

Termination of Cover Crops



People...Products...Knowledge...

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Cover Crops

Aren't just Winter Rye Anymore!



- ▶ Rye
- ▶ Oats
- ▶ Wheat
- ▶ Mixes
 - ▶ Radish, Clover, Vetch, etc.







- ▶ NOT Conservation Tillage
- ▶ Time Consuming



- ▶ Fuel Use
- ▶ Not Suitable for all Fields

Iron Poisoning



One pass does NOT do it all

TIMING
IS EVERYTHING



Rough Finish - Not Real Effective



Even with trash... ...It's Not a Conservation Practice

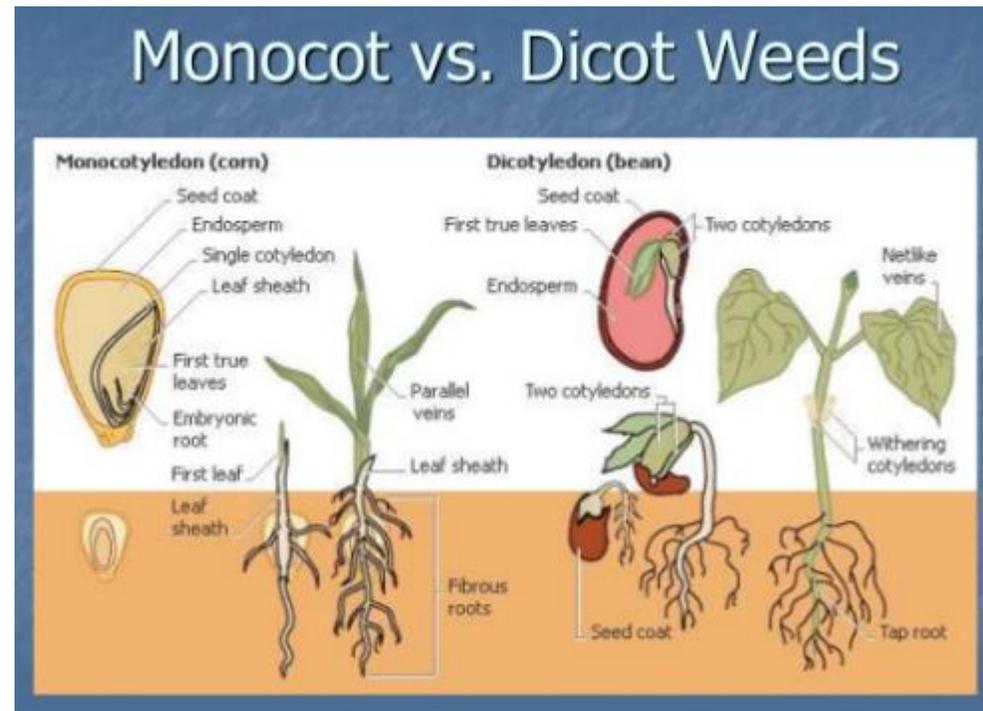


Glyphosate



Broad Spectrum

▶ Monocots & Dicots



Herbicides

Not as Effective in Cold Temps



Improve Effectiveness

► Helfire

► 1-2 qts / 100 gallons



Great For No-Till!

- ▶ Early termination to avoid excess trash



Paraquat





POISON

It does work...
...but with LOTS of baggage



Effective 11/14/2019

- ▶ **New EPA Certification Required to apply**

EPA PARAQUAT TRAINING

- ▶ Use only by Certified applicator



Paraquat Dichloride:

One Sip Can Kill !



Deaths from Accidental Ingestion of Paraquat

- ▶ Several accidental paraquat ingestion deaths have occurred in recent years.
- ▶ EPA looked into these deaths and found that such cases often occur as a result of the pesticide being transferred into a beverage container.
- ▶ This is a major concern to EPA because paraquat is a Restricted Use Pesticide and, like all pesticides, should never be placed into a beverage container.
- ▶ Paraquat is highly toxic to humans; one small accidental sip is often fatal and there is no antidote.

Deaths from Accidental Ingestion of Paraquat

- ▶ 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.”

“DO NOT REMOVE CONTENTS EXCEPT FOR IMMEDIATE USE.”

True Stories

- ▶ In 2008, an 8-year old boy drank paraquat that had been put in a Dr. Pepper bottle, which he found on a window sill in the garage. He died in the hospital 16 days later. His older brother had used the product on weeds around the house and put it in the bottle in the garage. The older brother obtained the product from a family friend who is a certified Restricted Use Pesticide applicator.

True Stories

In 2003, a 49-year old male took a sip from his coffee cup in which he had poured paraquat herbicide because the product's bottle was deteriorating. He realized his mistake and went to the Emergency Department. At that time, he was vomiting, cold and sweating profusely.

Doses of activated charcoal were administered and his stomach was pumped; morphine was provided for esophageal pain; and he was intubated to support breathing function on the fourth day. Aggressive supportive care continued until he died on the tenth day.

True Stories

- ▶ In 2000, a 15-month old boy ingested paraquat product that had been transferred into a Gatorade container and stored inappropriately. The boy survived in the hospital for 13 days after the ingestion and received aggressive treatment, but died after suffering acute kidney and liver failure.
- ▶ In 2000, an 18-month old boy ingested an unknown amount of paraquat solution from a bottle found in his father's landscaping truck. He received multiple-dose activated charcoal treatment two hours after the ingestion. He suffered from lack of oxygen during the first 24 hours followed by progressive liver, kidney, and cardio-pulmonary dysfunction. The boy died 11 days after the ingestion.

Applicators: The Solution is You!

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 or drink container.
- ▶ Always be kept secured to prevent access to children and/or other unauthorized persons.
- ▶ Never be stored in or around residential dwellings.
- ▶ Never be used around home gardens, schools, recreational parks, golf courses or playgrounds.

Questions?



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