Tour Objectives: To provide a direct and compelling experience of the progressive biodiversity enhancement practices that are driving sustainable agriculture forward in the 21st century, to provide access to scientists and other specialists who are helping us understand the importance of on-farm biodiversity for the quality and yield of agricultural crops, to identify some of the constraints that may limit the potential for the full benefits of these practices to be realized, and to provide relevant insights for future discussions on agricultural policies that encourage on-farm biodiversity.

Sponsors of the tour: The USDA Western Region IPM Center Functional Agro-Biodiversity Work Group (FAB Work Group) members include:
Gwendolyn Ellen, Oregon State U
Mace Vaughan, Xerces Society for Invertebrate Conservation (Xerces), OR
Rex Dufour, Nat Center for Appropriate Technology (NCAT), CA
Marsha Holt-Kingsley, Portland Metro
Joe Williams, USDA, NRCS, Plant Materials Center, Corvallis OR
Mike Russell, Oregon State U
Tammy Winfield, Oregon State U
Rebecca Sweet, Van Duzer Vineyard, OR
Steve Cook, U of Idaho
Allison Kutz-Troutman, Sound Horticulture, WA
Bob Bugg, Biohaven, CA
Deborah Clark, Oregon State U
Paul Jepson Oregon State U
John Lambrinos, Oregon State University
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The Nature Conservancy Idaho, Xerces, Northwest Coalition for Alternatives to Pesticides and NCAT

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3rd Annual Biodiversity Working for Farmers Tour Summary June 23, 2011 South Central Idaho

A tour that brought regional policy makers, conservationists and industry personnel together with farmers and researchers to highlight the importance of agricultural biodiversity

What was done

Two established, and very distinct south central Idaho farms (totaling over 3000 acres combined) were visited by 35 regional policy makers, farmers, industry personnel, conservationists and researchers. Farmers led the group through farms surrounded by diverse habitats from dry sage steppe to high prairie wetlands highlighting habitat enhancement practices they have implemented and their impacts on farm production, economic viability, area sustainability and quality of life for themselves and future generations of farmers.

Members, from the USDA Western Region IPM Center Functional Agro-Biodiversity Work Group (the FAB Work Group), specialists in agricultural biodiversity from industry, conservation groups and farmers meet on a regular basis to develop and promote adoption of ecological practices in the western region, continually led discussions throughout the day on the impacts of the on-farm biodiversity, biological pest management and native pollinator populations, extracting many live examples of beneficial insects and birds during the tours. Biodiversity at the soil microbe level increased by such ecological practices as crop rotations, cover cropping and compost applications were demonstrated by soil tilth examples on both farms. Farm resiliency to environmental degradation such as climatic catastrophes, soil erosion and water quality and regional contributions to local agricultural sustainability were discussed at length. The work group partnered with The Nature Conservancy of Idaho who sponsored lunch at the Silver Creek Preserve and the tour with their showcase barley farmers at the Stevenson Ranch in Bellevue, Idaho.

What was learned

All the farmers, Fred and Judy Brossy of Ernies Organics in Shoshone, and Gary Beck, farm manager of the Stevenson Ranch identified the following restraints they face while enhancing on-farm biodiversity:

- high costs in terms of time to plan and implement the practices, labor of creating and maintaining the habitats and land taken out of production for the habitat;
- very little regionally relevant information on the long-term impacts of these habitats on their farm production systems, and ;
- scant technical information on what plant selections to make for optimal beneficial organism and habitat enhancement (i.e. insect predators, parasitoids, native pollinators, predator birds, wetland restoration etc.).

These farmers, masters, or soon to be masters, of conservation ecology and adapting practices to fit within their farm ecosystems and production systems do so because they strongly feel on-farm biodiversity can:

- improve the quality of their products or;
- develop products for special marketing niches or;
- make their farm production systems more interesting or;
- conserve the biodiversity/sustainability of their farm or;
- take fragile lands out of farm production; or

- preserve the regional biodiversity of habitats for future generations.

Conservation practices observed

Between the sagebrush prairie and the banks of the Little Wood River farmer Fred Brossy grows certified organic wheat, barley, dry beans, potatoes and alfalfa in carefully planned rotations that include soil building cover crops. There are 60 foot crop borders which include a naturally occurring wetland and enhanced riparian and field edges of native trees, shrubs and flowering plants and sometimes trap crops of peas for aphids. Insectary strips of summer buckwheat are planted to distinguish dry bean varieties in the field. In one corner field Fred has planted a "pollinator plot" of perennial native and horticultural flowering plants. The farm participates in the Conservation Stewardship Program, the Organic Environmental Quality Incentives Program and has a permanent conservation easement on his farm with the Wood River Land Trust.

Stevenson Ranch at the headwaters of Silver Creek is 75% conventional malt barley and 25% certified organic malt barley. Soil fertility is maintained in both the conventional and organic fields with compost applications and crop rotations. There are trees and shrubs including native species planted on the edges of the conventional, center pivot, barley from their own on-farm nursery. Special field seeding patterns aid in weed management in the organic barley fields. About 800 acres of previously cropped land has been restored to wetlands and 200 acres have been set aside for avian species such as the long-billed curlew. They maintain 50 -100 foot riparian/crop buffers throughout the farm and are replacing existing fences with wildlife friendly fences. Stevenson Ranch participates in the Wetlands Restoration Program, and the Environmental Quality Incentives Program. They are a showcase barley farm with The Nature Conservancy and have several permanent conservation easements for the farm with them.

Participant comments and conclusions

The Work Group's goal of increasing awareness of agricultural biodiversity in farming systems and its importance in state and regional agricultural policy and ecosystem biodiversity planning was well met with this tour. Local biodiverse farming practices were demonstrated within very diverse farming systems and ecosystems, interested leaders were brought together in a day of stimulating demonstrations and discussions and local as well as national politicians were introduced to the constraints farmers and conservationists alike face in practicing functional agricultural biodiversity in Idaho.

Here are some comments from participants: "The FAB field day was one of the more stimulating farm tours I've ever attended. (We) have been tossing around some ideas to inspire other farmers to think about beneficial plantings and insects. Especially for those of us who don't have a river running through our farm. I'm also motivated to learn and identify the different pollinators I am seeing. It used to be enough to observe them but now I want to be formally introduced! The field day you put together was wonderfully memorable and has me reshaping my thoughts about beneficial insects." Beth Rasgorshek, Canyon Bounty Farm, Nampa , Idaho

"I really enjoyed the tour. It was very inspiring and I started looking at my place anew. I think we'll work with (others) on getting some biodiversity tours here next year." Janie Burns, Meadowlark Farm, Nampa Idaho

"The biggest revelation of the day came to me as we looked for insects within the buffer zones on the Brossy property. Because of my background and experience, I have been thinking of landscapes primarily as wildlife corridors and water systems—but there are ecosystems within the landscape that are just as important. What looks like unused transition ground around agricultural fields can be important habitat for insects, many of which contribute to healthier crops." Dayna Gross, The Nature Conservancy, Silver Creek Preserve, Bellevue, ID