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OREGON TILTH, INC.

Farmscaping for Beneficials Farm Walk

Fry Family Farm, Medford, OR May 13th, 2004

Organized by the OSU State IPM Program and Oregon Tilth

Summary

The Farmscaping for Beneficial team with ten farmers and other fellow bug-scaping enthusiasts, hit the fields on a sunny, warm, May day in southern Oregon for our second farm walk of this year. Our hosts were Steven and Suzie Fry of Fry Family Farms, organic vegetable and cut flower farmers for some twenty years. They farm seventy certified organic acres on four different Medford sites. They market their produce at area stores, farmers markets and wholesale. Steven and Suzy began farming the fields we were visiting in Medford about two years ago and are still in the process of developing their soil and pest management strategies. This gave the Farmscaping for Beneficial crew the unique opportunity to gain access to a farmscaping process “from the ground up”, so to speak.. We decided to look at what factors Steven and Suzie would be taking into consideration, what factors were effecting their decisions, and what the conservation biological control (CBC) possibilities would look like on their farm. To do this we used the “Farmscaping for Beneficials Game” as an exercise during the walk with the Fry’s fields as the game board.

The Farmscaping for Beneficials Game was first played by over twenty enthusiastic farmers and gardeners at the Bugscaping 2003 CBC informational faire in Corvallis, Oregon. The game is simply an interactive farm planning tool that engages groups of growers in planning three seasons of activities on real (in the case of the Fry Family farm walk, see maps at end of summary) or imaginary farms (in the case of the Bugscaping 2003 Faire) which are portrayed in simple maps or diagrams. The challenge is to integrate daily, monthly and seasonal farm production routines, project design, complete with assessments of success, and agronomic practices necessary for CBC adoption within a realistic farming system.

Landscape and pest management strategies. As with our other farm walks, we began this one with a discussion of the how existing landscape features can and do play a role in the ecology of the whole farm, including habitat for beneficial insects. The day of the farm walk, hover flies, larval and adult stages of lady bird beetles, and nabid (damselfly) bugs were a few of the beneficials collected to display during the walk. The forty acre fields were split by an irrigation canal/creek which runs into Bear Creek, which eventually runs to the Rogue River. The creek is bordered by shrubs, blackberries and in some area trees. Many of the field margins were bordered by trees

and grasses. The fields are located in a residential/commercial farming area nestled between conventional native grass nurseries, greenhouses and tree farms. Steven routinely plants barley and Austrian winter pea as winter cover crops.

The cover crops provide early habitat for beneficials and are also planted to improve soil fertility and weed management. He leaves rows of winter harvested brassicas to flower early in the spring for habitat and shelter for beneficial insects. Most of the blooming brassicas had been mowed before the farm walk. There was a particular field margin of grasses and some flowering weeds near the greenhouse that was harboring abundant populations of hover flies and lady bird beetles. Walk participants were given nets and hand lens and sent to this area to practice their sweeping and insect



Mowing winter harvested brassicas left to flower

identification skills.



Farmers practicing field insect identification

These fields have been a challenging area for Steven as he tries to produce crops while large numbers of flea beetles and both striped and spotted cucumber beetles are lunching on the crops at devastating rates. Participants were counting often several dozen insects per transplant! Steven contends that previous farmers allowed populations of these pests to go unchecked so that over-

wintering stages have built up in the soil and surrounding habitat. That, in addition to his field being a refuge from neighboring, pesticide sprayed, and conventional operations makes Steven Fry feel like his fields are a trap crop for the pests. In attempts to keep the 900 foot rows of recently transplanted zucchini, and brassicas alive Steven transplanted into plastic, sprays Surround, a clay compound which dusts the plants and makes them disagreeable to pests, and Pyganic (a pyrethrum acceptable for organic production) once or twice a week, and vacuums the plants with an industrial pull-behind vacuum, sometimes daily. Steven's immediate goal was to get the transplants through the early, most vulnerable stages of the pest damage. Participants could already see earlier transplants that were starting to recover from the damage with fresh, green growth.

