# Fall Weed Control and Lawn Care

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OSU EXTENSION

# Fall Lawn Care

- Maintaining a beautiful lawn can be one of the biggest priorities for some home landscapes
- This can also be one of the most frustrating parts of maintaining a home landscape

- Lawn care and weed control requires understanding a few simple factors
  - Lawn health and maintenance practices
  - Weed identification
  - Methods of control measures
  - Timing of control measures

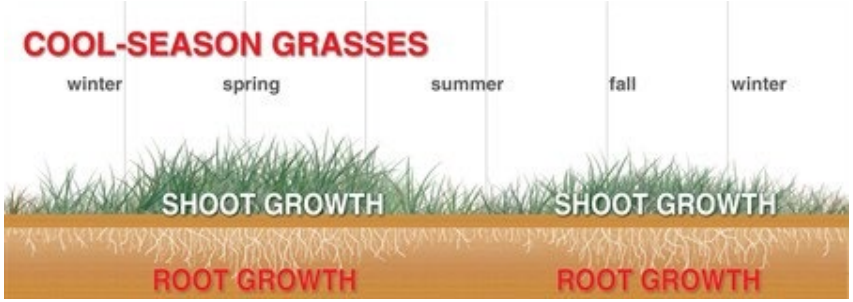
# What are your goals?

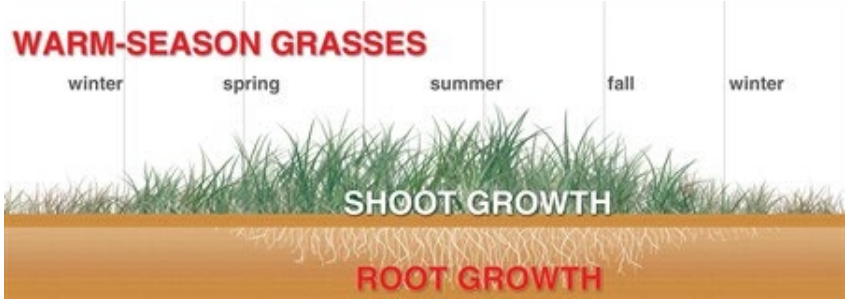
- Maximum landscape appearance?
- Low maintenance?
- Saving money?

Clearly define the goals and this will help determine the steps to take.

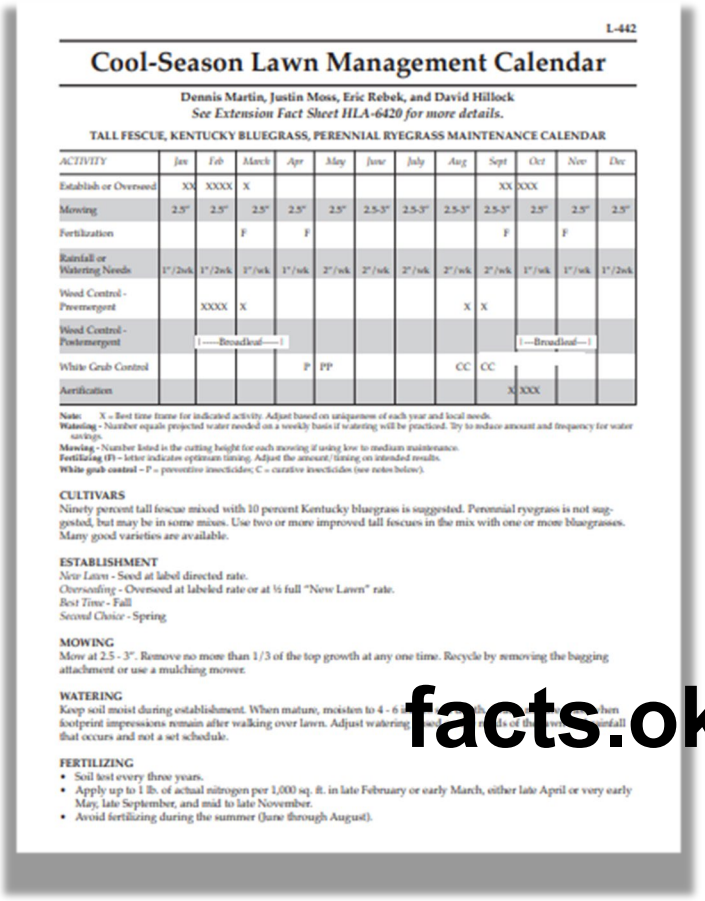
# Turfgrass Growth Patterns

- *Cool Season Grass* - types that grows best in fall and spring
- *Warm Season Grass* - types that grows best in late spring through summer into early fall.



# Refer to Fact Sheets



L-442

## Cool-Season Lawn Management Calendar

**Dennis Martin, Justin Moss, Eric Rebek, and David Hillock**

*See Extension Fact Sheet HLA-6420 for more details.*

**TALL FESCUE, KENTUCKY BLUEGRASS, PERENNIAL RYEGRASS MAINTENANCE CALENDAR**

| *ACTIVITY* | *Jan* | *Feb* | *March* | *Apr* | *May* | *June* | *July* | *Aug* | *Sept* | *Oct* | *Nov* | *Dec* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Establish or Overseed | | XX | XXXX | X | | | | | XX | XXX | | |
| Mowing | 2.5" | 2.5" | 2.5" | 2.5" | 2.5" | 2.5-3" | 2.5-3" | 2.5-3" | 2.5-3" | 2.5" | 2.5" | 2.5" |
| Fertilization | | | F | | F | | | | F | | F | |
| Rainfall or Watering Needs | 1"/2wk | 1"/2wk | 1"/wk | 1"/wk | 2"/wk | 2"/wk | 2"/wk | 2"/wk | 2"/wk | 1"/wk | 1"/wk | 1"/2wk |
| Weed Control - Preemergent | | XXXX | X | | | | | X | X | | | |
| Weed Control - Postemergent | | \|---Broadleaf---\| | | | | | | | | \|---Broadleaf---\| | | |
| White Grub Control | | | | | P | PP | | | CC | CC | | |
| Aerification | | | | | | | | | | X | XXX | |

**Note:** X = Best time frame for indicated activity. Adjust based on uniqueness of each year and local needs.
**Watering -** Number equals projected water needed on a weekly basis if watering will be practiced. Try to reduce amount and frequency for water savings.
**Mowing -** Number listed is the cutting height for each mowing if using low to medium maintenance.
**Fertilizing (F) –** letter indicates optimum timing. Adjust the amount/timing on intended results.
**White grub control –** P = preventive insecticides; C = curative insecticides (see notes below).

