

DON'T LET DRIFTS HIT WHERE IT HURTS

From: AgAnswers by Amy Raley-6-8-99

Not only can spray drift injure your neighbor's begonias, it can hit a good farm manager where it hurts most, in the wallet. Ohio State agricultural engineer Erdal Ozkan says off-target pesticide applications are "basically throwing your money away." Spray drift wastes an expensive input and may result in reduced pest control that cuts yield or necessitates another application. "Losses or costly litigation may result if sensitive crops in adjacent fields are damaged," Ozkan adds.

Now is the prime time for spray drift complaints because postemergence applications are in full swing, Ozkan says. Simply put, spray drift is when a pesticide moves through the air to a neighbor's garden or over the fence row to non-tolerant crops.

Improved spraying technologies can help reduce drift, but wind remains the most influential factor, Ozkan says. "If you have any doubts about a spraying job that might result in drift, wait until you no longer have that element of doubt," he says. Small droplets tend to be more susceptible to winds than larger, coarser ones, so use nozzles that produce coarser droplets when spraying on targets that don't require small, uniformly distributed droplets.

Manufacturers are designing equipment to help control drift. Keep up on latest developments when making new purchases. Among these improvements are low-drift nozzles. Keep several nozzle types on the sprayer boom and change nozzles in accordance with wind speed changes.

"When the wind picks up, you should be able to switch from a low flow-rate nozzle to another one with a larger flow rate," Ozkan says. "Adjust your travel speed, and still end up with the desired gallonage without the drift problem."

Air-assisted sprayers can reduce drift of smaller droplets by using air to replace part or all of the water carrier. Some air-assist systems atomize the spray solution, while others use a high-velocity airflow to transport spray mixture to the target.

Also relatively new are sprayers that produce electrostatically charged droplets with an electrical charge opposite of that of plants. The opposites attract, creating a magnetism between the herbicide and plants. More research is needed, however, to verify the effectiveness of these sprayers, Ozkan says.

Here are other drift-reducing principles to practice:

Shielded sprayer booms or nozzles can effectively direct small, drift-prone droplets toward the ground.

Increasing pressure reduces droplet size, so keep pressures at the low end of the recommended range.

Don't spray on very hot, dry and windy days, especially near sensitive vegetation. Although it may be impractical, night is the best time to spray. If that's not possible, spray in the morning or late afternoon, which are cooler.

Avoid spraying when sensitive crops are downwind. Leave a 50-foot to 100-foot buffer strip; spray later when the wind shifts.

Get a reliable wind meter to get objective wind speed data.

HOW TO SELECT A SPRAY RETARDANT

Money spent on pesticides won't do a farmer much good if the wind blows the product from the intended site to a neighboring field or garden. Spray additives or "drift retardants" can help keep the pesticide on target, says Ohio State agricultural engineer Erdal Ozkan.

Drift retardants increase viscosity, which helps enlarge droplets to the larger range of the nozzle's spectrum while reducing the portion of the spray volume contained in small, drift-prone droplets. Larger droplets are less vulnerable to air currents and are more likely to stay on target.

However, with 40 retardants on the market, choosing the right one can be a challenge. OSU tested about a half dozen products and found they all had the desired effect on droplet size, but they were not equally effective due to differing amounts of active ingredients.

To make the right choice, check the concentration of the active ingredients. If two products have the same price, buy the product with the highest concentration of active ingredient.

"We found that the least effective product turned out to be the one with the lowest sale price by volume," Ozkan says.

June Vegetable Twilight Tours

The Washington -Meigs Counties Annual Twilight Vegetable Meeting will be held June 23 at 6 p.m. at Witten Farms, Route 60, Lowell, Ohio. Registration starts at 5:30 p.m.. This is open to all interested growers, farm markets, suppliers and wholesalers. There is no charge for this event sponsored by Ohio State University Extension. See sweet corn initially grown under clear plastic (should be ready to harvest), trickle irrigated peppers and cucumbers, tomatoes, squash and thirteen other minor vegetable crops. Come enjoy a great evening of fun with other vegetable operators.

Crop Reports

Hal Kneen, Ron Becker, William. Evans

North Central:

Weather continues very dry in Celeryville. Irrigation continues around the clock. Corn is nearing knee high. Pepper and tomato planting are complete. Corn earworms and European corn borers are being trapped at moderate levels. Cutworms are also

being trapped. Aphids are being seen, as are leafhoppers. Growers should also be scouting for cucumber beetles.