This spurred some discussion on the deleterious effect of the Pyganic sprays and vacuuming on the natural enemies already on the farm. Steven is well aware of these effects and accepts them as trade offs to get a crop out for the short term. He has a farmscaping plan for the future which entails the following:

- cut the field into blocks with interspersed insectary hedgerow plantings
- continue winter cover crops
- research cover crops to grow that may be specifically unattractive to flea and cucumber beetles
- continue to let salad mixes and brassicas go to seed periodically to create bloom in the field at different times.

Steven contends that as the soil improves and more habitats are in place in the field the less susceptible to pests his plants will be. Steven had to be at the helm of the bug vacuum the day of the farm walk and was unable to share his farmscaping plan with fellow farmscapers who had similar ideas with some innovative additions.

Farmscaping for beneficials game.

Once everyone had a chance to finish the field insect identification and sweeping, we gathered round the shade of the processing area to begin the farmscaping segment of the walk.

Participants were given three maps of Steven's field. One map depicted what the fields looked like in early spring (see Spring Map), where the cover crops and flowering brassicas were, the last map was just a basic empty field map with no field crops at all (see big Summer map). This last map was also diagrammed on three large papers and posted on the side of the processing building. They represented Winter/Fall, Spring and Summer. These maps served as the template or game board on which participants were asked to diagram what future CBC practices they might adopt in the fields. Participants were asked to go out in the fields and design their ideal farmscaping plan on the blank map they were given. Then, we returned to the pack out area and began transcribing the practices from their farm plan maps on to each of the larger maps. We identified actions one would need to take to make these practices work and diagrammed these actions with Post-it notes on the maps.

Suggested Practices, Actions and Discussions

The following practices were listed with their accompanying actions and discussions;

- More perennial planting to provide beneficial and bird habitat; *seeding, weeding*

- Insectary habitat on sprinkler lines, plant selection is important; *seed in spring, and/or fall planting*
- Insectary planting in alternate rows with a low growing cover crop; *seeding, mowing*
- Small insectary planting blocks within the rows; *seeding, weeding*
- Alternate beetle banks and perennial insectary plantings with in the field; Management for the beetle bank includes: *making a raised bank, seeding grasses, weed management, and weed whacking or mowing if able*. Management for the insectary blocks include; *deciding design and how often to do in the field, seeding, irrigation, cultivation, and mowing*.
- Grow early trap crops of mustard, broccoli, spinach and bok choy, these trap crops can also provide food for insect feeding birds; *just direct seed, irrigate minimally if at all, minimal seeding*
- Run insect feeding birds (chicken and ducks) in field in winter and early spring for eating, eggs, grubs and slugs, birds can be run in the trap crop before it is harvested; *build coops, care and maintenance of birds, building pens, bird predator management*
- Exploit corners of the field and along the riparian zone by seeding insectary plants and bird habitat
- Apply shade cloth to the fence row to reduce wind
- Build bat houses and post in trees and in field margins

Closing

As exemplified in the previous section, there was plenty of discussion of potential CBC practices for the Fry Farm. Steven Fry was not able to attend this segment of the farm walk so perhaps in a future article we can capture his response to our discussion. Other practicing farmers from Whistling Duck Organic Farm, As the Crow Flies Organics, The Earth Works Farm, Bear Creek Farms, Medford Pear Orchard, Hi Hoe Produce, and Lupin Knoll Farm made the game come to life sharing their relevant, thoughtful suggestions, experiences and innovations in conservation biological control. After the game ended we all enjoyed a wonderful organic, vegetarian potluck in the cooling evening air.