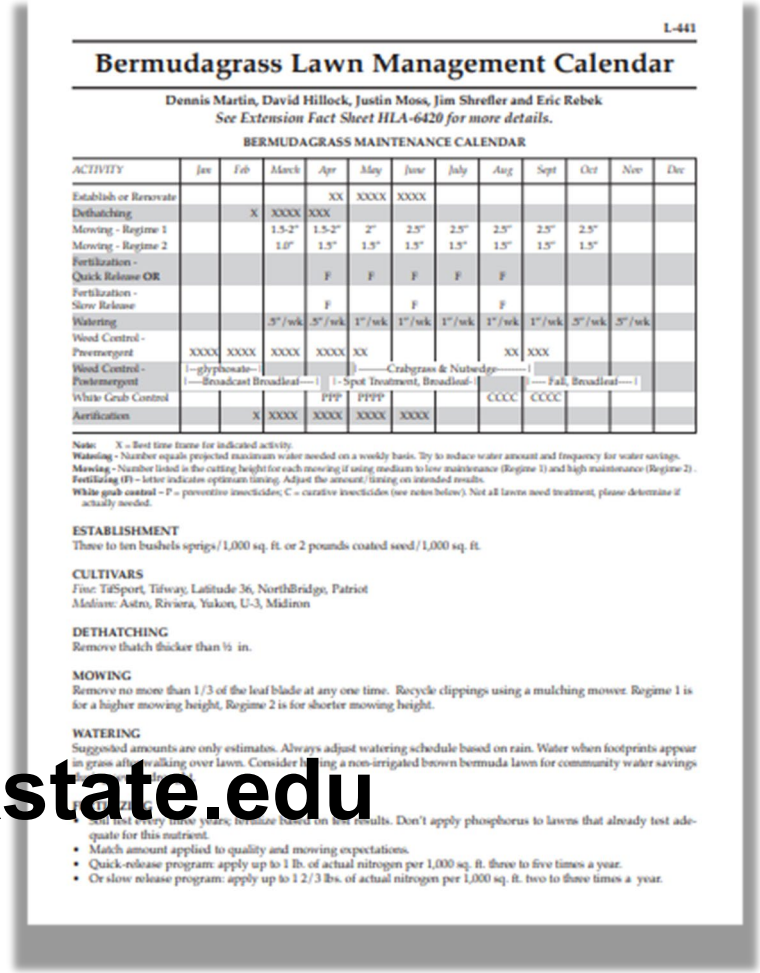
**CULTIVARS**
Ninety percent tall fescue mixed with 10 percent Kentucky bluegrass is suggested. Perennial ryegrass is not suggested, but may be in some mixes. Use two or more improved tall fescues in the mix with one or more bluegrasses. Many good varieties are available.

**ESTABLISHMENT**
*New Lawn* - Seed at label directed rate.
*Overseeding* - Overseed at labeled rate or at ½ full "New Lawn" rate.
*Best Time* - Fall
*Second Choice* - Spring

**MOWING**
Mow at 2.5 - 3". Remove no more than 1/3 of the top growth at any one time. Recycle by removing the bagging attachment or use a mulching mower.

**WATERING**
Keep soil moist during establishment. When mature, moisten to 4 - 6 i[illegible] when footprint impressions remain after walking over lawn. Adjust watering [illegible] that occurs and not a set schedule.

**FERTILIZING**
- Soil test every three years.
- Apply up to 1 lb. of actual nitrogen per 1,000 sq. ft. in late February or early March, either late April or very early May, late September, and mid to late November.
- Avoid fertilizing during the summer (June through August).



L-441

## Bermudagrass Lawn Management Calendar

**Dennis Martin, David Hillock, Justin Moss, Jim Shrefler and Eric Rebek**

*See Extension Fact Sheet HLA-6420 for more details.*

**BERMUDAGRASS MAINTENANCE CALENDAR**

| *ACTIVITY* | *Jan* | *Feb* | *March* | *Apr* | *May* | *June* | *July* | *Aug* | *Sept* | *Oct* | *Nov* | *Dec* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Establish or Renovate | | | | XX | XXXX | XXXX | | | | | | |
| Dethatching | | X | XXXX | XXX | | | | | | | | |
| Mowing - Regime 1 | | | 1.5-2" | 1.5-2" | 2" | 2.5" | 2.5" | 2.5" | 2.5" | 2.5" | | |
| Mowing - Regime 2 | | | 1.0" | 1.5" | 1.5" | 1.5" | 1.5" | 1.5" | 1.5" | 1.5" | | |
| Fertilization - Quick Release OR | | | | F | F | F | F | F | | | | |
| Fertilization - Slow Release | | | | F | | F | | F | | | | |
| Watering | | | .5"/wk | .5"/wk | 1"/wk | 1"/wk | 1"/wk | 1"/wk | 1"/wk | 1"/wk | .5"/wk | .5"/wk |
| Weed Control - Preemergent | XXXX | XXXX | XXXX | XXXX | XX | | | XX | XXX | | | |
| Weed Control - Postemergent | \|--glyphosate--\| \|---Broadcast Broadleaf----\| | | | \|---Crabgrass & Nutsedge--------\| \|- Spot Treatment, Broadleaf-\| | | | | \|--- Fall, Broadleaf----\| | | | |
| White Grub Control | | | | PPP | PPPP | | | CCCC | CCCC | | | |
| Aerification | | X | XXXX | XXXX | XXXX | XXXX | | | | | | |

**Note:** X = Best time frame for indicated activity.
**Watering -** Number equals projected maximum water needed on a weekly basis. Try to reduce water amount and frequency for water savings.
**Mowing -** Number listed is the cutting height for each mowing if using medium to low maintenance (Regime 1) and high maintenance (Regime 2).
**Fertilizing (F) –** letter indicates optimum timing. Adjust the amount/timing on intended results.
**White grub control –** P = preventive insecticides; C = curative insecticides (see notes below). Not all lawns need treatment, please determine if actually needed.

**ESTABLISHMENT**
Three to ten bushels sprigs/1,000 sq. ft. or 2 pounds coated seed/1,000 sq. ft.

**CULTIVARS**
*Fine:* TifSport, Tifway, Latitude 36, NorthBridge, Patriot
*Medium:* Astro, Riviera, Yukon, U-3, Midiron

**DETHATCHING**
Remove thatch thicker than ½ in.

**MOWING**
Remove no more than 1/3 of the leaf blade at any one time. Recycle clippings using a mulching mower. Regime 1 is for a higher mowing height, Regime 2 is for shorter mowing height.

**WATERING**
Suggested amounts are only estimates. Always adjust watering schedule based on rain. Water when footprints appear in grass after walking over lawn. Consider h[illegible] a non-irrigated brown bermuda lawn for community water savings

**[illegible]**
- [illegible] every three years, fertilize based on test results. Don't apply phosphorus to lawns that already test adequate for this nutrient.
- Match amount applied to quality and mowing expectations.
- Quick-release program: apply up to 1 lb. of actual nitrogen per 1,000 sq. ft. three to five times a year.
- Or slow release program: apply up to 1 2/3 lbs. of actual nitrogen per 1,000 sq. ft. two to three times a year.

