



AG Talk Report

UNIVERSITY OF IDAHO, U.S. DEPARTMENT OF AGRICULTURE, AND IDAHO COUNTIES COOPERATING

INSIDE THE ISSUE

CONSIDER BENEFICIAL INSECTS

Learn some tips on how to attract beneficial insects to keep crop pests at bay.

SMALL GRAINS SUMMARY

High winds, low temperatures and low moisture create a perfect storm for some fields. Disease pressure is currently low, but things may change as the season progresses.

CULL AND VOLUNTEER POTATOES

Discover how to manage cull piles and volunteer potatoes

Ag Talk Tuesdays resume for 2020

story by Kasia Duellman, Extension Seed Potato Specialist

Welcome to the first issue of the Ag Talk Report newsletter for 2020. This newsletter highlights topics discussed during the U of I sessions known as Ag Talk Tuesdays, and it gives us the chance to delve more deeply into those topics and to provide timely information for the current growing season on items not covered during these sessions.

Ag Talk Tuesday sessions are held from 11:00 am to 1:00 pm every first and third Tuesday of growing season, May through August. In 2020, they will be held online.

Register in advance to attend by clicking [here](#) or copying and pasting the following link to your web browser: https://uidaho.zoom.us/meeting/register/vpAkc-uvqTwpZF4DIEg_ZcN8xYE9ezZSkQ

Once your registration is approved, you will receive instructions on how to join the meeting by Zoom or by your phone.

We hope you can fit these sessions in your busy schedule. The more participation we have, the more interesting and relevant these interactive sessions will be. Listen to Featured Topics, ask questions, provide insight from your own experiences as the season progresses and as issues arise, participate in discussion, or just listen in. A follow up newsletter, The Ag Talk Report, will be released after each session to give more info on topics discussed and those not broached.

More information on what Ag Talk Tuesdays are and an agenda for each session can be found here: <https://webpages.uidaho.edu/extension-seed-potato/ATT.html>

Check back often as featured topics are added. Registration is required.

Consider beneficial insects in your pest control activities

story by Ron Patterson, Bonneville County Extension Educator

We have a tendency to notice bad bugs because of the damage they do to our crops, landscapes and livestock. Some vector diseases and many are a nuisance. But there are many more good bugs than bad bugs, and many more than both the good and bad that could be considered benign.

Good bugs are a way nature maintains balance. The good bugs help to keep the bad bugs in check so plants can thrive. Were it not so, life on this planet would cease to exist.

When scouting fields for insect pests it is important to be able to identify the pests. It is just as important to be able to identify the good bugs because their presence may be enough to reduce the cost of chemical intervention. In addition, our efforts to control the bad bugs often does more damage to the good bugs. If the good bugs can't keep up, by all means, intervene, and keep in mind that the beneficial bugs have also been affected by that intervention.

Here are some practices that will encourage beneficial insects and spiders:

- Reduce tillage as much as possible
- Allow some prey to be present to encourage predatory insects to lay eggs in the area
- Develop nearby flowering plant patches that provide alternate food source for predators when prey populations are low
- Avoid broad-spectrum insecticides that do as much or more harm to the beneficial population
- Establish unsprayed interplantings
- Improve soil health
- Provide a permanent beetle bank for ground-dwelling beetle and other species that spend a portion of their life cycle in the ground
- Limit the use of soil fumigants as much as possible
- Plant cover crops to help with winter survival of beneficial arthropods



UGA5083054

It is easy to confuse cereal leaf beetle (lower image), a serious pest of cereal crops and two-spotted collops beetle (above), a predator of many soft-bodied insect on plants and in the ground. (Lower image



UGA5313054

- Learn to differentiate between pest and beneficial insects so scouting will can provide a more balanced approach

When developing your pest control program, consider the benefit you will get from the beneficial insect population, that may help to reduce the cost of your plant protection program.

Cereals Update

story by Juliet Marshall, Cereals Agronomist and Plant Pathologist

A comparison of growing degree days for the last three years (Aberdeen and Osgood) puts 2020 on par with 2018 and ahead of 2019, which had a cold rainy start to the season. This year so far is dry with little foliar disease and substantial winter kill of winter barley and winter wheat fields, especially where winter seeding was late. Winter seeding even when planted within the normal window of planting did not have much growth before very cold temperatures arrested crop development in October, resulting in small to very small seedlings with little crown development. In some fields, seedlings that never emerged due to dry conditions (as in dry pivot corners) have better plant stands than those areas with good fall emergence.