Evaluations

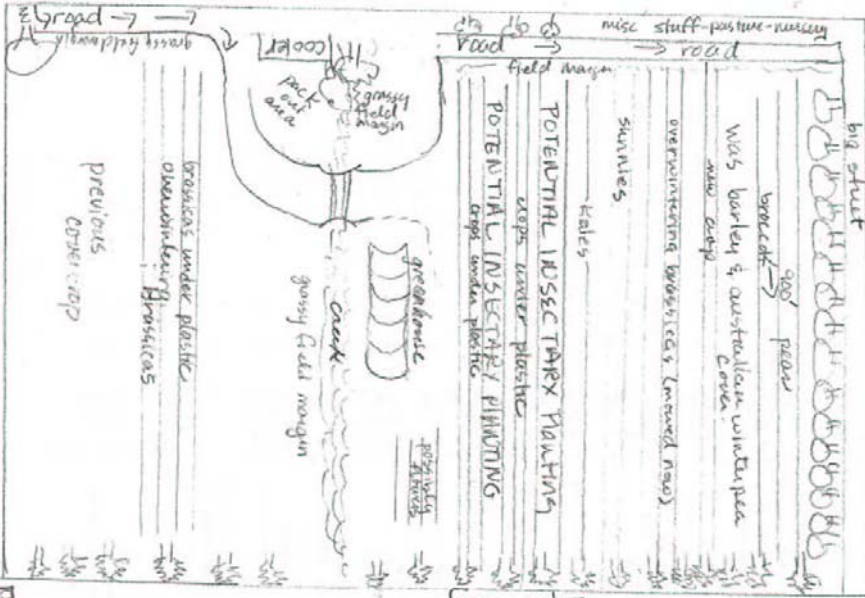
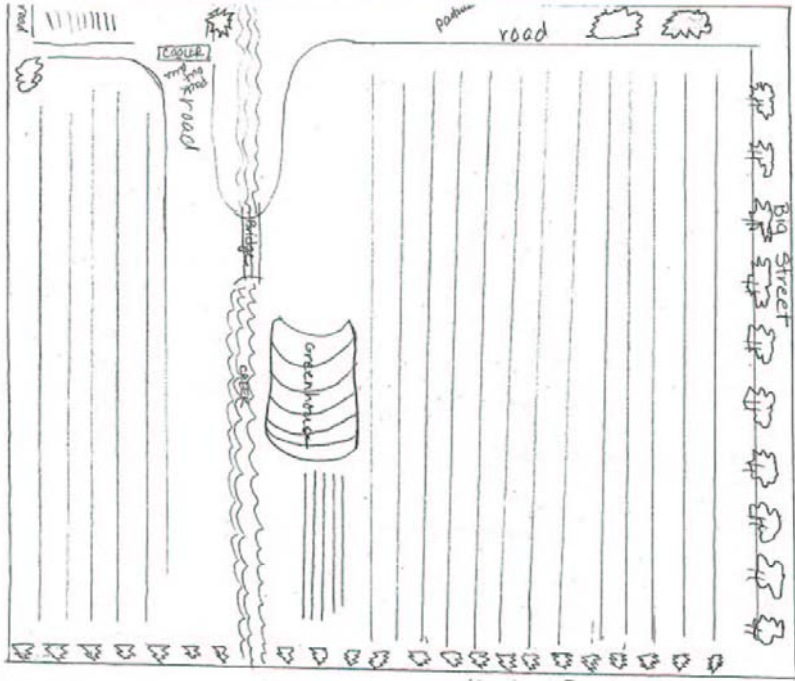
Two evaluations were returned and are summarized here. Reasons for attending the farm walk included to create a more balanced environment on the farm because farmer had mixed successes with the things tried so far, to learn more about “flea beetles, flea beetles, flea beetles”, and due to interests in developing insectary areas.

Farmers thought the benefits of the walk was the good materials (in the packet), the opportunity to talk with the presenters about their individual situations, “wow!”, and they learned about beetle banks and winter habitat for beneficial insects. One farmer felt like the small group made the walk unique and that the walks were a good tool to help learn and adopt CBC practices. This same participant felt like seeing bug-scaping in action would improve our walks.