**facts.okstate.edu**

# Bermudagrass Lawn Management Calendar

| *ACTIVITY* | *Jan* | *Feb* | *March* | *Apr* | *May* | *June* | *July* | *Aug* | *Sept* | *Oct* | *Nov* | *Dec* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Establish or Renovate | | | | XX | XXXX | XXXX | | | | | | |
| Dethatching | | X | XXXX | XXX | | | | | | | | |
| Mowing - Regime 1 | | | 1.5-2″ | 1.5-2″ | 2″ | 2.5″ | 2.5″ | 2.5″ | 2.5″ | 2.5″ | | |
| Mowing - Regime 2 | | | 1.0″ | 1.5″ | 1.5″ | 1.5″ | 1.5″ | 1.5″ | 1.5″ | 1.5″ | | |
| Fertilization - Quick Release **OR** | | | | F | F | F | F | F | | | | |
| Fertilization - Slow Release | | | | F | | F | | F | | | | |
| Watering | | | .5″/wk | .5″/wk | 1″/wk | 1″/wk | 1″/wk | 1″/wk | 1″/wk | .5″/wk | .5″/wk | |
| Weed Control - Preemergent | XXXX | XXXX | XXXX | XXXX | XX | | | XX | XXX | | | |
| Weed Control - Postemergent | \|--glyphosate--\| | | | | \|--------Crabgrass & Nutsedge--------\| | | | | | | | |
| | \|----Broadcast Broadleaf----\| | | | | \|- Spot Treatment, Broadleaf-\| | | | | \|---- Fall, Broadleaf----\| | | |
| White Grub Control | | | | PPP | PPPP | | | CCCC | CCCC | | | |
| Aerification | | X | XXXX | XXXX | XXXX | XXXX | | | | | | |

# Fall Warm-Season Lawn Care

- **Mowing** – Mowing may be necessary through October or early November
- **Fertilization** – May apply last application for the season. It is best wrap up fertilization programs by the end of August
- **Irrigation** – Depending on weather conditions, irrigation may be required. Roughly 1” per week through September. 0.5” per week through October as needed.
- **Weed Control** – ***Pre-emergent*** products for winter annuals should be applied in August and early September. **Post-emergent** products can be used to spot treat young emerging weeds.

# Cool-Season Lawn Management Calendar

| *ACTIVITY* | *Jan* | *Feb* | *March* | *Apr* | *May* | *June* | *July* | *Aug* | *Sept* | *Oct* | *Nov* | *Dec* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Establish or Overseed | XX | XXXX | X | | | | | | XX | XXX | | |
| Mowing | 2.5″ | 2.5″ | 2.5″ | 2.5″ | 2.5″ | 2.5-3″ | 2.5-3″ | 2.5-3″ | 2.5-3″ | 2.5″ | 2.5″ | 2.5″ |
| Fertilization | | | F | F | | | | | F | | F | |
| Rainfall or Watering Needs | 1″/2wk | 1″/2wk | 1″/wk | 1″/wk | 2″/wk | 2″/wk | 2″/wk | 2″/wk | 2″/wk | 1″/wk | 1″/wk | 1″/2wk |
| Weed Control - Preemergent | | XXXX | X | | | | | X | X | | | |
| Weed Control - Postemergent | | \|-----Broadleaf-----\| | | | | | | | \|---Broadleaf---\| | | |
| White Grub Control | | | | P | PP | | | CC | CC | | | |
| Aerification | | | | | | | | | X | XXX | | |

# Fall Cool-Season Lawn Care

- **Establishing and Overseeding** – Mid-September through mid-October is the ideal time to start cool-season lawns from seed or sod.
- **Fertilization** – Fertilization applications can occur in late September and into early November as needed (based on soil test if possible). Typically 3-4 applications per year – March, April, October/November. Avoid summer season fertilization.
- **Irrigation** – Generally 2”per week in August and September (more if establishing new seed). 1” per week through fall and winter as needed.
- **Weed Control** – **Pre-emergent** applications can be conducted on established turfgrass starting in August but should be delayed in areas where overseeding is planned. **Post-emergent** applications can be made to spot treat young emerging weeds.
- **Renovation/Improvements** – Dethatching and aerification can be conducted in September or early October before overseeding as needed.

# Maintaining a Healthy Lawn

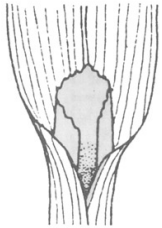
- Many lawn problems, including an abundance of weeds are the result of poor management practices. Management practices to consider:
    - **Build healthy soil** – Try to improve the soil. Aerification, application of compost, mulch mowing, etc.
    - **Follow good mowing practices** – Follow the 1/3 rule of mowing.
    - **Irrigation and fertilization schedules** – Properly fertilize and irrigate lawns. Base all fertilization on soil test results if possible. Irrigate during dry conditions. A thick and healthy lawn will outcompete most weeds.

# Fall Weed Control

## Identification of weeds is the first step

- **Broadleaf** – (Dicot) Two leaves emerge from the seed. These generally have wider shaped leaves and web like vein patterns.
- **Grassy** - (Monocot) One leaf emerges from the seed. These have long straight leaves with up and down veins.
- **Annual** – One year lifecycle. Plant comes back each year from seeds it produces.
- **Biennial** - Plants that stay in vegetative state the first year and produce seeds and conclude lifcycle in second.
- **Perennial** – Plants that continue to grow year after year from plant crown.
- **Winter/Summer** – The season in which the weeds emerges and begins its growth.


Dicot



Monocot

Broadleaf Weed

Grassy Weed

# Summer/Winter Broadleaf Weeds

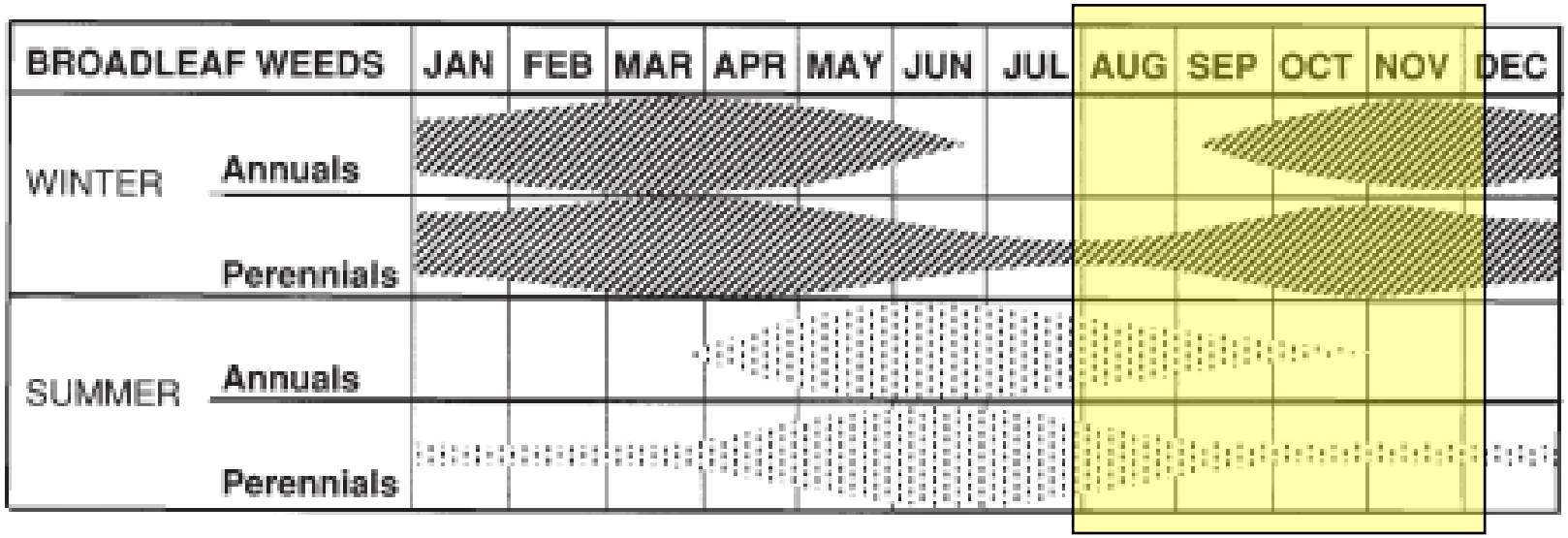



**Figure 2. Active growth varies among winter and summer broadleaf weeds. The thicker part of the bar indicates when the weed is actively growing. Perennial weeds become dormant, while annuals die and re-establish by seed the following year.**

