

CROPS

ADG can conduct research on virtually any crop grown in the Northwest; if we cannot grow a crop at our research station, we have offsite locations that will allow us to conduct research trials on most crops of the Pacific Northwest.

Crops grown on-farm include:

Vegetables: Asparagus, Brussel Sprout, Beet, Carrot, Cabbage, Broccoli, Cauliflower, Cucumber, Dry Bean, Lima Bean, Green Bean, Eggplant, Lettuce, Mint, Onion, Leek, Peas, Bell Pepper, Green leafy vegetables, Hot Pepper, Okra, Potato, Pumpkin, Spinach, Squash, Sugar Beet, Grape, Tomato, Turnip, and many others.

Fruit: Apple, Blackberry, Blueberry, Cherry, Grape (Juice and Wine), Melon, Peach, Raspberry, Strawberry, Pear and Plum.

Other crops: Alfalfa, Barley, Field Corn, Sweet Corn, Lavender, Mint, Oats, Popcorn, Wheat, Hemp, Hops, Dill, Vegetable Seed and Turf Grass.

RESEARCH EXPERTISE

Insects: ADG has conducted studies on green peach aphid, Banks grass mites, European asparagus aphid, European red mite, asparagus beetle, beet leafhopper, grape leafhopper, cabbage looper, diamondback moth, codling moth, Colorado potato beetle, corn earworm, peach twig borer, potato tuber worm, potato psyllid, onion thrips, seed corn maggot, spotted wing drosophila, western flower thrips, onion thrips, two-spotted spider mite, black cherry aphid, wireworm and symphylans, and others. ADG also can monitor for beneficial organisms including ladybugs, big-eyed bugs, spiders, parasitic wasps, and lacewings. We are currently engaging in snail and slug control studies.

Weed Control: ADG has conducted studies with most of the pre-emergence and post-emergence

herbicides used in the Columbia Basin, as well as with cultural controls and herbicides approved for organic production. We have a wide array of weed species at our research station suitable for herbicide efficacy trials.

Diseases and Nematodes: The farm has two acres with developed infestations of *Sclerotinia* and *Verticillium*, which enables us to conduct studies on white mold of potatoes, alfalfa, canola, peas, and beans. Potato diseases studied include early blight, *Rhizoctonia* and *Verticillium*. ADG has also conducted studies on corn smut; powdery mildew of grape, apple, cherry, strawberry, squash, and peach, *Botrytis* of blueberry, raspberry, strawberry, blackberry, grape, and onion, mummy berry (*Monilinia*) of blueberry and other diseases. We can inoculate plants or infest soil to ensure sufficient incidence and severity of fungal diseases, such as onion botrytis. ADG has conducted many studies on nematodes including *Meloidogyne chitwoodi* and *Pratylenchus penetrans* on resident populations at the research station. Specific areas of the farm have been identified where nematodes are widespread which ensures that the pest is present when efficacy tests are run.



contacts with agrichemical companies and agricultural commodity groups.

Agriculture Development Group, Inc.



Agricultural Research and Consulting



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Alan Schreiber, PhD, President, has thirty five year's expertise in entomology, pesticide toxicology, pesticide resistance, pesticide registration and consulting. Dr.

Schreiber has extensive

Agriculture Development Group, Inc. (ADG) was founded in 1998 to conduct independent research and provide consulting services to the agriculture industry. The research farm is located 15 miles north of Pasco on 93 acres of highly productive farmland in the Columbia Basin. With sandy loam soils and a hot dry climate, this area provides ideal growing conditions for over 100 crops. ADG also has a second research station in Western Washington, as well as a research location in Wenatchee with a focus on tree fruit.

GROWER EDUCATION: We have a long list of influential growers that have expressed interest in trying new products. If you have a product that you want “center of influence” growers to experience, we can make this happen. Each year, we operate a numerous split or paired field comparisons for new crop inputs.

RESEARCH: ADG has conducted research trials on nearly every major and minor crop grown in Washington. Approximately 75% of ADG research trials in 2023 focused on pest management of insects, nematodes, weeds, or diseases, 20% of research trials were focused on fertility research, and 5% of trials involved varietal evaluations and other types of agronomic research. Research can be conducted using center pivot, drip, rill, or solid set irrigation. The ADG team consists of Ph.D. scientists in the research areas of horticulture, weed science, entomology, and plant pathology.

CONSULTING: Dr. Schreiber has extensive experience in state and federal pesticide registration, including Section 18 emergency exemptions, Section 3 and Section 24c registrations. Each year ADG handles multiple Section 24c and Section 18 registrations and collaborates extensively with the USDA’s IR-4 Project. Dr. Schreiber is a member of the IR-4 Commodity Liaison Committee, and ADG works

with most of the commodity groups in Washington and many of Idaho and Oregon’s agricultural associations. ADG has 57 acres of organic land, certified by WSDA, and has developed the largest private organic research program in the Pacific Northwest.

Dr. Schreiber is also available as an expert witness in pesticide related cases.

FACILITIES, TECHNIQUES, AND EQUIPMENT

- Pesticide application methods include airblast, seed treatments, in-furrow treatments, over the row and boom sprayers, backpack sprayer, helicopter, plane, and chemigation.
- In 2024, we will carry out RCBD, replicated aerial and chemigation efficacy trials.
- Temperature controlled chambers/cold room for post-harvest studies for tree fruit, potatoes, onions, and other crops.
- Insect cages for indoor and field use.
- Potter spray tower for laboratory assays.
- Year-round greenhouse study capacity.
- A wide array of crops on which crop destruction projects can be conducted.
- Commercial scale potato yield and grade analyses.
- Parallel 8-boom over the row sprayer for applications over bush/vine type crops like grapes, blueberries, and blackberries from both sides.
- 10 boom plot broadcast sprayer.
- Post harvest analyses for tree fruit, potatoes, onions, berries, and other produce.
- In addition to our Columbia Basin Research Station, we also have research facilities in Wenatchee (tree fruit central) and Mt Vernon (high disease pressure situation.)
- Drone research

Trials that Agriculture Development Group, Inc. plans to conduct in 2024 include:

1. Residue decline curves.
2. Fire blight, powdery mildew, codling moth, mites, pear psylla and other insects and diseases of tree fruit
3. Potato psyllid trials at plant, chemigation, foliar in field, by life stages
4. Potato white mold, early blight Rhizoctonia, Verticillium, late blight
5. CPB, aphids, psyllid, mites, lygus, wireworm and thrips on potatoes
6. Potato herbicides and fumigation research.
7. SWD on blueberry and raspberry
8. Mealy bug and leafhopper on grape
9. Botrytis on grapes, onion, blueberry, strawberry, snapbean, and raspberry
10. Powdery mildew on grape, apple, peach, strawberry, cherry, squash
11. Tomato diseases and fertility
12. Nematodes on potatoes, onions, squash, carrot and other crops
13. Sweet corn earworm and corn fertility
14. Mites on mint, grass seed, raspberry, blueberry
15. Thrips on onion, apples, potato, and other crops
16. Fertility trials on several crops
17. Storage diseases of apple, blueberry, onion, potato, and other crops.
18. Potter spray tower efficacy studies
19. Organic products testing
20. Mummy berry on blueberry
21. Hemp trials