Airblast Sprayer Calibration and Configuration

Airblast sprayers and pesticide drift

In a recent pilot study, the Washington State Department of Agriculture (WSDA) found that airblast sprayers were often calibrated improperly or not calibrated at all. In some instances, sprayers were not configured to account for tree shape, size, or the density of foliage, and operators did not always have the tools or the training to properly manipulate the equipment to avoid off-target pesticide drift.

Pesticide off-target drift, usually from airblast sprayers in orchards, is always a concern. But tree fruits, hops, vineyards, cane berries, and other crops require airblast sprayers to effectively combat pest problems.

However, these applications are inherently prone to cause off-target drift due to the large volume of water and air used for proper canopy coverage.

Avoid drift with training on airblast sprayer calibration

WSDA is offering on-farm technical assistance to train growers on proper calibration techniques that can reduce drift from airblast sprayer applications. Properly calibrated equipment is more efficient, saves money, and reduces potential hazards to workers and surrounding natural resources.

This training takes place on the farm, using the farm’s own equipment, addressing specific site and equipment issues.

The curriculum for this volunteer program covers:

- Methods to calculate equipment speed.
- Simple steps to calibrate.
- Effective methods to measure nozzle output.
- Sprayer configuration based on planting size and systems.
- Weather monitoring tools.

WSDA’s technical assistance is available in English and Spanish. All information is also provided electronically on a USB drive.

The requirements for a visit are:

- Limit participation to five people per visit, plus one equipment operator.
- The tractor and airblast sprayer used must be properly decontaminated and in good working order before the visit.
- Access to water is required.

Jaime Ramon, WSDA instructor, teaches how to calculate tractor speed as well as sprayer output in gallons per minute.