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Weed and Feed

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Weed and Feed

W. W. Witt and H. B. Rice

Fertilizer and herbicide combinations are often applied prior to planting, at planting, or after crop emergence, a procedure sometimes called "weed and feed". The opportunities for utilizing this system are numerous with the major advantage being saving an extra trip across the field. In order for the system to work, it must ensure that both fertilizer and herbicide are present when needed. When both the crop plant and weedy plant are at growth stages which allow for compatible applications with a single treatment, this can be highly successful. Conversely, when these two plant systems are not at compatible growth stages, severe crop injury and/or a lack of weed control can result.

There are several methods of applying herbicides and fertilizers together, but regardless, always follow directions on the pesticide label for specific instructions and/or restrictions.

Using Herbicides with Liquid Fertilizers

Herbicides are routinely broadcast or banded onto the soil surface using water as the carrier. In many instances, fluid fertilizers can replace water as the carrier. This type of system is frequently used for application of soil-active herbicides which are applied to the soil surface after planting or applied to the surface and incorporated into the soil prior to planting. This method also works well for topdressing small grains with nitrogen solutions and herbicides to control wild garlic. In this case, it is critical to apply prior to jointing of the small grain.

Before mixing a large quantity of herbicide with fluid fertilizer, be sure they are compatible. The herbicide formulation can make a difference as to whether this will work. If you do not have compatibility information on the mixture in question, always conduct a compatibility test. This can easily be done by mixing 1 to 2 qts of the liquid fertilizer and herbicide in the same proportion as they would be mixed in the applicator tank. Shake this mixture and check for nondispersible clumps or sludge. Allow to stand for 30 minutes and check for separation of materials, clumps, etc. Shake the mixture again and observe. If a separation of materials occurred after 30 minutes but can be remixed easily after shaking, then the mixture can be used if there is adequate agitation in the spray tank. However, do not use if nondispersible

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aggregates form. Several compatibility additives are available which enhance the mixing properties of herbicides in liquid fertilizer.

Using Herbicides with Dry Fertilizers

Some herbicides can be impregnated onto dry fertilizer with satisfactory results. When utilizing this system, several steps need to be taken to ensure uniform herbicide distribution on the fertilizer particles. Some herbicide labels are very specific with regard to what dry fertilizers are suitable for mixing and as to what caution would be exercised. A closed rotary drum blender (or similar type) with the spray nozzle positioned in the blender will provide adequate herbicide distribution onto the granular fertilizer.

Uniform distribution of the impregnated fertilizer particles onto the field is essential for this method to be successful in providing weed control. Do not use less than 200 lbs of fertilizer per acre and double spread whenever possible. With this technique, only half the impregnated fertilizer is applied in one pass over the field, and the other half is then applied perpendicular, if possible, to the first. This enhances uniform distribution.

There is a risk of fertilizer contamination by unwanted herbicides in the blender or spreader trucks. This risk is very great when the corn herbicides atrazine or simazine are impregnated on fertilizer in a blender which is also used to blend bulk fertilizer for tobacco and soybeans. Extremely low concentrations (less than 0.3 ppm) of these herbicides can cause tobacco injury. To be safe, different blenders should be used if at all possible, and spreader trucks should be thoroughly washed after hauling a load of herbicide-impregnated fertilizer.

Do not mix dry bulk fertilizers with different sized granular pesticide formulations. With differences in particle size, it is not possible to achieve or maintain uniform distribution of the various particles.

Using Herbicides with Anhydrous Ammonia

A recently developed technique involves injecting volatile herbicides (Eradicane Extra, Sutan+) with anhydrous ammonia. This is accomplished by use of a metering device which injects the herbicide in the anhydrous ammonia line. While UK has not conducted any research on this technique, it is being commercially recommended with precautions that injection shanks should not be more than 10 inches apart and the injection depth should be 5 inches or less to achieve uniform herbicide distribution. Great care should be taken to be sure that the anhydrous is adequately sealed into the soil.

The UK College of Agriculture and the Kentucky Educational Television Network have recently started providing a new information service to farmers in the state. Called AgText, the service provides timely information via the KET signal.

AgText uses closed captioning technology to bring information to farmers about markets (including local cash and futures), weather and Extension recommendations and advisories. The information is presented through KET's normal broadcast hours and is arranged in a 15-minute loop so that at any given time, farmers can tune in and wait a maximum of 15 minutes to receive the information they want.

AgText's information is new each day and timely material such as weather and markets is updated several times each day.

There are two methods by which farmers can receive AgText. First, a television with a special built-in decoder is available for under \$400 which permits viewing AgText by flipping a switch. Second, a special decoder attached to a standard television allows viewing and is available for less than \$300. Either method allows the farmer to receive the information on AgText.

The following is the current update schedule for AgText material:

8:00 a.m.	<u>AgText</u> - is on the air
8:30-8:45	<u>Weather Updates</u> - state forecast and summary.
9:30	<u>USDA</u> - Weekly weather and crop summary (Tuesday), state extended outlook (Monday, Wednesday and Friday)
10:05-10:45	<u>Weather Updates</u> - state observations, roundup, state summary and agricultural advisories.
10:50-11:30	<u>Futures Markets</u> - opening quotations for corn, wheat, soybeans, feeder cattle, hogs and slaughter cattle.
12:00 Noon	<u>Weather Updates</u> - state forecast, observations and roundup.
1:05-1:30	<u>Futures Markets</u> - midday quotations for corn, wheat, soybeans, feeder cattle, hogs and slaughter cattle.
1:45	<u>Weather Updates</u> - state observations and roundup.
2:05-2:10	<u>Cash Markets</u> - quotations for feeder cattle, hogs and slaughter cattle.
2:20	<u>Weather Updates</u> - state observations, roundup.
3:35-3:45	<u>Cash Markets</u> - closing quotations for corn, wheat and soybeans.
3:50-4:15	<u>Futures Markets</u> - closing quotations for corn, wheat, soybeans, feeder cattle, hogs and slaughter cattle.
5:15	<u>Weather Updates</u> - state summary, forecast and extended forecast.
6:00 p.m. to sign-off	Continuous recycle of information already presented.

For more information about AgText, contact your county Extension office or write to AgText, 131 Scovell Hall, University of Kentucky, Lexington, KY 40546.

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