# Common Winter Annual Broadleaf Weeds

Henbit

Mouseear Chickweed


Cranesbill or Carolina geranium

Shepherd's Purse

Common Chickweed

# Common Winter Perennial Broadleaf Weeds

Dandelion

Wild Carrot

White Clover

# Common Winter Annual Grassy Weeds

Annual bluegrass

Little Barley

Downy Brome
Or Cheatgrass

# Cool-Season Perennial Broadleaf Weeds

curly dock

broadleaf plantain

buckhorn plantain

# Common Summer Annual Grassy Weeds

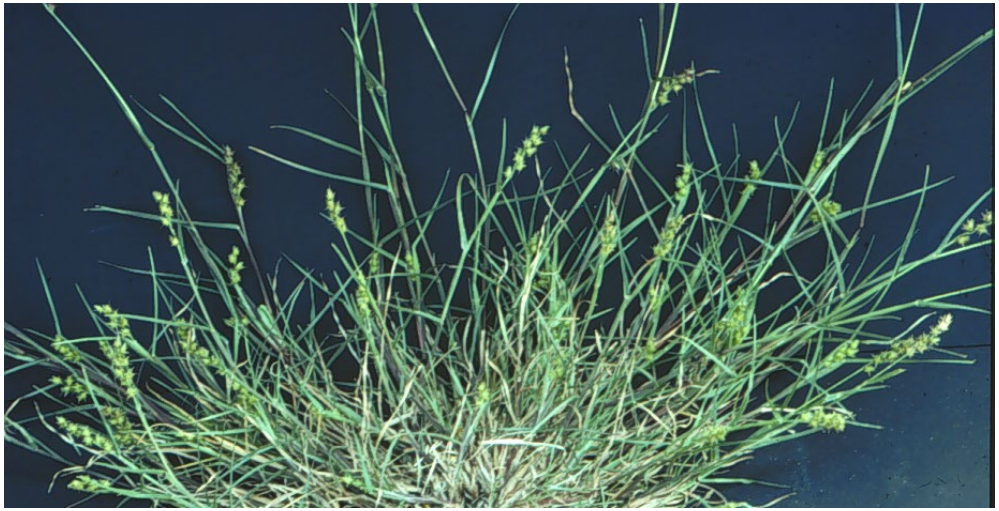
crabgrass

goosegrass

Pre-emergent treatment in the spring (Feb-March)

# Warm-Season Perennial Grassy Weeds

dallisgrass



field sandbur

# Sandbur Control Strategy

- Most sand bur in OK is field sandbur and is a perennial that forms new plants by seed
- Control for the consumer is a good fertility program, proper irrigation and digging out sandburs on a small scale.
- Image is used in repeat applications as per label in combination with cultural management.

# Non-Chemical
# Methods for Controlling Weeds

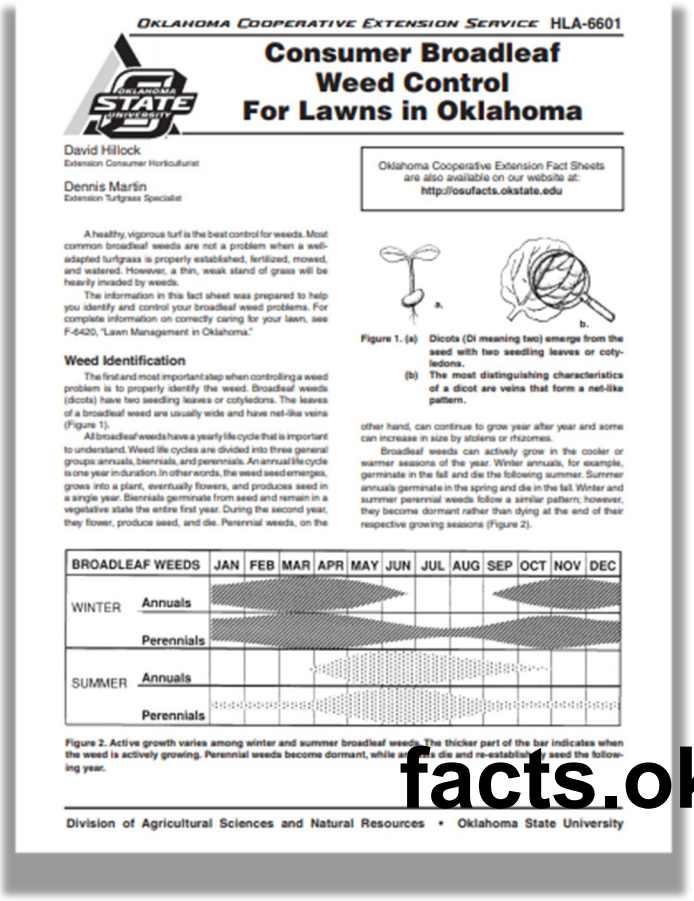
## Cultural/Maintenance Practices

- Adjustments to mowing height
  - Raise height dependent upon turf species
  - Allows for increased canopy to reduce weed competition
  - Proper mowing reduces stress on turf plants
- Mulch mowing
  - Improves soil conditions as organic material is returned to soil
  - Add nutrients to the soil as leaf material decays
- Mowing frequency
  - Frequent mowing can eliminate or slow many weeds

# Non-Chemical
# Methods for Controlling Weeds

- Hand pulling
  - Labor intensive but very effective against most weeds
- Proper fertilization
  - Allows stronger turf to compete against weeds
  - Ensure plants are receiving proper nutrients
    - Should be based on a soil test…
- Proper irrigation
  - Deep but less frequent irrigation cycles will promote strong root systems and limit surface soil moisture which promotes weed seed germination

# Refer to Fact Sheets



OKLAHOMA COOPERATIVE EXTENSION SERVICE HLA-6601

## Consumer Broadleaf Weed Control For Lawns in Oklahoma

David Hillock
Extension Consumer Horticulturist

Dennis Martin
Extension Turfgrass Specialist

Oklahoma Cooperative Extension Fact Sheets are also available on our website at: http://osufacts.okstate.edu

A healthy, vigorous turf is the best control for weeds. Most common broadleaf weeds are not a problem when a well-adapted turfgrass is properly established, fertilized, mowed, and watered. However, a thin, weak stand of grass will be heavily invaded by weeds.

The information in this fact sheet was prepared to help you identify and control your broadleaf weed problems. For complete information on correctly caring for your lawn, see F-6420, "Lawn Management in Oklahoma."

### Weed Identification

The first and most important step when controlling a weed problem is to properly identify the weed. Broadleaf weeds (dicots) have two seedling leaves or cotyledons. The leaves of a broadleaf weed are usually wide and have net-like veins (Figure 1).

