Phenoxy and pyridinoxy
Auxin-type herbicides

- Postemergence
- Foliar absorbed and translocated
- Also root absorbed
- Broadleaf weeds
Phenoxy and pyridinoxy *Auxin*-type herbicides

Clarity (dicamba)

- Stem twisting
- Stem swelling
Phenoxy and pyridinoxy

*Auxin-type herbicides*

Clarity (dicamba)

- Stem twisting
- Stem and leaf reddening
Phenoxy and pyridinoxy

*Auxin-type herbicides*

Clarity (dicamba)

Leaf curling and cupping
Phenoxy and pyridinoxy
Auxin-type herbicides

Butyrac (2,4-DB)

Stem twisting
Necrosis
Phenoxy and pyridinoxy
Auxin-type herbicides

Butyrac (2,4-DB)

Legumes not as injured as other broadleaves
Phenoxy and pyridinooxy

*Auxin-type herbicides*

Butyrac (2,4-DB)

Leaf strapping
Dinitroaniline herbicides

*DNA’s*

- Soil-applied
- Root and shoot absorbed
- Not translocated
- Grass weeds and some small-seeded broadleaf weeds
Dinitroaniline herbicides

DNA’s

Prowl (pendimethalin)

Control of grasses and small seeded broadleaf weeds
Chloroacetamide herbicides

- Soil-applied
- Root and shoot absorbed
- Translocated but not herbicidal
- Grass weeds and some small-seeded broadleaf weeds
Chloroacetamide herbicides

Dual Magnum (s-metalachlor)

Buggy whipping
Chloroacetamide herbicides

Dual Magnum (s-metalachlor)

Cotton and Cantaloupe injury and morningglory control at 2x use rate
Other “amides” and miscellaneous category herbicides

- pronamide (Kerb)
- napropamide (Devrinol)
- flufenacet (Axiom-w/metribuzin)
- isoxaben (Gallery)
- bensulide (Prefar)
- DCPA (Dacthal)
- dichlobenil (Casoran)
- quinclorac (Facet)
Miscellaneous chemistry herbicides

- Foliar applied
- Shoot absorbed
- Not readily translocated
- Broadleaf weeds
Nitrile herbicides

Buctril (bromoxynil)

Chlorotic mosaic
Miscellaneous chemistry herbicides

Roundup (glyphosate)

Chlorosis followed by necrosis
Miscellaneous chemistry herbicides

Roundup (glyphosate)

Immediate cessation of growth

Stacked nodes (regrowth)
Miscellaneous chemistry herbicides

Roundup (glyphosate)

Interveinal chlorosis at sub-lethal dose
Miscellaneous chemistry herbicides

Roundup (glyphosate)
Pigment inhibiting herbicides

- Soil-applied
- Root absorbed
- Translocated
- Broad-spectrum weeds
Pigment inhibiting herbicides

Evital (norflurazon)  Bleached leaves
Pigment inhibiting herbicides

Evital (norflurazon)
Pigment inhibiting herbicides

Evital (norflurazon)
Pigment inhibiting herbicides

Evital (norflurazon)
Triazine herbicides

- Soil and foliar applied
- Root absorbed and translocated
- Not translocated out of treated leaves
- Broadleaf weeds
Triazine herbicides

Aatrex (atrazine)

Interveinal chlorosis
Necrosis
New growth unaffected (foliar application)
Triazine herbicides

Caporal (prometryn)
Triazine herbicides

Caporal (prometryn)

Plants emerge then symptoms occur (chlorosis followed by necrosis)
Phenylurea herbicides

- Soil and foliar applied
- Root absorbed and translocated
- Not translocated out of treated leaves
- Broadleaf weeds
Phenylurea herbicides

Karmex (diuron)

Interveinal chlorosis on lower leaves
Phenylurea herbicides

Karmex (diuron)

Leaf tip burn
Bipyridilium herbicides

- Foliar applied
- Rapid burndown activity
- Non-selective grass and broadleaf weeds
Bipyridilium herbicides

Gramoxone Max (paraquat)

Rapid desiccation of leaf tissue
Bipyridilium herbicides

Gramoxone Max (paraquat)

Leaf tip burn
Necrotic lesions
Bipyridilium herbicides

Gramoxone Max (paraquat)

Necrotic spots with red halo
Diphenylether herbicides

Goal (oxyfluorfen)

Bronzing of contacted leaf tissue
Diphenylether herbicides

Goal (oxyfluorfen)

Bronzing of contacted leaf tissue
Triazolinone herbicides

- Foliar and soil applied
- Readily absorbed by leaves
- Not translocated
- Annual broadleaf weeds
Triazolinone herbicides

Aim (carfentrazone)

Bronzing and necrosis of leaf tissue
Triazolinone herbicides

Aim (carfentrazone)

Bronzing and necrosis of leaf tissue
Imidazolinone herbicides

- Foliar and soil applied
- Root and shoot absorbed
- Rapidly translocated to growing points
- Selective and broadspectrum
Imidazolinone herbicides

Pursuit (imazethapyr)

Buggy whipping
Imidazolinone herbicides

Pursuit (imazethapyr)

Stunting (flat top)

Purple discoloration
Imidazolinone herbicides

Pursuit (imazethapyr)

Lime green color

Cupping of upper leaves
Imidazolinone herbicides

Pursuit (imazethapyr)

Stacked nodes
Sulfonylurea herbicides

- Foliar and soil applied
- Root and shoot absorbed
- Rapidly translocated to growing points
- Selective and broadspectrum
Sulfonylurea herbicides

Sandea (halosulfuron)

Red veins
Sulfonylurea herbicides

Sandea (halosulfuron)
Pyrimidinyl oxybenzoate herbicide

- Foliar and soil applied
- Root and shoot absorbed
- Rapidly translocated to growing points
- Selective and broadleaf weeds
Pyrimidinyl oxybenzoate herbicide

Staple (pyrithiobac)

Red veins
Aryloxyphenoxy propionate and Cyclohexanedione herbicides

Grass herbicides

- Foliar applied
- Shoot absorbed
- Rapid uptake and translocation to growing points
- Selective and only grass weeds
Aryloxyphenoxy propionate and Cyclohexanedione herbicides

grasp herbicides

Select (clethodim)

Growing point easy to remove
Aryloxyphenoxy propionate and Cyclohexanedione herbicides

*grass herbicides*

Select (clethodim)

Purpling of leaf tissue