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In January, Dual Magnum was approved for preemergence use in sesame.

Though this herbicide will provide good to excellent control of annual grasses and small seeded broadleaf weeds (Florida pusley, pigweed, etc.), it must be used with caution.

Sesame is a small seeded broadleaf crop and injury from applications of Dual Magnum is possible.

For this reason, the 24C state label has been released with “indemnified” status.

Before the product label can be obtained, the grower must go to http://www.farmassist.com/ and register as a user, acknowledge and accept the indemnification, and then download the label.

This process is necessary since sesame injury resulting from Dual Magnum applications is slightly higher than is common with other crops.

Research conducted at the University of Florida has shown that applying Dual Magnum at the recommended rate will often result in stand loss or possible growth reduction.

However, a yield penalty resulting from this injury is less likely.

Dual Magnum is currently the only herbicide registered for preemergence weed control in sesame.

Since getting the crop started in a weed free environment is critical, the potential crop injury will often be much less than the impact of uncontrolled weeds.
Strip Till Peanuts

There has been debate and testimonials for many years on peanut yield, disease and grade from strip tilled peanuts as compared to conventional tilled peanuts. Some researchers will say that there is no yield difference while others say there is. Strip tillage is a proven management practice, if growers want to make strip tillage work, they will figure out a way to make high yields. Yields of near 8000 lbs. per acre have been reached using strip tillage. In most years as in 2014, yields of non-irrigated peanuts are as high as irrigated yields in the conventional rotation. These high peanut yields from research plots tend to debunk the comment that you can’t make high yields with strip till plantings. Yields of crops planted in conservation tillage systems are often different from conventional plantings. They have been shown to be higher, lower and in many cases the same. The residue left on the soil surface before planting has not resulted in higher disease ratings and diseases like TSWV have been shown to be less when using strip till planting methods. In conventional tillage systems, plant residue is incorporated into the soil. This exposes the residue and over wintering pathogens to a very diverse soil microbial community that is better suited to the saprophytic life in the soil environment. The increased contact of the plant residue with the soil biological community increases the rate of residue decomposition, releasing the harbored pathogen survival structures into a soil environment that they may not be able to compete in. The ability of the pathogen to survive in the soil is more dependent upon its saprophytic than its pathogenic potential.

Yield variability can often be explained due to cover crops and timing of kill of the cover crops as well as planter adjustment for stand establishment. Grass cover crops may take several weeks longer than legumes to decompose. Cover crops decompose more slowly when left on the soil surface as compared to incorporation but this is often what we like to see for highly erodible land. Generally, decomposition of cover crops is 2-3 times faster for each 10 degrees C increase in temperature. Therefore, cover crops decompose much more slowly under cool conditions as in April of 2014, when heat units were below normal. Many growers are looking at high residue cover crops to help control herbicide resistant weeds as well as erosion with good results. Many growers have made strip tillage work for them on all crops in the rotation and our data from long term studies (35+ years) indicate that you never have to “turn” the land or do tillage and yields can remain high.

Starter Fertilizer For Corn And Cotton

Research has shown that sulfur from ammonium sulfate or other compounds leave the soil band slightly acidic and will increase phosphorus (P) uptake in corn when applied in a band (2”X2”) or dribbled 2” from the seed furrow. If higher amounts of N are applied in the starter fertilizer, distance from the seed furrow should increase by 1 inch for each 10lbs/A of N applied. Ammonium polyphosphate (10-34-0) mixed with nitrogen solution with sulfur (28-0-0-5 or similar materials) can increase P uptake over phosphate materials alone. Minor elements have also been shown to have the highest yield response when applied at planting with starter fertilizer. Early growth is enhanced and corn matures earlier with starter fertilizers. Starter fertilizer placement is critical to good germination and early plant growth. Fertilizer materials cannot be applied in furrow with the seed without some impact on germination. Our research indicates that small amounts in furrow can damage plant stands and may not show much damage in other cases. However, it is far safer to apply starter fertilizer in bands on a 2”X2” placement or 2” from the row.
New Insecticide Alternative to Neonicotinoids, Safer for Bees

The EPA is registering a new insecticide, flupyradifurone, that is safer for bees.

It is expected to be an alternative to more toxic products including certain pyrethroid, neonicotinoid, organophosphate and avermectin insecticides.

As an insecticide, flupyradifurone is unusual in that laboratory-based studies indicate that the compound is practically non-toxic to adult honeybees.

Studies show no adverse effect on overall bee colony performance or overwintering ability when compared to untreated colonies.

EPA’s decision meets the rigorous Food Quality Protection Act standard of "reasonable certainty of no harm" to human health. On the basis of protective and conservative human health and ecological risk assessments for the uses of the pesticide, EPA confirmed the safety of the use for the public, agricultural workers and wildlife. EPA coordinated its evaluation with their counterparts in Canada and Australia.

This decision was one of the first to incorporate newly-required bee studies and involved evaluating the largest number of bee-related studies ever for the registration of a new chemical.

EPA reviewed 437 studies including 38 different tests on bees to analyze the potential exposure and effects of flupyradifurone.

These included evaluation of the sublethal effects of pesticides on all life stages of bees, as well as effects on colony health in field studies.

The field studies examined pollinator-attractive crops while bees were actively foraging after the crops had been treated through various application methods (seed, soil and foliar) to demonstrate very high exposure. Flupyradifurone is registered for a large number of crops such as citrus, cotton, potatoes and many others to protect against piercing and sucking insects such as aphids, whiteflies, thrips, and psyllids, all of which have become increasingly resistant to other pesticides and are difficult to control.