All broadleaf weeds have a yearly life cycle that is important to understand. Weed life cycles are divided into three general groups: annuals, biennials, and perennials. An annual life cycle is one year in duration. In other words, the weed seed emerges, grows into a plant, eventually flowers, and produces seed in a single year. Biennials germinate from seed and remain in a vegetative state the entire first year. During the second year, they flower, produce seed, and die. Perennial weeds, on the other hand, can continue to grow year after year and some can increase in size by stolens or rhizomes.




**Figure 1. (a) Dicots (Di meaning two) emerge from the seed with two seedling leaves or cotyledons. (b) The most distinguishing characteristics of a dicot are veins that form a net-like pattern.**

Broadleaf weeds can actively grow in the cooler or warmer seasons of the year. Winter annuals, for example, germinate in the fall and die the following summer. Summer annuals germinate in the spring and die in the fall. Winter and summer perennial weeds follow a similar pattern; however, they become dormant rather than dying at the end of their respective growing seasons (Figure 2).




**Figure 2. Active growth varies among winter and summer broadleaf weeds. The thicker part of the bar indicates when the weed is actively growing. Perennial weeds become dormant, while annuals die and re-establish by seed the following year.**



OKLAHOMA COOPERATIVE EXTENSION SERVICE HLA-6421

## Controlling Weeds in Home Lawns

Dennis Martin
Extension Turf Specialist

Oklahoma Cooperative Extension Fact Sheets are also available on our website at: http://osufacts.okstate.edu

Weeds are the most common pest in turfgrass areas. They destroy the appearance of our turf and weaken it by stealing space, nutrients, water, and light. Chemical weed killers (herbicides) are effective tools for controlling weeds in turfgrass, but repeated occurrence of weeds may reflect underlying problems of turfgrasses that are not correctable with herbicides. Frequently, weeds germinate and become established when the turf coverage is thin or broken due to some environmental condition, such as excessive drought or winter injury, uncontrolled insect or disease infestations, and/or improper maintenance activities. Thus, the most important step in controlling weeds in turfgrass is a management program that produces a dense, vigorous, healthy turf. This can only be accomplished by growing a turfgrass variety adapted to your conditions and by properly mowing, watering, and fertilizing. For complete information on correctly caring for your lawn, see Fact Sheet F-6420 "Lawn Management in Oklahoma." The information below was prepared to describe how to effectively control weeds with herbicides.

### Weeds

Identifying weeds is the first step in effective herbicide control. Most herbicides control only certain kinds of weeds, so identifying your weed problem is critical in selecting the appropriate herbicide. You may not be able to positively identify your weeds, but distinguishing whether they are grassy or broadleaf will frequently be sufficient information for selecting the right herbicide. All grassy weeds have long, narrow leaves with straight veins running parallel the full length of the leaf. Broadleaf weeds have broader leaves with veins arranged in a branching or net-like pattern.

Identifying your weed problem also will help you in knowing the life cycle of weeds and the stage of growth in which they are most susceptible to herbicides. Applying postemergence herbicides on weeds in the correct stage of growth is just as critical as identifying the weed and choosing the right herbicide: emerged summer weeds are most effectively controlled in May and June and emerged winter weeds are most effectively controlled in October and November. Annual weeds complete their life cycle in one growing season. They come back each year from seed. There are annual weeds that grow in the summer and produce seeds in the fall, and there are annual weeds that grow in the winter and produce seeds in late spring or early summer.

### Summer Annual Weeds

Summer annual weeds germinate in the spring and typically die with the first hard frost in the fall. Examples of commonly found summer annual grassy weeds include crabgrass, foxtails, goosegrass, and sandbur. Crabgrass and foxtails are consistently controlled in all established turfgrasses by applications of preemergence herbicides by March 15 to April 1. Most summer annual grassy weeds can be safely controlled in established bermudagrass, buffalograss, and Kentucky bluegrass by applications of organic arsenicals (AMA, DSMA, MSMA, etc.) soon after their emergence in May and June.

Examples of commonly found summer annual broadleaf weeds include asters, carpetweed, knotweed, puncture vine, common purslane, and spotted spurge. Most summer annual broadleaf weeds can be safely controlled in established bermudagrass, Kentucky bluegrass, centipedegrass, perennial ryegrass, tall fescue, and zoysiagrass by applications of 2,4-D, Banvel (dicamba), MCPP (mecoprop) combinations (Trex-San, Trimec, 33-Plus, etc.) soon after their emergence in May and June.

### Winter Annual Weeds

Winter annual weeds germinate in late September and October and die the following summer. Examples of commonly found winter annual grassy weeds include annual bluegrass, cheat, downy brome, little barley, and rescuegrass. Annual bluegrass is consistently controlled in all established turfgrasses by applications of preemergence herbicides by September 15. Most winter annual grassy weeds also can be controlled in established bermudagrass by applications of Kerb (pronamide) soon after their emergence in October and November. Annual bluegrass and other winter annual weeds also can be controlled in established dormant bermudagrass by applications of Roundup (glyphosate) in December and January.

Examples of commonly found winter annual broadleaf weeds include chickweed, dwarf fleabane, and henbit. Most winter annual broadleaf weeds can be safely controlled in established bermudagrass, Kentucky bluegrass, centipedegrass, perennial ryegrass, tall fescue, and zoysiagrass by applications of 2,4-D, Banvel, MCPP combinations (Trex-San, Trimec, 33-Plus, etc.) soon after their emergence in October and November.



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# Chemical Control
# Methods for Controlling Weeds

**Pre-Emergent**

- Controls weeds before or as they germinate. Will not control actively growing weeds.

**Post-Emergent**

- Control weeds after they have emerged and begun growing.
  - Selective
    - Controls specific types of weeds without hurting turfgrasses.
  - Non-Selective
    - Will kill most weeds and turfgrasses

# Fall Pre-Emergent

- Inhibits germination
- Fall application time
  - Always 3rd week of August
  - Do not Apply to Fescue (fall is over-seeding time)
- 80 to 90 percent control
- ~ 50-90 day control (weather dependent)

# Fall Post-Emergent

- Used on emerged weeds
- 2,4-D based products (selective)
- Glyphosate based products (non-selective)
- Apply in late fall on small emerged weeds
  - Smaller weeds are easier to control
  - Best as spot treatment vs broadcast

Information for spring and summer is also available in fact sheets mentioned.

# Fall Chemical Weed Control

Pre-Emergent

- For winter annual weeds, apply product in last half of August to first half of September. **Grassy weeds**: use products containing oryzalin, prodiamine, pendimethalin, dithiopyr, etc. **Broadleaf weeds**: use product containing isoxaben (See L-442 or L-441)

Post-Emergent (Selective)

- Generally pre-mixes of 2,4-D; and Dicamba are used to selectively control broadleaf weeds in turfgrasses. (Examples include: Weed-B-Gone and Trimec). October through November – apply post emergent broadleaf herbicide for control of cool season perennial broadleaves (See L-442 or L-441)
- Non-Selective herbicide can be applied carefully on dormant **warm-season turf ONLY** to control winter weeds.