At this time, there is no stripe rust reported in southern Idaho. High levels of stripe rust have been reported in California, with minor stripe rust in Oregon and moderate in Washington on susceptible varieties. Sherman, Gilliam, and Morrow counties west of Pendleton, OR have stripe rust in susceptible varieties (UI Magic CL+) which border Washington State (as reported by Ryan Graebner, OSU). Stripe rust is in the Palouse area of Washington State has been found on lower leaves of susceptible varieties indicating the pathogen overwintered with the crop (reported by Xianming Chen, USDA ARS, Pullman, WA). It is likely that stripe rust will impact late season susceptible spring wheat and barley varieties, similar to the pattern seen in 2019.

The main impacts to the spring development of grain this season was damaging wind (40-60 mph) on May 6 followed by nighttime lows as low as 18-24 degrees F. April 13 and 14 also had damaging cold temperatures, with two nights in the teens (15-19 degrees F in Ririe, ID, Agrimet data). Following the May 6 freeze, widespread damage to



Frost injury (photo by J. Marshall)

spring seedlings and actively growing winter grain was reported. In some cases, damage was severe enough to kill plants. Damage was greatest when fields were not irrigated prior to the wind and freeze event. Soil conditions are dry and early irrigation was needed to reduce crop stress.

Winter crop growth stages - late tillering (eastern Idaho) to heading (southern Idaho, Twin Falls / Buhl area). Spring crop growth stages - seedling (eastern Idaho) to tillering (southern Idaho, Twin Falls / Buhl area).

How to deal with potato cull potatoes

story by Pamela J.S. Hutchinson, Potato Cropping Systems Weed Scientist

Excerpts from Pest Alert: May 2019 Cull Pile Management

Chemical application to kill sprouts and foliage. Cull piles are technically non-crop areas and some herbicides labeled for non-crop uses may be somewhat effective at killing sprouts and subsequent foliage emerging from culls. Multiple applications may be necessary, especially since re-sprouting can occur. There are currently no herbicides capable of “killing” the tuber so there is a possibility of disease persistence in this “living reservoir” even though sprouting

foliage is controlled.

Examples of herbicides labeled for control of broadleaves in noncrop areas – active ingredient and associated, possible trade names are listed: glyphosate (Roundup PowerMax and others), MCPA (various trade names), 2,4-D (various), dicamba (Banvel, Clarity, Vanquish), bromoxynil (Buctril), aminopyralid (Milestone), clopyralid (Stinger, Transline), clopyralid + 2,4-D (Curtail), diuron (Karmex), bromacil + diuron (Krovar), flumioxazin (Payload), fluroxypyr (Starane Ultra),

imazapic (Plateau), imazapyr (Arsenal), triclopyr (Garlon).

Several desiccation products, including those used for potato vine-kill can be used: carfentrazone-ethyl (Aim), diquat (Reglone and others), glufosinate-ammonium (Rely), paraquat (various Gramoxone products), pyraflufen ethyl (Vida).

NOTE: *Herbicide application to cull piles could be considered spot spraying, and wand, single-nozzle type sprayers would be used.* Herbicide labels may have sections containing spot-spraying instructions. Rates are often based upon an area of 1,000 sq ft and amount of product (and adjuvant) to mix per gallon of water. Rates also might be based on a percentage-of-volume basis.

Apply enough spray to cover the foliage but NOT to the point of runoff. Don't forget the recommended adjuvant(s). As always, when treating cull piles with herbicides, avoid drift onto off-target areas including crop fields due to the potentials for immediate or long-term crop damage.



Cull pile in southern Idaho, June 13, 2019

Volunteer potato control recommendations

story by Pamela J.S. Hutchinson, Potato Cropping Systems Weed Scientist

An integrated approach using preventative, cultural, mechanical, biological, and chemical is recommended. Preventative measures can go a long way for avoiding the problem in the first place. However, right now the issue is killing the volunteer potatoes already in the field.

These suggestions/recommendations are not complete.

Objectives:

- Kill emerged volunteer potato plants.
- Prevent volunteer potatoes from re-sprouting.
- Volunteer potatoes have a large carbohydrate reserve in the tuber and can re-sprout even after the foliage has been destroyed.
- Prevent the volunteer plant (mother) from producing new tubers (daughter tubers) which can become a problem in next year's crop.
- Reduce weight of daughter tubers if they are already being produced by control time.

Volunteer potato control methods for spring/early summer:

Herbicide application.

Cultivation.

Repeated cultivations and hand weeding can control volunteer potatoes, but are most effective and economical when combined with other control methods.

