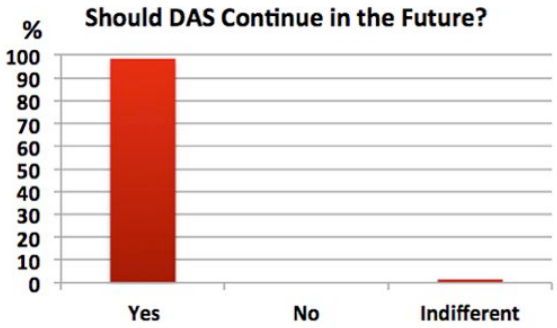


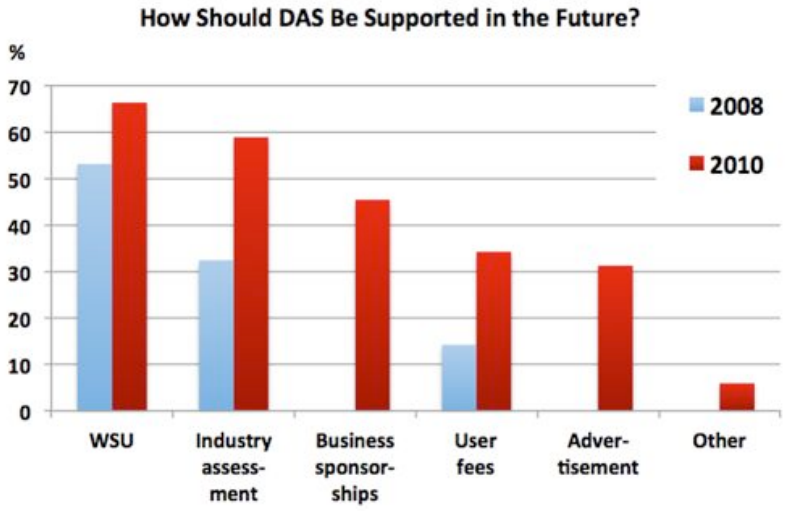


percent of the respondents were interested in using DAS in Spanish. When asked about adding models to DAS 56.3% request a pear psylla model and 54.8% request a model for bee activity.

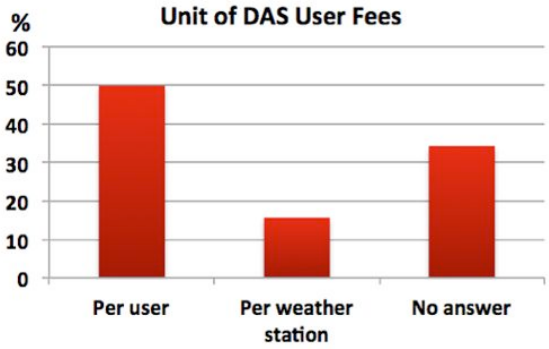
Future of WSU-DAS

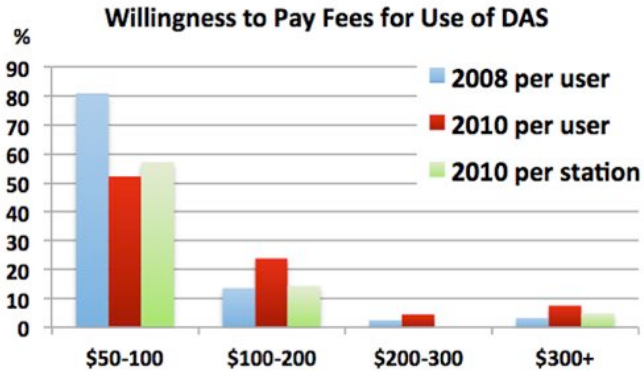
Maintenance of WSU-DAS costs approximately $200,000 per year. Currently, WSU-DAS is funded mainly by WA Tree Fruit Research Commission grants, but the mission of WTFRC is not meant to support/ maintain long-term projects. In light of this, users were asked if they thought WSU-DAS should continue in the future and how it should be supported.





Respondents were then asked if WSU-DAS were forced to institute a user fee, what unit of measure should the fee be based on? Most (50%) felt a flat rate user fee best and only 15.7% felt it should be per station with 34% prefering to give no anwser. They were then asked how much they would be willing to pay per year.





We also asked how the user's operation would be affected if DAS was discontinued next year. The majority of survey participants indicated that the discontinuation of DAS would have "major" or "modest" impacts on the clarity of treatment timings (95%), on the improvement of the user's overall management strategy (88%), level of pest control (76%), management for multiple pests (71%), costs for pest management (71%), the user's number of sprays (70%), the user's choice of chemicals for best efficacy (64%), and choice of chemicals to reduce natural enemy mortality (58%).