Summer/Fall Lawn Care

University of Kentucky
College of Agriculture, Food and Environment
Cooperative Extension Service

May 2021

Ray Tackett

Bourbon County Extension Service

1

What are your expectations for a home lawn?

2

Seasonal Growth Curves

3

Common causes of general home lawn issues

- heavy nitrogen fertilization or N at wrong times of year
- poor drainage
- heavy thatch (irrigated, highly maintained lawns)
- compaction
- short mowing height
- pH issues
- root injury (from pests or chemicals)
- high temperatures

4

Turf Care Calendar for Cool-Season Lawns in Kentucky

Food and Environment
Cooperative Extension Service

Gregg C. Munshaw, Plant and Soil Sciences

Management Practice	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Aerify[1]												
Lime[2]												
Mow[3]												
Mower maintenance[4]												
Nitrogen fertilization[5]												
PRE-herbicides for annual grassy weeds[6]												
POST-herbicides for annual grassy weeds[7]												
POST-herbicides for broadleaf weeds[7]												
Seeding for renovation or initial establishment[8]												
Sodding[9]												
Curative white grub control[10]												
Preventive white grub control[10]												

Note: *Cool-season lawns include Kentucky bluegrass, tall fescue, fine fescues, and perennial ryegrass.*

Best time to perform activity
Second-best time to perform activity
Do not perform activity

5

Management Practice	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Aerify[1]												
Lime[2]												
Mow[3]												
Mower maintenance[4]												
Nitrogen fertilization[5]												
PRE-herbicides for annual grassy weeds[6]												
POST-herbicides for annual grassy weeds[7]												
POST-herbicides for broadleaf weeds[7]												
Seeding for renovation or initial establishment[8]												
Sodding[9]												
Curative white grub control[10]												
Preventive white grub control[10]												

Note: *Cool-season lawns include Kentucky bluegrass, tall fescue, fine fescues, and perennial ryegrass.*

Best time to perform activity
Second-best time to perform activity
Do not perform activity

6

Aerifying and Dethatching Lawns

- Thatch not a problem in most Kentucky home lawns
- A little thatch helps regulate soil temperature
- See AGR-54 publication for more information

Figure 1. Check for thatch by using a knife or soil probe to remove a core. The dense organic layer above the soil line in this image is a mixture of thatch, roots, and rhizomes.

7

Reasons thatch might build up

- No earthworms present
- Acid soils. Microorganisms break down organic matter best at a pH of 6-8
- High nitrogen rates have been applied several years in a row
- Kentucky bluegrass is being grown. Bluegrass has rhizomes (underground stems) that take longer to break down.

8

Mechanical Dethatchers

- Use machines that use knives or blades. Machines with rake-type tines are not effective at removing thatch.
- Time to dethatch if you have more than ½ inch thatch layer.

Figure 2. A good dethatching machine has fixed knives or sling blades; spring tines are not effective.

9

Core Aerifying

- Method of removing soil cores from the top 2-3 inches of soil and redepositing those cores on top of the soil
- Used to help ease soil compaction

Benefits of Coring

Increased
- water infiltration
- water percolation
- soil aeration/venting
- thatch decomposition

Decreased
- soil compaction

Figure 5. A common lawn aerifier available at rental agencies. This roller-type aerifier inserts tines as it rolls along.

10

Figure 6. Coring machines remove plugs of soil and grass and open up the soil for improved aeration and water infiltration.

11

Management Practice	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Aerify[1]												
Lime[2]												
Mow[3]												
Mower maintenance[4]												
Nitrogen fertilization[5]												
PRE-herbicides for annual grassy weeds[6]												
POST-herbicides for annual grassy weeds[7]												
POST-herbicides for broadleaf weeds[7]												
Seeding for renovation or initial establishment[8]												
Sodding[9]												
Curative white grub control[10]												
Preventive white grub control[10]												

Note: *Cool-season lawns include Kentucky bluegrass, tall fescue, fine fescues, and perennial ryegrass.*

Best time to perform activity
Second-best time to perform activity
Do not perform activity

