

PNW Agroforestry Working Group Exploratory Meeting

Breakout session questions: Reactions to presentations and experience

Q1: What key issues can Agroforestry and a PNW Agroforestry Working Group address?

Topics:

1. Water quality issues/stream protection: reduce erosion, capture agricultural chemical pollutants, provide shade to cool streams, provide thermal protection and improved water quality for salmon and drinking water.
2. Adaptation to climate change
3. Pollinator status: Improve health of bees and other pollinators in PNW region – very important for food crops.
4. New markets: Create another market opportunity for depressed forestry areas where no mills left – opportunity to introduce AF for econ.
5. Diversify income sources: add value for landowner; show how farmer can make more than \$220/acre like they do now with wheat.
6. Soil carbon
7. Forestry residues: fire reduction for funding attraction (Eastside-Westside issue)

Functions:

1. Research and marketing
2. Problem identification, interaction with stakeholders, outreach, education, grounded research.
3. Inform ourselves; conduct inventories – what agroforestry practices are already being used in the PNW? What data is there on economic and ecological benefits?
4. Education: In the PNW, the number of small farms is on the increase – there is a movement of people reconnecting with the land. Both WSU and OSU have active small farms programs. At the Extension Center there is a “Growing Farms” class to learn about being farmers, which is well-attended by younger and older folks.

Could a PNW Agroforestry Academy happen here? It could be part of Extension farming training. Opportunities for small farms: have sense of a more holistic approach, diverse portfolio, variety of products, economic diversity, increasing land value by stacking crops to reduce footprint and water use (for example, mixing orchards and understory agriculture). Is it biologically possible, socially acceptable, and economically viable?

Q2: Areas of impact?

1. Riparian buffers for wildlife habitat – We are currently not meeting habitat management responsibilities with a sole focus on yield/value for all private landowners, who may perceive no incentive to install riparian buffers. These buffers and hedgerows can provide important habitat for endangered species.
2. Direct ecological and economic benefits for landowners and rural communities (nontimber forest products, diversified income sources). Diversity of agroforestry can make farms more economically and ecologically resilient. Existing subsidies for ecosystem services might help if they provide harvestable products in riparian zones. (PNW already recognized leader in ES markets such as carbon sequestration.)

3. Health of salmon in PNW – Riparian buffers reduce stream temperatures and sedimentation, improve water quality, and provide TMDL solutions for cities whose treated wastewater is too warm to be released directly into rivers.
4. Adaptation to climate change (reference to National Institute for Food and Agriculture (NIFA)).
5. Snohomish Conservation District restoration projects being implemented with salmon recovery funds. Private riverside landowners are stakeholders. We need a model to manage riverside lands for treefall, bugs dropping, and erosion control to improve salmon habitat.
6. Improved crop and soil health.
7. Salmon-safe certification for vineyards for value-added product (riparian buffers can be a useful tool to achieve certification). Riparian buffers and hedgerows can provide pollinator habitat for improved crop success, sustainable food supply; PNW issue with specialty food crops and GM cross-pollination.
8. Use of bio-solids – for example: integrate dairy operations and biogas operations on farms.
9. Biochar market is growing, provides economic use for forest residues. Biomass fuels for heating.
10. Break from an engineering mindset.

Q3: Barriers to success:

1. Resource concerns: If not done right at first, this may be the end of it. Disadvantage: no existing industrial lobby; no signs of natural adoption; must we jump on other bandwagon?
2. Lack of adequate market/ marketing: identify mechanisms to bring in new products (Salmon-Safe Certification for wine, could be for other crops). Food Alliance recently closed shop near here – have fundamental structural problem.
3. Elements you don't have control over (competitive pricing).

Q4: Resources required to support AF Working Group:

1. Shared view of perceived need and sufficient level of enthusiasm are very important. One of two breakout groups indicated interest level in forming a Working Group: High interest 3, med 7, low 2. (Similar expressed interest in other group.)
2. Professional expertise, education, and research.
3. Available time, personnel, funding, and interest.
4. Communication avenues (website, list-serve, blog, etc.). Who will participate? Who to involve; website and list-serve host; where to meet/host group?
5. Marketing strategy.

Website and group email list will be helpful first step, followed by an agroforestry blog. Start with website and local contacts to spread word and make connections. Private industry involvement is important.

Need funding to move research forward and to support agroforestry education and demonstration projects.

Needed research (OSU and WSU land grant role): identify crops to grow in riparian areas, develop marketing strategy, collect data on income potential. Have experiential information but need more good data, case studies.

Need better marketing of agroforestry benefits, communication message with landowners; how to commercialize specialty products, nontimber forest products. These are systems that mature over multiple years. Get data from early adopters. **Marketing issues:** Branding (PNW grown; Salmon-safe

and Salmon Nation brand in use already). How big is the market? How is certification quantified/validated? As market share increases, premium goes away.

Need to develop design solutions. (Share OSU agroforestry coursework site with working group; develop PNW Agroforestry Academy to teach skills, methods.) A suggestion: ask floodplain landowners and commercial growers: “What would it take to develop your land to provide these agroforestry services?” Manage NRCS cost-shares.

Certification and organic standards – how do agroforestry operations fit with forest certification standards and organic agricultural standards?

Q5: Opportunities for collaboration as a group:

Outreach, landowner education projects, demonstration sites.

Grant applications for funding to support demonstration sites, specific projects, public education, and research.

Research to develop working models; pollinator enhancement studies with data and happy landowner stories; grazing plus riparian buffers and insectaries.

Communication about value of riparian buffers, forest farming, and silvopasture opportunities in the PNW (Roseburg example; lamb prices are high now).

Water quality improvement opportunities: TMDL issues, Salmon-safe certification process. Partners: Soil and watershed conservation groups/councils; extension agents; NRCS; local municipalities.

Carbon management project: NOAA, EPA, USDA, etc. Tangible pathway for being competitive. What can we measure locally?

Biochar: DOE, university, and industry partners.

SAF Agroforestry Working Group – local people working in it?

Specific projects: What are a couple of galvanizing ideas for the PNW region that can sustain investment in agroforestry? Riparian restoration projects for statewide water quality issues; riparian buffers for urban TMDL; secondary forest products; fungal opportunities; floral greenery; example of truffle growing on Mount Hood that has great marketing.

Closing comments by Connie Harrington

Future collaborations with PNW Research Stations in Alaska, Oregon and Washington may include summaries of what is known, testing on the ground practices, and basic research for multiple objectives. We can look for opportunities for future work and funding.

Agroforestry can broaden what we do, pull together what we do.

Older papers may be relevant to new questions – some examples:

“A Method of Site Quality Evaluation of Red Alder”

“Special Forest Products Species Information Guide for the PNW”

“Ecology and Management of Commercially Harvested Chanterelle Mushrooms”

Research done for other purposes can be useful.

Forest farming and niche markets provide opportunities.

Silvopasture: Starkey Project is a comprehensive field research project that looks at nutrient flows and livestock; riparian buffers in forests and their effects on stream and on microclimates; air flow near streams in thinned and unthinned forests by streams. Winter dormancy and bud break drivers – memories of winter that plants accumulate; possibility line is all factors that above a line promote bud break. Temp data from pecan and white oak in Arkansas show factors had to cross D-fir possibility line to result in bud break (DM Burner et al. ms in prep).

Agriculture/forestry/horticulture system recommendations are possible. Agroforestry research may be relevant to prairie and meadow research. Future steps?

Suggestions for moving forward: Coalesce around specific issues. I can see possibility in collaborations, identifying issues to rally around (water quality for example), understanding what the landowner wants and how agroforestry can be a beneficial tool.