

Air Quality Enhancement Activity – AIR04 – Use drift reducing nozzles, low pressures, lower boom height, and adjuvants to reduce pesticide drift



Enhancement Description

Use drift reduction technologies to reduce the drift of agricultural chemicals away from the intended target when spraying.

Land Use Applicability

Cropland, Pastureland

Benefits

Drift reduction will reduce damage to non-target desirable plants and animal habitats and reduce pollution of water bodies. Reducing chemical drift will help to reduce both particulate matter (liquid droplets) in the air and the production of volatile organic compounds, which are an

integral part of the formation of ozone, a pollutant in the lower atmosphere. Reduced chemical drift will improve water quality by minimizing the delivery of chemical compounds through the air to water bodies. This enhancement assumes all chemical applications are done according to label directions.

Conditions Where Enhancement Applies

This enhancement applies to all crop or pasture land use acres.

Criteria

Implementation of this enhancement to reduce spray drift of agricultural chemicals requires the use of one or more of the following activities:

1. Use drift reduction nozzles, drops, shielding, pressure adjustment, electrostatic spray technology, or re-circulating spray technology to minimize drift of applied chemical away from targeted area while maintaining required efficacy of pesticide application.
2. Reduce sprayer pressures per the nozzle criteria to produce larger spray droplets, which have a lower tendency to drift. Do not exceed 40-45 psi sprayer pressure.
3. Reduce boom height to the minimum amount allowable (where full coverage is achieved just above the top of the plant canopy) to achieve coverage and minimize the amount of time droplets are in the air before contacting plant or soil surfaces.
4. Use spray adjuvants approved for use with the specific pesticide being applied to reduce evaporation of airborne spray droplets, keeping droplets larger so they will settle more quickly onto the targeted plants and soil.

Adoption Requirements

This enhancement is considered adopted when one or more of the above criteria have been implemented and documented to satisfy the NRCS State Office list of acceptable methods.



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Documentation Requirements

Each year the following must be supplied:

1. Written documentation for the type of drift reduction technology used, and
2. Acres treated.

References

Ozken, H.E. 2012. New Nozzles for Spray Drift Reduction. Ohio State University Extension Fact Sheet AEX 523-98. <http://ohioline.osu.edu/aex-fact/0523.html>

Witt, J. M. 2012. Agricultural Spray Adjuvants. Oregon State University Extension. http://psep.c_

Utah State Supplement 2015 for AIR04

Notes:

1. Any manufacturer-designated ‘drift reducing’ nozzle , drops, shielding, pressure adjustment, electrostatic spray technology, or re-circulating spray technology can be used.
2. A written field note identifying field, date, crop and psi setting that is below 40 psi is adequate.
3. A written field note identifying field, date, crop and boom height is adequate.
4. A written field note identifying field, date, crop and spray adjuvant is adequate

Enhancement Name	Enhancement Code	Potential Duplicative Practices Practices (code)	Incompatible Enhancements
Use drift reducing nozzles, low pressures, lower boom height, and adjuvants to reduce pesticide drift	AIR04	595 - Integrated Pest Management (drift reduction)	WQL01 WQL19 WQL20 WQL21



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Operations & Maintenance, Conservation Measures, and Client Acknowledgement

Operation and Maintenance	
Operation:	
Maintenance:	
Conservation Measures	
Actions that must be implemented by the landowner/manager during practice implementation:	
Client's Acknowledgement Statement	
The Client acknowledges that:	
a. They have received a copy of the enhancement and understand the contents and requirements.	
b. It shall be the responsibility of the client to obtain all necessary permits and/or rights, and to comply with all ordinances and laws pertaining to the application of this practice.	
Cooperator:	_____ Date: _____
Planner:	_____ Date: _____

ce.cornell.edu/facts-slides-self/facts/gen-peapp-adjuvants.aspx