12

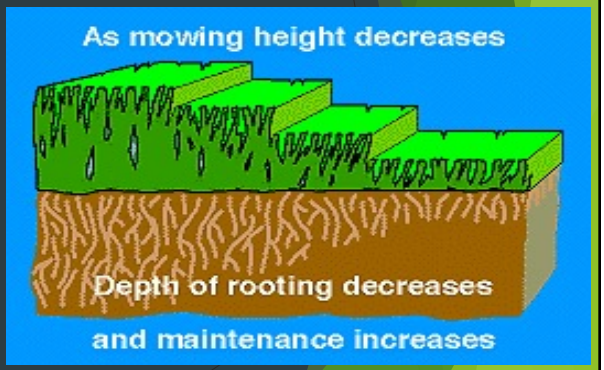
Some Facts about mowing

- Mow no more than 1/3 -1/2 leaf blade height
- Mow turf in shady areas higher
- If brown patch is present, mow at slightly lower height
- Do not mow when wet
- Do not mow above 90 degrees F
- Keep mower blades sharp

13

Mowing Heights for Turfgrasses

Turfgrass	Range (in inches)
Kentucky bluegrass	2.0-3.5
Tall fescue	3.0-4
Perennial ryegrass	1.5-2.5
Fine fescue	2.0-2.5
Bermudagrass	1.0-2.0
Zoysiagrass	1.0-3.0



14

Clippings

- Clipping removal--pros:
  - Reduced thatching (minimal)
  - Reduced disease
  - Reduced injury from heavy deposits of clippings
  - Reduce weed seeds
- Clipping removal--cons:
  - 20-40% of the grasses' fertility requirements can be met by returning clippings to the lawn.
    - this practice can reduce the amount of fertilizers applied to the turf.
  - Loss of organic matter for building soil
  - Extra work and space in landfills

15

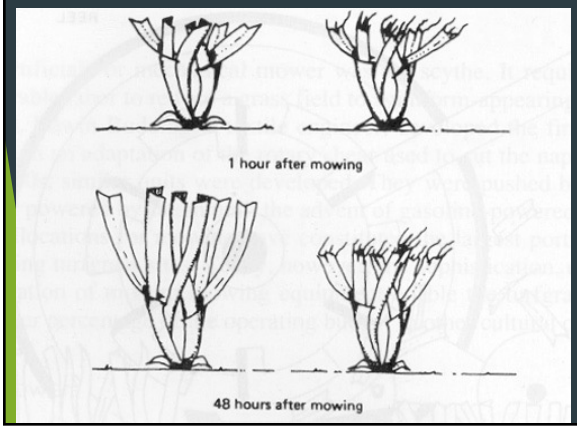
Mowing

Foliage removed	Effects on root growth
40%	Slowed but not stopped
50%	35% of roots growing after 33 d
90%	No root growth

16

Keep Mowers Sharp!

- Dull mower blades:
  - increase disease
  - reduce quality
  - increase gasoline costs by 22%



Dull cutting surfaces or poor adjustment result in tearing and bruising of leaves. The mutilated leaves turn gray, then brown, at the tip and may be stunted as a result of cutting with dull blades.

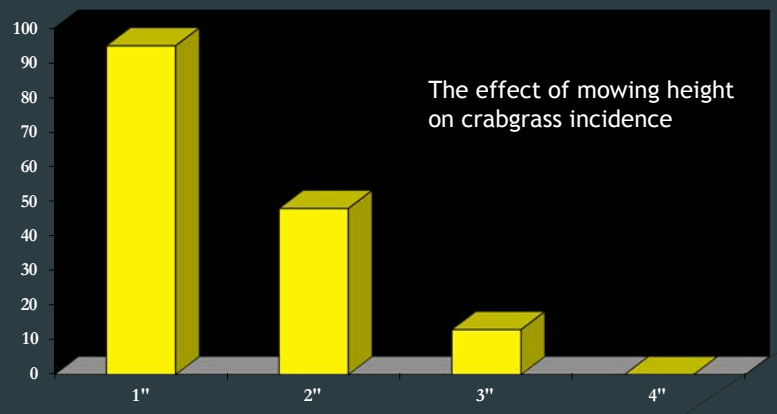
17

MOWING HEIGHT AND SEASON

- Recent research: keep heights at 3.5 to 4” year round on TF lawns
- Slightly lower in spring and fall for the following reasons:
  - Reduced disease pressure in fall
  - Remove dead leaves in spring
- Don’t forget to set mowing height back up!!!
  - Deeper root system during droughty periods
  - Less susceptible to most diseases