From Wayne County:

Aphid and thrip populations are picking up in all crops. Several fields of peppers, zucchini, and eggplant are over threshold for aphids. Flea beetle is starting to return to sweet corn fields, but are still low in numbers. Other insects found in sweet corn are cutworm, armyworm, stalkborer, European corn borer and aphids. None of these being over threshold. Potato beetles continue to increase and larvae are hatching on both potatoes and eggplant. None have been found on tomatoes so far. Along with the potato beetles though, we are starting to find the two-spotted stink bug, a beneficial insect that wiped out a potato beetle population in a small potato planting in 1998. This is only the second year we have observed the presence of this insect. Cucumber beetles are still being found in most vine crop plantings. Bean leaf beetle, Mexican bean beetle, aphids and potato leafhoppers are being found in bean plantings, with bean leaf beetle causing the majority of defoliation. The only disease that has shown up so far is stewart's wilt in sweet corn, showing no more than a 2% infestation.

SouthEast:

The weather is hot, humid and dry! Perfect growing weather for tomatoes as long as the growers have irrigation. Trickle irrigated fields are well worth the investment this year. Fungicides sprays are being applied as called for by TomCast system.

Tomatoes are increasing in size as each day goes by, largest are 2 1/2-3 inches in diameter. Second trellising of tomato vines occurring.

Earliest sweet corn has silking ears and should be ready for local market late in week of June 20th. Irrigation continues to help fill out the ears of corn. Pest monitoring continues uses helio traps. Number of moths trapped this past week through June 9 am : European Corn Borer 31 moths, Corn earworm 6. Growers are spraying silking corn on a regular basis especially with temperatures exceeding 90-95 since the weekend. Cabbage continues to be harvested.

Vines (watermelon, cantaloups and cucumbers) crops planted in mid May are at the running vine stage. Most have been irrigated which has assisted in their continued growth. Supplemental fertilizer has been side dressed in. Pumpkins are being planted.

TOMCAST Report

J. Jasinski

DSV Hotline -1-800-228-2905

TOMCAST is a tomato disease forecasting network which many growers find aids in their timing of fungicide applications. As of June 8 the total TOMCAST DSV, are given for each station below:

The current stations and DSV counts as of June 8, 1999:

If you have further questions, please contact: J. Jasinski
at 937-454-5002 or

jasinski.4@osu.edu

The 7-10 Day Outlook*

The 7-10 Day Outlook*

Temperature:

From 09 Jun to 14 Jun, the mean surface temperature will be 70 - 80 degrees F for all of OH.

From 14 Jun to 19 Jun, the mean surface temperature will be 50-60 degrees F for the northern onthird of OH and 60-70 degrees for the southern two thirds of OH.

Precipitation:

From 09 Jun to 14 Jun, expect about 0.5 inches for all of OH.

From 14 Jun to 19 Jun, expect about 0.2 to 0.5 inches for the eastern two thirds of OH running north to south and expect 0.1 to 0.3 inches for the western one third of OH.

What's New At The VegNet Web Site

>> Impatiens Necrotic Spot on Pepper Transplants

Research Reports

1998 se Sweet Corn Variety Trial

1998 Fresh Market Cabbage Cultivar Evaluation

1998 Fresh Market Vegetable Reports from the Enterprise Center at Piketon.

1998 Colored Pepper Cultivar Trial

1998 Fresh Market Tomato Cultivar Evaluation

Evaluation of Eastern Style MuskMelons for Southern Ohio, 1998

Mechanical Harvesting Regimes for Processing Bell Pepper Production in Ohio

From The Vegetable Crops Planner: Links now provided to the National Weather Service Offices in Cleveland and Wilmington, OH. Provides Agricultural Observations, soil temperatures, climate summaries, growing degree days and much more.

1999 Ohio Vegetable Production Guide - Online. Visit: "The Library

>> 1998 Pumpkin Yield Data is Here!...Plus the First Set of Pumpkin Pictures

See how your favorite varieties performed.

Check out new varieties.

View Powdery Mildew Tolerance ratings

plus the effects of spray programs on pumpkin production. More pumpkin pictures coming.

Return to Vegetable Crops Homepage Ohio State University Extension

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Where trade names are used, no discrimination is intended and no endorsement by Ohio State University Extension is implied. Although every attempt is made to produce information that is complete, timely and accurate, the pesticide user bears the responsibility of consulting the pesticide label and adhering to those directions.

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