The registration of flupyradifurone will provide growers across the U.S. with a new pest resistance management tool that presents an effective countermeasure to resistance development. No residential uses have been proposed.
Paraquat Dichloride: One Sip Can Kill

The California Poison Control System and the Central California Children’s Hospital reviewed data from 1998-2009 and identified more than 1,400 cases of accidental poisonings caused by storage of non-food substances in soda bottles, unmarked bottles, cups or glasses. Several of the deaths involved the accidental ingestion of pesticides, including the commonly used herbicide, paraquat.

The California Poison Control System and the American Association of Poison Control Centers (AAPCC) recently sent letters of concern to EPA regarding a series of deaths from accidental ingestion of paraquat in the San Joaquin Valley of California. AAPCC cited 50 deaths from paraquat; at least 12 were from accidental ingestion of paraquat from a beverage container. This is a major concern to EPA because paraquat is a Restricted Use Pesticide that should not be accessible to the general public and, as with all pesticides, should never be placed into a beverage container. Paraquat is highly toxic to humans; one small accidental sip can be fatal and there is no antidote.

The product labels clearly prohibit pouring paraquat into food or beverage containers with the prominently-placed statements “NEVER PUT INTO FOOD, DRINK OR OTHER CONTAINERS” and “DO NOT REMOVE CONTENTS EXCEPT FOR IMMEDIATE USE.”

The fatalities resulting from paraquat products transferred into beverage containers in California prompted EPA to investigate all reported cases. EPA conducted an investigation of all reports of fatal and high-severity paraquat incidents. EPA identified 27 paraquat fatality reports to date in its Incident Data System (IDS). The IDS database contains all registrant submissions of adverse health effects from pesticide products, as required by federal law (FIFRA). More than 80% of all identified paraquat fatality cases reported to IDS was due to ingestion of the product. At least eight of these 27 deaths were due to the accidental ingestion of paraquat. All eight of these accidental deaths involved transfer of paraquat into a beverage container. Several of these cases have occurred recently, including the fatal case of an 8-year-old child who drank the paraquat out of a soda bottle.

It is the responsibility of pesticide applicators to ensure that RUP products are used safely and appropriately, including never transferring any pesticide product, including paraquat, into a beverage container. To prevent the severe injury and/or death from paraquat ingestion, a paraquat product must:

- Be used only by a certified applicator or under the direct supervision of a certified applicator;
- Never be transferred to a food, drink or any other container;
- Always be kept secured to prevent access by children and/or other unauthorized persons;
- Never be stored in or around residential dwellings; and
- Never be used around home gardens, schools, recreational parks, golf courses or playgrounds.
USDA Releases 2013 Pesticide Data Summary

USDA’s Pesticide Data Program (PDP) annually tests a wide range of commodities in the U.S. food supply. PDP tests fresh and processed fruit and vegetables, grains, beef products, catfish, groundwater, and treated and untreated drinking water for pesticide residues. These data are important to ensure the implementation of the 1996 Food Quality Protection Act (FQPA) is followed. The FQPA requirements include stricter safety standards, especially for infants and children, and a complete reassessment of all existing pesticide tolerances. Thirteen states participated in 2013, including Florida. Sound conclusions about the U.S. food supply can be drawn from the PDP results because these states represent all regions of the U.S. and more than half the population.

During 2013 excluding water, PDP tested 10,104 samples for various insecticides, herbicides, and fungicides. Of the total samples collected and analyzed, 84.4% were fresh and processed fruit and vegetables. Fresh and processed products were tested for various parent pesticides, metabolites, degradates, and/or isomers plus other environmental contaminants. Excluding water, residues exceeding the tolerance were detected in 0.23% (23 samples) of the total samples tested (9,990 samples). Of these 23 samples, 17 were imported and 6 were domestic. Residues with no established tolerance were found in 3.0% (301 samples) of the total samples tested. Of these 301 samples, 148 were imported (49.2%), 151 were domestic (50.2%), and 2 were of unknown origin (0.6%).

PDP laboratory operations are designed to detect the smallest possible levels of pesticide residues possible, even when those levels are well below the safety margins established by EPA. It is important to note that the mere presence of a pesticide on food does not indicate the food is unsafe. For samples containing residues, the vast majority of the detections were well below established tolerances and/or action levels. Before allowing the use of a pesticide on food crops, EPA sets a tolerance, or maximum residue limit, which is the amount of pesticide residue allowed to remain in or on each treated food commodity. EPA also factors in large margins of safety when determining any given tolerance. The reporting of residues present at levels below the established tolerance serves to ensure and verify the safety of the U.S. food supply.

Of all samples collected and analyzed, the majority were fresh fruits and vegetables, many of which are often eaten in a fresh, raw state. Health experts and the U.S. Food and Drug Administration agree washing fresh fruit and vegetables before eating is a healthful habit. Consumers can reduce pesticide residues, if they are present, by washing fruit and vegetables with cool or lukewarm tap water. Such reports of data are reassuring to know that the U.S. not only has the world’s most abundant food supply, but also the safest. Visit the PDP Website at www.ams.usda.gov/pdp.
Calendar of Events

To follow the link, press “Ctrl” and put cursor over link, and “click.”

March 23-26, 2015   8th International IPM Symposium
                    Salt Lake City, Utah
                    http://www.ipmcenters.org/IPMSymposium15/

May 4-7, 2015       Aquatic Weed Short Course
                    Coral Springs, Florida
                    http://conference.ifas.ufl.edu/aw/