18

Another reason to raise mowing heights



19

Management Practice	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Aerify[1]												
Lime[2]												
Mow[3]												
Mower maintenance[4]												
Nitrogen fertilization[5]												
PRE-herbicides for annual grassy weeds[6]												
POST-herbicides for annual grassy weeds[7]												
POST-herbicides for broadleaf weeds[7]												
Seeding for renovation or initial establishment[8]												
Sodding[9]												
Curative white grub control[10]												
Preventive white grub control[10]												

Note: *Cool-season lawns include Kentucky bluegrass, tall fescue, fine fescues, and perennial ryegrass.*

Best time to perform activity
Second-best time to perform activity
Do not perform activity

20

Fertilizing cool season lawns

COOPERATIVE EXTENSION SERVICE
UNIVERSITY OF KENTUCKY COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT, LEXINGTON, KY, 40546

AGR-212

UK UNIVERSITY OF KENTUCKY College of Agriculture, Food and Environment

Fertilizing Your Lawn

Gregg Munshaw, Plant and Soil Sciences

Lawns require fertilizer to remain healthy. Proper fertilization practices will lead to a thick, dark green, uniform lawn that is competitive against weed and disease invasions. The nutrients contained in fertilizers are necessary to support many processes occurring within the plants. If any essential nutrient

Table 1. The sixteen essential elements needed for plant growth.

Macronutrients	Micronutrients
Carbon (C)	Zinc (Zn)
Hydrogen (H)	Iron (Fe)
Oxygen (O)	Copper (Cu)
Nitrogen (N)	Manganese (Mn)
Potassium (K)	Chlorine (Cl)

ronutrients. The primary macronutrients include nitrogen, phosphorous, and potassium. These are considered primary due to the larger quantities required by plants. These nutrients can often be deficient in the soil resulting in the need to fertilize. Whereas, the secondary macronutrients, as well as micronutrients, are

21

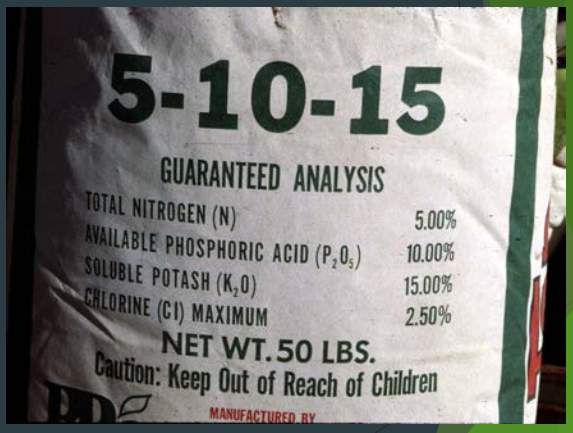
Fertility Basics

- Soil test every 3-5 years on home lawns
- Only apply P, K, and anything else if indicated by test
- Cheap fertilizers work just as well as expensive ones
- Know how much you are applying
- Be very careful not to sling fertilizer into the street or other solid surfaces

22

Nitrogen Timing

- Spring/Summer Nitrogen Encourages:
  - Crabgrass
  - Foxtail
  - Dallisgrass
  - Johnsongrass
  - Bermudagrass
  - Nimblewill
  - Nutsedge
- Apply N Every Fall
  - Less on Good Soils
  - Less When Not Irrigated
  - Less when not trafficked
  - Less on large industrial lawns



23

AGR-212 Fertilizing Your Lawn

Table 2. Timing and amounts of nitrogen applications for various levels of maintenance on cool-season lawns.