This was the first farm walk for both respondents. They both heard about the walk through our mailings, have never seen any of our other publications, nor played the farmscaping game before. They both felt that they connected with other growers at the walk, and were willing to

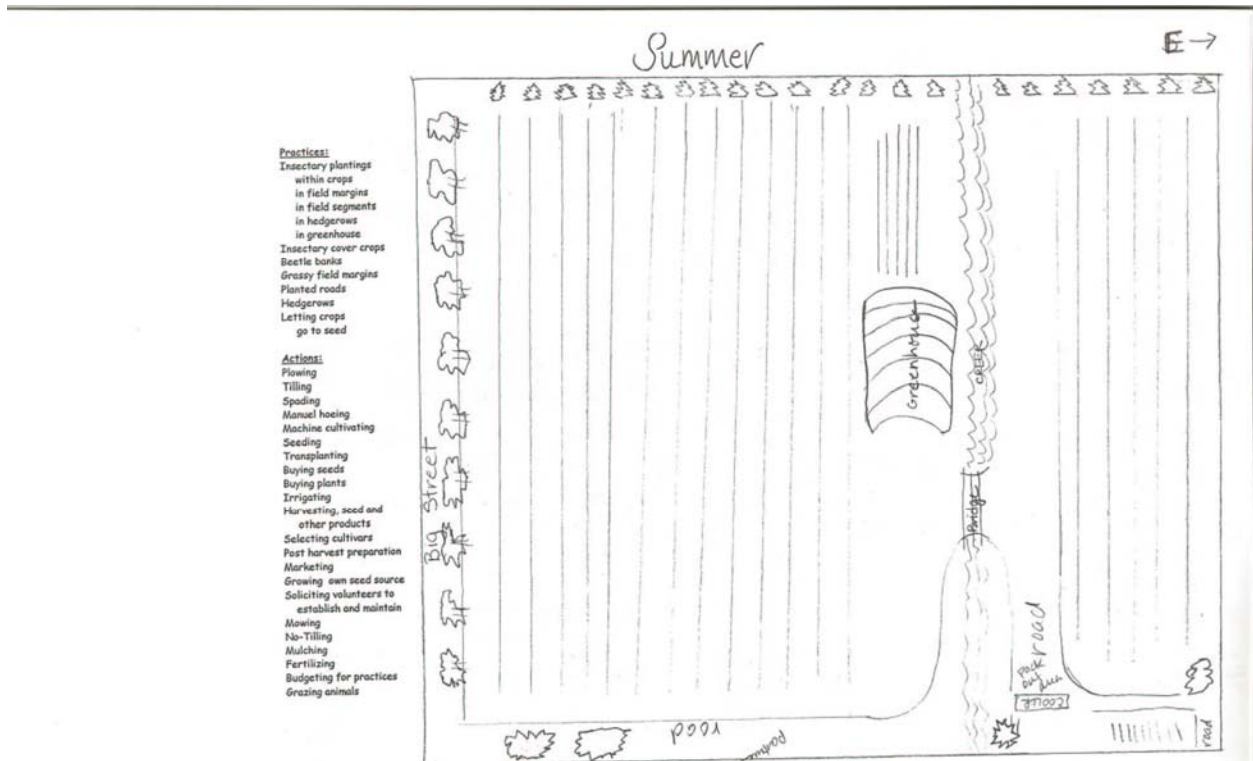
come to more walks. One wants to come to Bug-Scaping 2004 and the other is interested in participating in CBC research groups with other farmers on beetle banks, insectary plantings and hedgerows.

1/21
Winter



Spring

big street
900' pear
w/ barley & australis winter pea
overwintering vegetables (mound row)
survives
kales
POTENTIAL INSECTARY HAUNTING
crops under plastic
POTENTIAL INSECTARY HAUNTING
crops under plastic
greenhouse
creek
grassy field margin
grass field margin
previous cover crop
previous cover crop



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Integrated Plant Protection Center, OSU, with Oregon Tilth

Agenda

Fry Family Farms

May 13th, 2004 2pm-5pm

Fry Family Farm 2:00pm

Participant, program and farmer introductions.....20 min

Walk to station one to discuss landscape and scale factors with Paul..... 20 min

Walk to station two to discuss insect pest problems with Steven20 min

Walk to station three to introduce Planning Game.....20min (3:00)

Thinking, planning, collecting in fields.....40 min

Station three for discussion of recommendations and implementation.....30min (4:00)

Insect Displays, evaluation, food and fun.....30 min

Wrap Up.....5:00 pm

**Fry Family Farm Walk
Participant List
5/13/04**

Host: *Steven and Suzie Fry* 541-535-8044
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