

ADJUVANTS

Surfactants, Crop Oil Concentrates, Etc.

An adjuvant is best described as any material that is added to a pesticide or solution to enhance or modify the performance of the pesticide, solution, or application, and that has no pesticidal activity when used alone. More companies are recommending the use of an adjuvant with their pesticide product. It is important that the user understand the basic facts concerning the use of an adjuvant with pesticide products.

ADJUVANT TYPES

One must first understand the adjuvant's function in increasing pesticide spray application effectiveness. Research indicates that as much as 70 percent of a pesticide's effectiveness can be dependent on the spray application. Adjuvants can reduce, minimize, or eliminate spray application problems such as incompatibility, foaming, suspension, stability, solubility, volatilization, degradation, absorption, penetration, adherence, phytotoxicity, surface tension, droplet size, drift, evaporation, impingement, coverage, and others.

Buffering Agent

An adjuvant designed to adjust the pH of alkaline waters and minimize the hydrolysis of pesticides that tend to break down in alkaline spray solutions.

Compatibility Agent

An adjuvant which allows simultaneous application of liquid fertilizer and pesticide, or application of two or more pesticides as a tank-mix with a liquid carrier, or improves the stability and uniform distribution of a mixture.

Crop Oil Concentrate

A petroleum-based product generally containing 15-20% surfactant/emulsifier and 75-80% nonphytotoxic oil.

Drift Control Agent

An adjuvant used in liquid spray mixtures to create a cohesive spray solution that reduces spray drift.

Foam Suppressant

An adjuvant for suppressing both surface foam and trapped air. Allows quicker refilling of spray tanks and

reduces risk of exposure to toxic pesticides in foam.

Penetrant

An adjuvant that enhances a liquid's ability to enter the pores of a substrate or penetrate a surface. Penetrating agents or penetrants are usually wetting agents or crop oil concentrate/surfactant combinations.

Petroleum Oils

Refined spray oils that are classified by their relative content or straight chain, branched chain, or ring compound hydrocarbons and are broadly classed as paraffins, naphthenes, aromatics, and unsaturates.

Paraffin Based Oil

A petroleum oil used as dormant spray, summer oil, carrier for other pesticides, or an adjuvant to increase the efficacy of herbicides, fungicides, and other pesticides.

Naptha Based Oil

A petroleum oil used mainly in adjuvants formulated for use with contact herbicides. Naptha oil alone has herbicidal action on selected small weeds and grasses.

Surfactants

Chemicals which modify the surface properties of materials they contact. Surfactants can influence the wetting or spreading of liquids, mixability or normally incompatible substances, and emulsification characteristics and can modify the dispersion, suspension, or precipitation of a pesticide in water.

(Nonionic Surfactant) — An adjuvant which has no electrical charge, and is compatible with all pesticides.

(Anionic Surfactant) — An adjuvant which has a negative charge (-), and limited compatibility.

Spreader

An adjuvant which increases the area a given volume of liquid will cover on a solid or other liquid.

Sticker

(continued on page 38)

(continued from page 37)

An adjuvant which increases the firmness with which finely divided solids or other water-soluble materials attach to solid surfaces.

Spreader/Sticker

An adjuvant which combines some properties of both spreaders and stickers. Generally increases the area covered and the firmness with which pesticides are attached.

U.R. Rating (unsulfonated residue)

A measure of the purity of a spray oil; the higher the U.R. percent, the less likely the oil will cause acute plant injury.

Vegetable Oil

Oil derived from seeds, usually those of cotton, soybean, peanut, and sunflower plants.

Vegetable Oil Concentrate

Vegetable oil-based product, generally containing 7-15% surfactant/emulsifier.

Wetting Agent

An adjuvant which appreciably lowers the interfacial tension between a liquid and a solid, and increases the tendency of a liquid to make complete contact with the solid's surface.

get out of the water

Weeds grow all the time, even when you don't have time for them.

We specialize in aquatics. We have the people, the equipment, the know-how and the time to do it right.

When we manage your water and shoreline areas, you spend your time on more important things. You know that your lakes are in the best possible hands.

Serving golf courses and green spaces throughout Florida.

FLORIDA AQUATIC

Professional Lake Management

1637 N.W. 38th Avenue

Ft. Lauderdale, FL 33311

FLORIDA TOLL FREE (800) 432-1349



New from ProTurf...

Scotts® Super Greens Fertilizer provides quick green-up in spring and fall for all turfgrasses used on putting greens, tees and other fine turf areas.

Call your Tech Rep for details.

ALLEN FIGLEY
Technical Representative
171 9th DRIVE
VERO BEACH, FLORIDA 32960
(305) 778-2410