Maintenance Level	September	October	November	December	Late May/ early June
	Pounds N/1,000 sq ft				
Low*	--	1	--	--	--
Medium†	--	1	1	--	--
High‡	--	1	1	1	0-0.5
Very high	1	1	1	1	0-0.5

* Mainly non-irrigated, non-trafficked, large acreage lawns, church or schoolyards, etc.
† Mainly includes commercial lawns, apartments, home lawns, and high traffic areas. Requires no irrigation except during severe heat and drought.
‡ Mainly for formal lawns, requiring maximum uniformity and color. Irrigation is required during summer for this level of nitrogen. Will require frequent and consistent mowing, even into winter months if growth continues. Never let a lawn go into winter higher than 2.5 to 3 inches tall.

Table 3. Examples of fertilizers and rates needed to provide 1 pound of nitrogen per 1,000 square feet of lawn.

Farm Fertilizer	Pounds Product Needed/1,000 ft²
Urea (46-0-0)	2.2
10-10-10	10
19-19-19	5.3
Specialty Fertilizer*	
25-5-10	4
29-3-4	3.5
32-4-8	3.1

* Specialty fertilizers generally contain high nitrogen and low phosphate. They also contain a portion of slow-release nitrogen.

24

Avoid this!

Avoid “striping” with fertilizer

Easier to do with fertilizer that has high Nitrogen content.

“Drop spreaders” are worse than “broadcast” type spreaders about leaving these tracks

25

Note: Fertilizing grass in shady areas

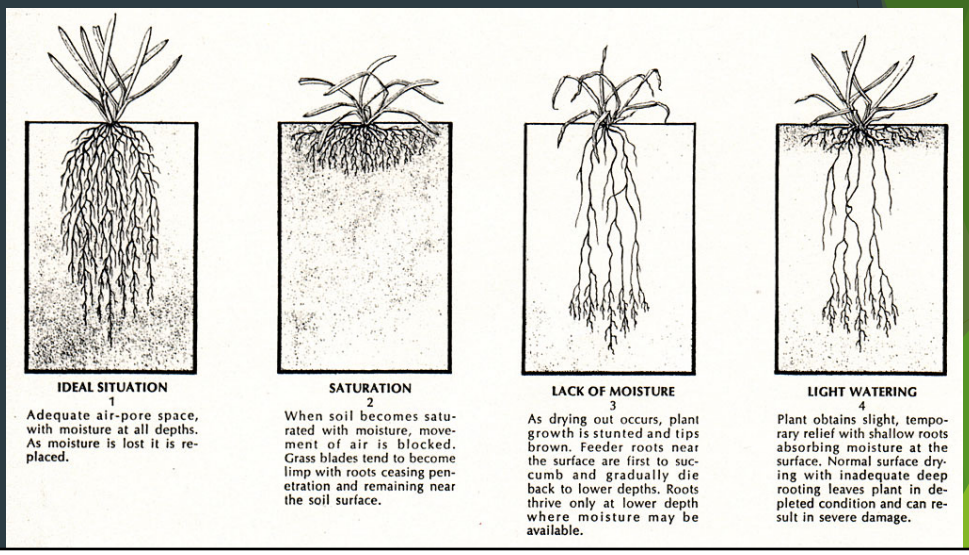
- Be cautious in applying heavy nitrogen fertilizers to grass in areas with heavy shade!

26

Water Management

27

These diagrams illustrate the effects of “deep and infrequent” irrigation on root density, depth, and health



28

Early morning (2 to 8 am) is the best time of day to irrigate because:

- Low wind, low/no evaporation
- Reduce length of leaf wetness period
- Knock dew off leaf
- No people
- Increased water pressure

29

Drought Tolerance

- Choose tolerant turf species
  - Tall fescue is very deep rooted
- Avoid top growth stimulation (NO SPRING N)
- Raise mowing heights
- Limit traffic