# Example Lawn Treatment Schedule

- Last week of August to mid Sept – apply preemergent winter annual weed control
- October to early November – apply post-emergent broadleaf herbicide for control of cool season perennial broadleaves
- Feb to mid March – apply 1st preemergent summer annual herbicide
- Feb to early March – apply dormant Roundup + Trimec program for winter annuals in bermudagrass
- Early to mid May – apply 2nd application of preemergent summer annual herbicide
- Late May to mid June – spot treatments of post emergent broadleaf herbicide
- Late May to mid June – post emergent crabgrass control if needed

# Too Late for Control

- July to August – too late, you missed the boat, increased risk of herbicide drift, injury to desirable turf and ornamentals and decreased herbicide susceptibility of summer annuals and cool and warm-season perennials

# Organic Lawn Management

An organic lawn care program is a lawn managed without synthetic fertilizers or pesticides. However, it does not mean discontinuing basic lawn care maintenance practices

- Organic lawn care depends more heavily on sound care and maintenance programs
- Organic lawn care, like conventional lawn care, requires an investment of time and money for best results and id generally more labor intensive
  - Mowing
  - Irrigation
  - Fertilization (organic products) – alfalfa meal, blood meal, compost, feather meal, corn gluten meal, etc.
  - Weed control (organic products)

# Organic Weed Control Practices

Limited scientific research has been done on exclusively natural, organic lawn care programs. However, well-documented research has been done on practices that are an integral part of organic lawn care such as core aeration, mowing height and top-dressing with compost.

# Organic Weed Control Practices

- Mowing at 2.5 to 3 inches will keep the lawn dense and discourage weed seed germination. The growing point for grass is near the crown, while the growing point for many weeds is near the top of the plant. High mowing will preserve grass crowns and leaves for photosynthesis and eliminate weed flowers and seed heads. Frequent mowing will prevent or reduce seed production in some weed species.
- Frequent, shallow irrigation discourages root growth and can encourage weed seed germination. If you irrigate, follow proper practices.
- Keep fertility levels stable and build healthy soil
- Use organic-based herbicides as appropriate.

# Organic Weed Control Products

## Organic Herbicides

### Selective

- New organic herbicides are available for lawn use. Chelated iron is an active ingredient (Fiesta) that provides control for broadleaf weeds in the lawn.
- Other products (such as A.D.I.O.S) have salt as an active ingredient and provide broadleaf weed control.

### Non-Selective

- Herbicidal soaps - are fatty acid-based, non-selective herbicides. They coat the leaves and lead to dehydration and eventual death. Herbicidal soaps work by contact and will not affect underground plant parts. They can be effective against annual weeds,but are not very effective against perennial weeds.

### Pre-Emergent

- Recent research shows that corn gluten is an effective pre-emergent herbicide that can control some annual weeds. Corn gluten is a byproduct of corn syrup production. The proteins in the corn gluten act on germinating seeds to inhibit root growth.

# Other Options

Other tools available for weed management that you may wish to explore include:

- flame weeders
- soil solarization for large weedy areas

# Soil Health is Key to Organic Lawn Care

***Topdressing With Compost***

- Surface applications of compost to established lawns is called topdressing. Compost supplies some nutrients but is primarily applied to add organic matter to improve soil qualities.
- Topdressing should be done in conjunction with core aeration in the spring or fall, when temperatures are cool.

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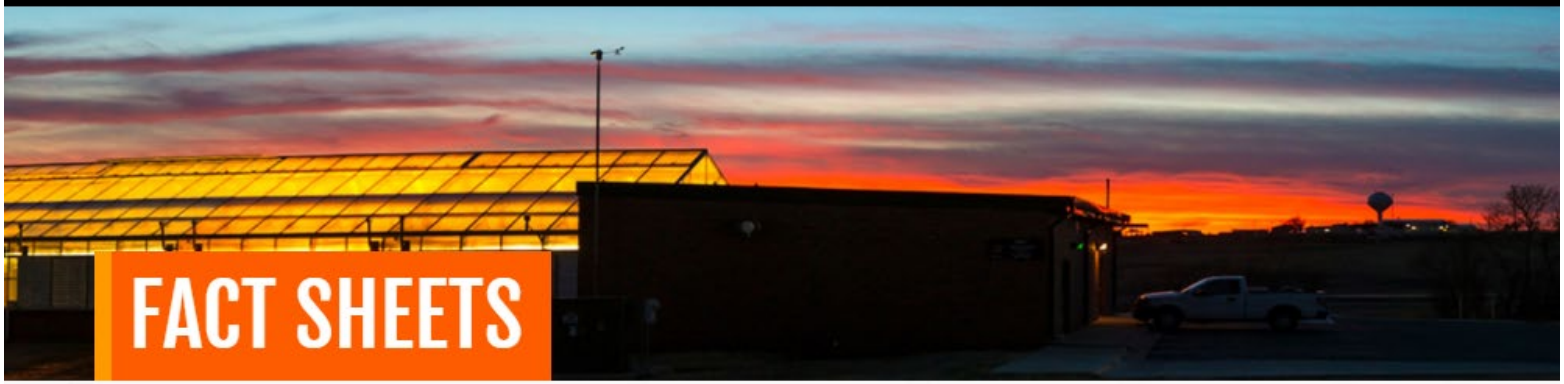

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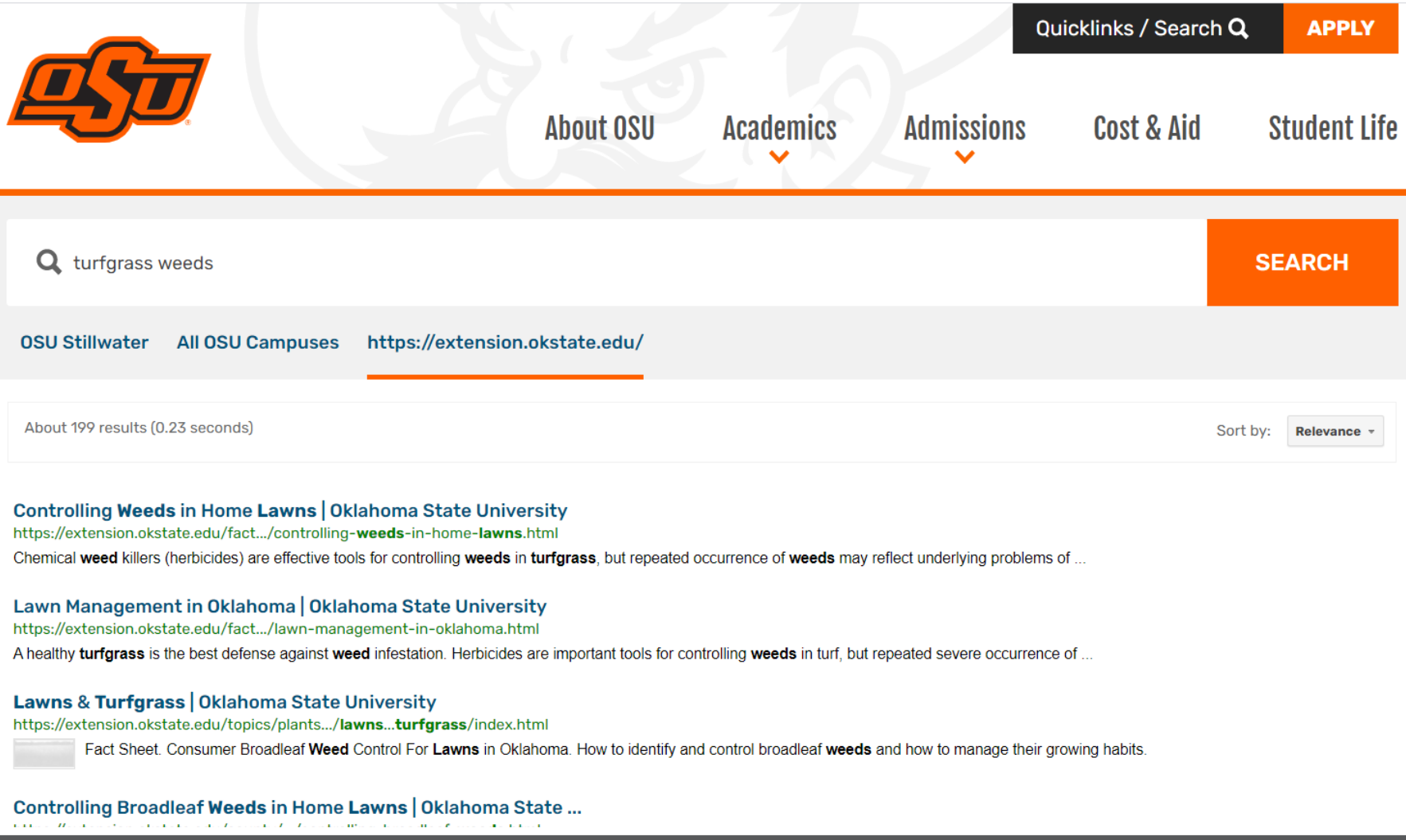