Two or more cultivations are required to reduce volunteer potato tuber production by more than 50% but cultivation does not control potatoes in the crop row.

Research has shown that cultivating four times during the season beginning when volunteer potatoes were at the 6 to 8 leaf stage and hooking, and repeating each time potatoes regrew to this stage, reduced potato competitiveness and nearly eliminated production of new tubers.

Combination of herbicide and cultivation (examples are given below).

A healthy crop is more competitive than a crop with nutrient, water, pest, etc. issues.

Timing:

Optimum postemergence herbicide application time to volunteer potato is at tuber initiation



(tuber initiation is when the tip of the stolon (underground stem) starts to swell to form a new potato tuber).



Depending upon the herbicide used, possible translocation to the tuber just being initiated which is a sink for photosynthates, and hence, a chance for the herbicide to also go to the daughter tuber and kill = no longer can sprout.

If the herbicide application occurs earlier than tuber initiation, then the original volunteer potato tuber (mother tuber) may re-sprout.

Herbicide application later than tuber initiation is usually too late because daughter tubers which have already formed by spraying time can survive and produce volunteer potato plants in the following year's crop.

If volunteer potato plants are sprayed too late, in addition to competition which has already occurred, the mother plant with the developing daughter tubers is competing with the crop for water and nutrients even more now than before daughter tuber production began.

University of Idaho research results: when glyphosate application did not occur until after daughter tubers were developing, the potato plant was killed, however, sugar beet yields were reduced due to the extended competition.

According to Oregon State University researchers, delayed control measures in onion can also affect yield, especially since the potato plant canopy will shade over the onions.

Herbicides:

This herbicide list is not complete. Herbicides listed for use in some crops may also be labeled for use in other crops. Most labels state "suppression" not control of volunteer potatoes. Rates are not always given for herbicides listed.

Unless noted, application timing is postemergence (after the volunteer potato has emerged).

Read and follow labels closely for labeled crops, proper rates, timing of applications, crop growth stage, adjuvant recommendations, and crop rotation restrictions.

Trade names are used to simplify information – no endorsement of discrimination is intended.

General herbicide information:

Sulfonylureas, such as Harmony, can injure volunteer potato vegetation but usually aren't effective at preventing re-sprouting and daughter tuber production.

Repeated applications of contact (burndown) herbicides such as oxyfluorfen (Goal), carfentrazone (Aim), fomesafen (Reflex), glufosinate (Rely), or paraquat (Gramoxone) can be effective at killing the plant above-ground, however, the mother tuber could keep re-sprouting.

Cultivation 7 to 10 days after postemergence applications of Starane (fluroxypyr), oxyfluorfen (Goal and others), glyphosate (Roundup and others), and/or dicamba (Banvel, Clarity, and others) has been shown to significantly reduce the number of tubers (daughter tubers) produced by the volunteer potato plant (mother plant) compared to herbicides alone.

Some crops have labels for use of burndown herbicides such as paraquat, carfentrazone (Aim), or glyphosate (Roundup and others) after planting but before crop emergence.

If the volunteer potatoes have not reached the tuber initiation stage, then control measures at this time most likely will not be effective.

There are pre-mix products (more than one herbicide in the container) which might be labeled for volunteer potato control.

Roundup Ready Crops

Glyphosate (Roundup) is an option. As mentioned, the most effective application time is when the volunteer potato plant is at the tuber initiation phase.

Corn

Roundup (glyphosate) in Roundup Ready corn – most effective if applied when volunteer potatoes are at the tuber initiation stage.

Callisto 4 SC (mesotrione) can effectively reduce daughter tuber formation at 2 to 3 fl oz/A (with 1 % v/v crop oil concentrate + UAN (32% N) at 2.5% v/v). AMS (ammonium sulfate) can be substituted for the UAN.

Cultivation after Callisto application may not improve volunteer potato control.

Aim 2 EC (carfentrazone-ethyl) one application alone (0.5 fl oz/A) can kill exposed foliage of potato, but new shoots continued to emerge and reduced corn yield;

Aim 2 EC 0.5 fl oz/A two or three times applied one week apart is more effective than a single application.

Aim 2 EC + dicamba (Banvel, Clarity, or others) (0.5 fl oz + 8 fl oz/A) in a single application at tuber initiation.

Starane 2/3 pt/A (a second application may be needed – do not exceed 1.33 pt/A per year)

NOTE: the Starane ULTRA label states 0.4 pt/A.