30

Management Practice	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Aerify[1]												
Lime[2]												
Mow[3]												
Mower maintenance[4]												
Nitrogen fertilization[5]												
PRE-herbicides for annual grassy weeds[6]												
POST-herbicides for annual grassy weeds[7]												
POST-herbicides for broadleaf weeds[7]												
Seeding for renovation or initial establishment[8]												
Sodding[9]												
Curative white grub control[10]												
Preventive white grub control[10]												

Note: *Cool-season lawns include Kentucky bluegrass, tall fescue, fine fescues, and perennial ryegrass.*

Best time to perform activity
Second-best time to perform activity
Do not perform activity

31

The best weed control is:

- Thick healthly lawn!!!
  - Turfgrass selection
  - Mowing
  - Irrigation
  - Drainage
  - Overseeding
  - Fertilizer
  - Herbicides

32

Summer Broadleaf weeds

33

Controlling Broadleaf Weeds

- Most are controlled with applications of 3-way products (3 active ingredients listed)
- Weeds need to be actively growing
- Herbicides can be liquid or granular
- Granular herbicides should be applied after a rain, irrigation, or with the dew present
- Avoid spraying during high wind or eminent rainfall
- Easier to control weeds that are smaller

34

Black Medic

35

Carpet Weed

36

Ground Ivy

37

Knotweed

38

Plantains

39

Spurge

40

White Clover

41

Wild violet

42

Yellow woodsorrel

43

Annual Grassy Weeds

44

Crabgrass

45

Foxtail

46

Goosegrass

47

Perennial Grassy Weeds

48

Bermudagrass

49

Controlling Bermudagrass

- Spot treat non-selective if weedy spots are smaller
- Renovation
- Selective chemical products?

50

Johnsongrass

51

Other Grasslike Weeds

52

Yellow nutsedge

53

Found on Store Shelves Locally

54

THE EFFECT OF SURFACTANTS

Untreated | Herbicide Only | Herbicide & Surfactant

55

56


015036815189
GORDON'S
SPEED ZONE
LAWN WEED KILLER
DEAD WEEDS FAST
CAUTION
KEEP OUT OF REACH OF CHILDREN
NET CONTENTS 20 FL OZ

57


ORTHO®
Max ®
POISON IVY
AND TOUGH BRUSH KILLER
CONCENTRATE
KILLS OVER 60 TYPES OF TOUGH BRUSH & WEEDS
Poison Ivy | Poison Oak | Kudzu
KEEP OUT OF REACH OF CHILDREN
CAUTION
MANTENER FUERA DEL ALCANCE DE LOS NIÑOS
PRECAUCION
FOR HOME USE

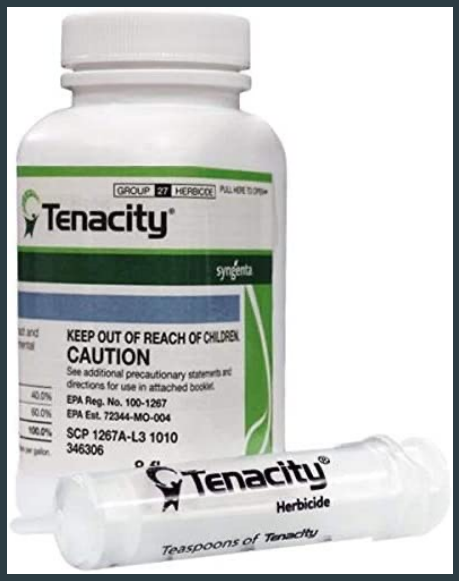
58


GORDON'S
Trimec
CRABGRASS
Plus
LAWN WEED KILLER
CONCENTRATE
KILLS CRABGRASS AND OVER 200 LISTED WEEDS
WON'T HARM LAWNS!
KEEP OUT OF REACH OF CHILDREN
CAUTION


ORTHO
WEED B GON
CRABGRASS CONTROL
KILLS CRABGRASS, DANDELIONS
WON'T HARM THE LAWN GUARANTEED


BAYER ADVANCED
All-In-One
Lawn Weed & Crabgrass Killer
Kills even Tough Weeds To the Root
• Won't harm lawns!
• Rainproof in 1 hour
Kills 200+ Weeds