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# Controlling Weeds in Home Lawns

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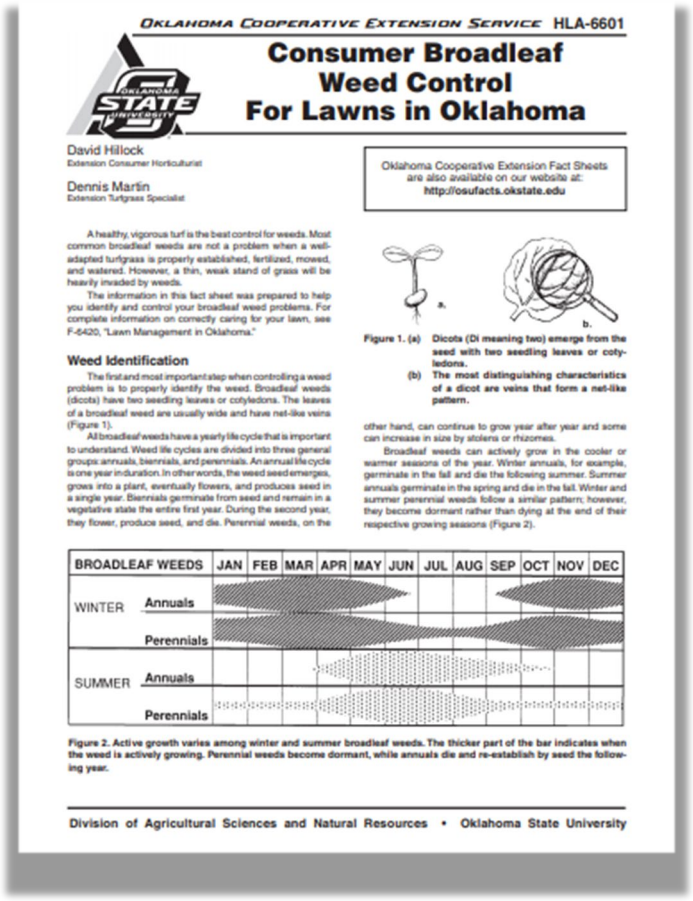
By Dennis Martin

Print-friendly PDF Share Fact Sheet



Weeds are the most common pest in turfgrass areas. They destroy the appearance of our turf and weaken it by stealing space, nutrients, water, and light. Chemical weed killers (herbicides) are effective tools for controlling weeds in turfgrass, but repeated occurrence of weeds may reflect underlying problems of turfgrasses that are not correctable with herbicides. Frequently, weeds germinate and become established when the turf coverage is thin or broken due to some environmental condition, such as excessive drought or winter injury, uncontrolled insect or disease infestations, and/ or improper maintenance activities. Thus, the most important step in controlling weeds in turfgrass is a management program that produces a dense, vigorous, healthy turf. This can only be accomplished by growing a turfgrass variety adapted to your conditions and by properly mowing, watering, and fertilizing. For complete information on

# facts.okstate.edu



OKLAHOMA COOPERATIVE EXTENSION SERVICE HLA-6601

## Consumer Broadleaf Weed Control For Lawns in Oklahoma

David Hillock
Extension Consumer Horticulturist

Dennis Martin
Extension Turfgrass Specialist

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A healthy, vigorous turf is the best control for weeds. Most common broadleaf weeds are not a problem when a well-adapted turfgrass is properly established, fertilized, mowed, and watered. However, a thin, weak stand of grass will be heavily invaded by weeds.

The information in this fact sheet was prepared to help you identify and control your broadleaf weed problems. For complete information on correctly caring for your lawn, see F-6420, "Lawn Management in Oklahoma."

### Weed Identification

The first and most important step when controlling a weed problem is to properly identify the weed. Broadleaf weeds (dicots) have two seedling leaves or cotyledons. The leaves of a broadleaf weed are usually wide and have net-like veins (Figure 1).

All broadleaf weeds have a yearly life cycle that is important to understand. Weed life cycles are divided into three general groups: annuals, biennials, and perennials. An annual life cycle is one year in duration. In other words, the weed seed emerges, grows into a plant, eventually flowers, and produces seed in a single year. Biennials germinate from seed and remain in a vegetative state the entire first year. During the second year, they flower, produce seed, and die. Perennial weeds, on the other hand, can continue to grow year after year and some can increase in size by stolens or rhizomes.




**Figure 1. (a) Dicots (Di meaning two) emerge from the seed with two seedling leaves or cotyledons. (b) The most distinguishing characteristics of a dicot are veins that form a net-like pattern.**

Broadleaf weeds can actively grow in the cooler or warmer seasons of the year. Winter annuals, for example, germinate in the fall and die the following summer. Summer annuals germinate in the spring and die in the fall. Winter and summer perennial weeds follow a similar pattern; however, they become dormant rather than dying at the end of their respective growing seasons (Figure 2).




**Figure 2. Active growth varies among winter and summer broadleaf weeds. The thicker part of the bar indicates when the weed is actively growing. Perennial weeds become dormant, while annuals die and re-establish by seed the following year.**



OKLAHOMA COOPERATIVE EXTENSION SERVICE HLA-6421

## Controlling Weeds in Home Lawns

Dennis Martin
Extension Turf Specialist

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Weeds are the most common pest in turfgrass areas. They destroy the appearance of our turf and weaken it by stealing space, nutrients, water, and light. Chemical weed killers (herbicides) are effective tools for controlling weeds in turfgrass, but repeated occurrence of weeds may reflect underlying problems of turfgrasses that are not correctable with herbicides. Frequently, weeds germinate and become established when the turf coverage is thin or broken due to some environmental condition, such as excessive drought or winter injury, uncontrolled insect or disease infestations, and/or improper maintenance activities. Thus, the most important step in controlling weeds in turfgrass is a management program that produces a dense, vigorous, healthy turf. This can only be accomplished by growing a turfgrass variety adapted to your conditions and by properly mowing, watering, and fertilizing. For complete information on correctly caring for your lawn, see Fact Sheet F-6420 "Lawn Management in Oklahoma." The information below was prepared to describe how to effectively control weeds with herbicides.