Status (diflufenzopyr + dicamba) is a more recently released product than Distinct and includes a safener. The use rate is 2.5 to 10 fl oz/A. Research has shown that 6 fl oz/A early postemergence + 0.4 fl oz/A mid- or late-postemergence (do not exceed 10 fl oz/A per year) may suppress or control volunteer potato in corn.

DiFlex is a formulation of dicamba with improved safety to corn over some previous dicamba formulations. It can be applied preplant, preemergence, postemergence, and/or as a directed spray. Adjuvant combinations recommended for postemergence applications are crop oil concentrate (COC) or methylated seed oil (MSO) at 1% v/v plus 2 to 4 quarts/A of UAN or AMS at 8.5 to 17 lb/100 gal spray mix.

DiFlex at 8 to 12 fl oz/A + Roundup (in Roundup Ready Corn) at the appropriate rate and with MSO and UAN as described above, can be effective.

There are reports that a combination of topramezone (Impact or Armezon) at 1 oz (as per a supplemental label) and atrazine + 1% v/v MSO. **READ AND FOLLOW THE MOST UP-TO-DATE LABELS.**

atrazine (Aatrex, Atrazine, and others)

Small grains

Starane Ultra (fluroxypyr) 0.7 pt/A. The label states that application(s) should be made before volunteer potatoes are 8 inches tall.

Aim 2 EC (see corn recommendations)

2,4-D + dicamba: not very effective unless used in a competitive, healthy (wheat) crop.
Barley is sensitive to dicamba so it is not recommended for use in this crop.

Roundup pre-harvest would most likely be too late to prevent daughter tuber production, however, translocation to the daughter tuber during bulking phase could prevent daughter tubers from sprouting the following year (ala glyphosate drift onto a seed potato crop).

Sugar beet

Roundup in Roundup Ready sugar beet. Most effective application timing is when volunteer potatoes are at the tuber initiation stage.

Nortron (ethofumesate): A preemergence application can slow volunteer potato emergence; suppression of volunteer potato when applied postemergence might occur, however, this herbicide does not effectively control volunteer potato.

clopyralid (Stinger, Curtail, and others)

Dry bean

Control in dry bean is mostly limited to hand removal once tuber initiation has occurred or possibly a wiper or wick application of glyphosate.

Raptor 1SC (imazamox) and/or Basagran 4L (bentazon) do not effectively control volunteer potato in dry bean.

NOTE: Since dry bean is usually planted later than others in southern Idaho, volunteer potato could already be present in the field so there may be an opportunity to implement various control measures before planting. However, if tuber initiation has not begun at this time, then effective control might not be possible.

Onions

The herbicides listed here for volunteer potato in onion may suppress volunteer potato but most likely will not provide effective control.

oxyfluorfen (Goal and others) – 2 to 3 applications.

NOTE: spray coverage with oxyfluorfen is important – use the appropriate spray gallonage/pressure.

oxyfluorfen + bromoxynil – 2 to 3 applications.

Starane Ultra can be applied at 0.35 pt/A to 4 to 6 inch tall onion, only.

Alfalfa

Raptor (imazamox).

Pursuit (imazethapyr).

2,4-DB.

These alfalfa herbicides can stunt the volunteer potato plants and alfalfa cuttings can further weaken those plants.

Colorado potato beetle are known to be attracted to potatoes that are chemically and physically stressed.

Information included in this list has been gathered from a number of publications and resources including those by Rick A. Boydston, Agronomist, USDA-ARS, Pullman, WA; Don W. Morishita, Professor, Extension Weed Specialist, Superintendent Kimberly R&E Center, University of Idaho; Joel Felix, Associate Professor, Weed Scientist, Malheur Agricultural Experiment Station, Oregon State University; and from Colorado State University, Michigan State University, University of Wisconsin, and University of Nebraska.

AG Talk Report

UPCOMING EVENTS

AG TALK TUESDAY
 May 19 | 11:00 AM
 Ag Talk Tuesday session, live and online.
MORE EVENTS CAN BE FOUND AT:
[HTTPS://WWW.UIDAHO.EDU/EXTENSION/NEWS/CALENDAR](https://www.uidaho.edu/extension/news/calendar)



Cull potato piles waiting to be rendered non-viable to avoid increasing pest and disease risk to current-season potatoes.

<p>Idaho Falls Research & Extension Center 1776 Science Center Drive Idaho Falls, ID 83401 (208) 529-8376</p>
<p>Aberdeen REC 208-397-4181</p>
<p>Kimberly REC 208-423-4691</p>
<p>Parma REC 208-722-6708</p>
<p>Entomology, Plant Pathology & Nematology 208-885-3776</p>
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