### Weeds

Identifying weeds is the first step in effective herbicide control. Most herbicides control only certain kinds of weeds, so identifying your weed problem is critical in selecting the appropriate herbicide. You may not be able to positively identify your weeds, but distinguishing whether they are grassy or broadleaf will frequently be sufficient information for selecting the right herbicide. All grassy weeds have long, narrow leaves with straight veins running parallel the full length of the leaf. Broadleaf weeds have broader leaves with veins arranged in a branching or net-like pattern.

Identifying your weed problem also will help you in knowing the life cycle of weeds and the stage of growth in which they are most susceptible to herbicides. Applying postemergence herbicides on weeds in the correct stage of growth is just as critical as identifying the weed and choosing the right herbicide: emerged summer weeds are most effectively controlled in May and June and emerged winter weeds are most effectively controlled in October and November. Annual weeds complete their life cycle in one growing season. They come back each year from seed. There are annual weeds that grow in the summer and produce seeds in the fall, and there are annual weeds that grow in the winter and produce seeds in late spring or early summer.

### Summer Annual Weeds

Summer annual weeds germinate in the spring and typically die with the first hard frost in the fall. Examples of commonly found summer annual grassy weeds include crabgrass, foxtails, goosegrass, and sandbur. Crabgrass and foxtails are consistently controlled in all established turfgrasses by applications of preemergence herbicides by March 15 to April 1. Most summer annual grassy weeds can be safely controlled in established bermudagrass, buffalograss, and Kentucky bluegrass by applications of organic arsenicals (AMA, DSMA, MSMA, etc.) soon after their emergence in May and June.

Examples of commonly found summer annual broadleaf weeds include asters, carpetweed, knotweed, puncture vine, common purslane, and spotted spurge. Most summer annual broadleaf weeds can be safely controlled in established bermudagrass, Kentucky bluegrass, centipedegrass, perennial ryegrass, tall fescue, and zoysiagrass by applications of 2,4-D, Banvel (dicamba), MCPP (mecoprop) combinations (Trex-San, Trimec, 33-Plus, etc.) soon after their emergence in May and June.

### Winter Annual Weeds

Winter annual weeds germinate in late September and October and die the following summer. Examples of commonly found winter annual grassy weeds include annual bluegrass, cheat, downy brome, little barley, and rescuegrass. Annual bluegrass is consistently controlled in all established turfgrasses by applications of preemergence herbicides by September 15. Most winter annual grassy weeds also can be controlled in established bermudagrass by applications of Kerb (pronamide) soon after their emergence in October and November. Annual bluegrass and other winter annual weeds also can be controlled in established dormant bermudagrass by applications of Roundup (glyphosate) in December and January.

Examples of commonly found winter annual broadleaf weeds include chickweed, dwarf fleabane, and henbit. Most winter annual broadleaf weeds can be safely controlled in established bermudagrass, Kentucky bluegrass, centipedegrass, perennial ryegrass, tall fescue, and zoysiagrass by applications of 2,4-D, Banvel, MCPP combinations (Trex-San, Trimec, 33-Plus, etc.) soon after their emergence in October and November.

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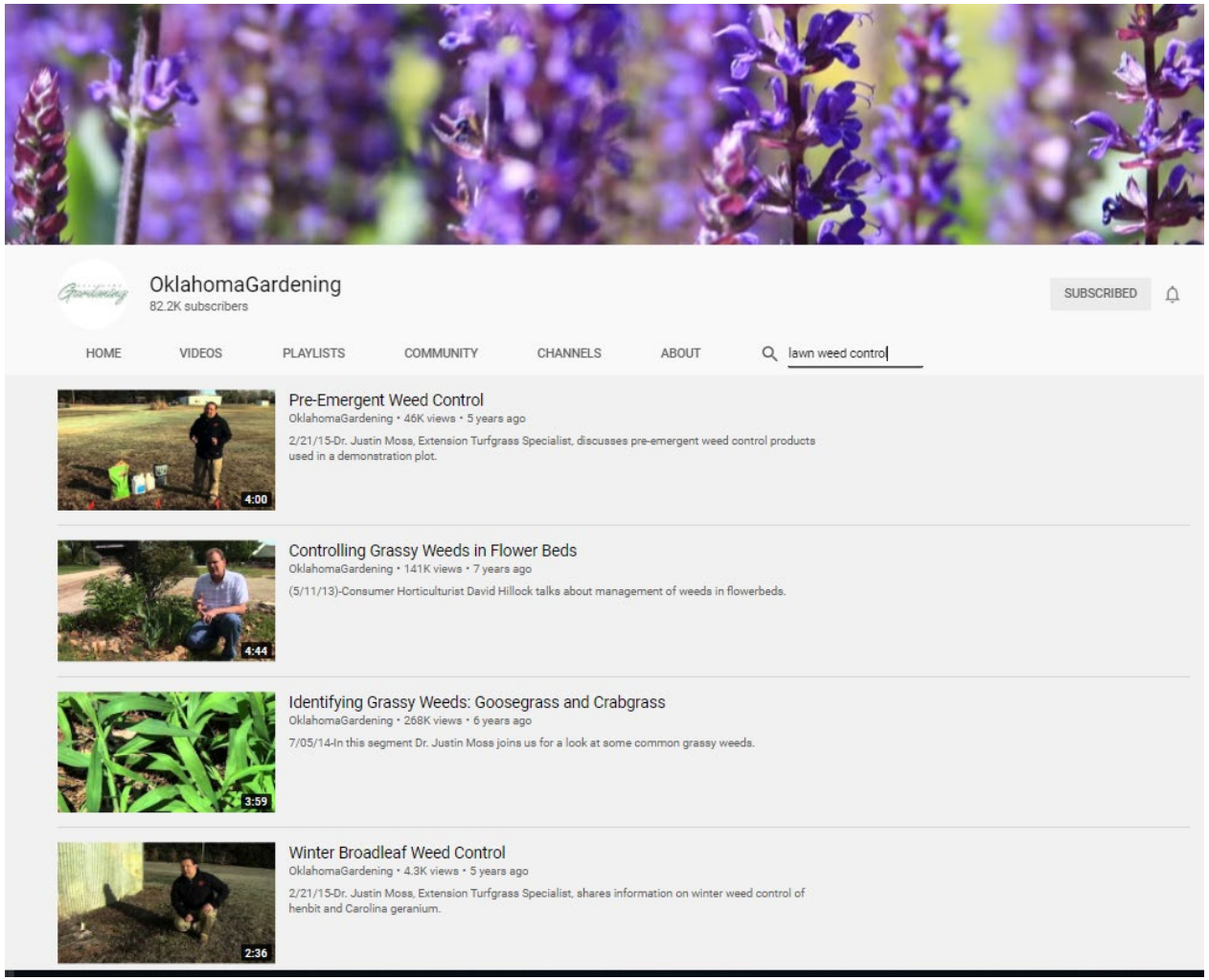


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