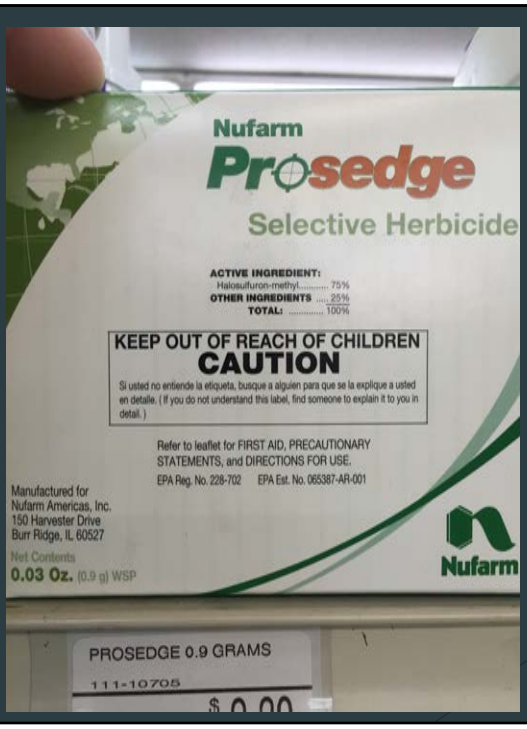
59


GROUP 27 HERBICIDE
Tenacity
syngenta
KEEP OUT OF REACH OF CHILDREN
CAUTION
See additional precautionary statements and directions for use in attached booklet.
EPA Reg. No. 100-1267
EPA Est. 72344-MO-004
SCP 1267A-L3 1010
346306
Tenacity
Herbicide
Teaspoons of Tenacity

60

61

Best left to professional applicators



62

63

Management Practice	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Aerify[1]												
Lime[2]												
Mow[3]												
Mower maintenance[4]												
Nitrogen fertilization[5]												
PRE-herbicides for annual grassy weeds[6]												
POST-herbicides for annual grassy weeds[7]												
POST-herbicides for broadleaf weeds[7]												
Seeding for renovation or initial establishment[8]												
Sodding[9]												
Curative white grub control[10]												
Preventive white grub control[10]												

Note: *Cool-season lawns include Kentucky bluegrass, tall fescue, fine fescues, and perennial ryegrass.*

Best time to perform activity
Second-best time to perform activity
Do not perform activity

64

Seeding

Seeding Rate (AGR-52)

AGR-52

COOPERATIVE EXTENSION SERVICE
UNIVERSITY OF KENTUCKY • COLLEGE OF AGRICULTURE

Selecting the Right Grass for Your Kentucky Lawn

A.J. Powell Jr.

The "right" grass for your lawn may not be the one you like best, but the one easiest to grow. Generally, Kentucky bluegrass

65

Best times for seeding

Best

- Mid August – late September

Second Best

- Mid February – mid March

66

Seeding-Till Method

- ✓ Till soil
- ✓ Sow seed
  - Rotary/Drop seeder in 2 directions
- ✓ Roll or rake seed into soil
- ✓ Mulch seed (straw)
  - 50% of soil showing
  - About 1 straw bale/1000 square feet

67

Seeding-Slit Seeder Method

- Works well in heavy clay soils
- Works well where moisture might be lacking
- Slit seeding necessary where existing turf/weed cover is greater than %50
- Can work in Fall or very early Spring (March)

68

69

70

71

Water frequently until seedlings emerge

Watering

72

Begin mowing as soon as new seedlings reach 2 ½ -3 inches

73

Management Practice	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Aerify[1]												
Lime[2]												
Mow[3]												
Mower maintenance[4]												
Nitrogen fertilization[5]												
PRE-herbicides for annual grassy weeds[6]												
POST-herbicides for annual grassy weeds[7]												
POST-herbicides for broadleaf weeds[7]												
Seeding for renovation or initial establishment[8]												
Sodding[9]												
Curative white grub control[10]												
Preventive white grub control[10]												

Note: *Cool-season lawns include Kentucky bluegrass, tall fescue, fine fescues, and perennial ryegrass.*

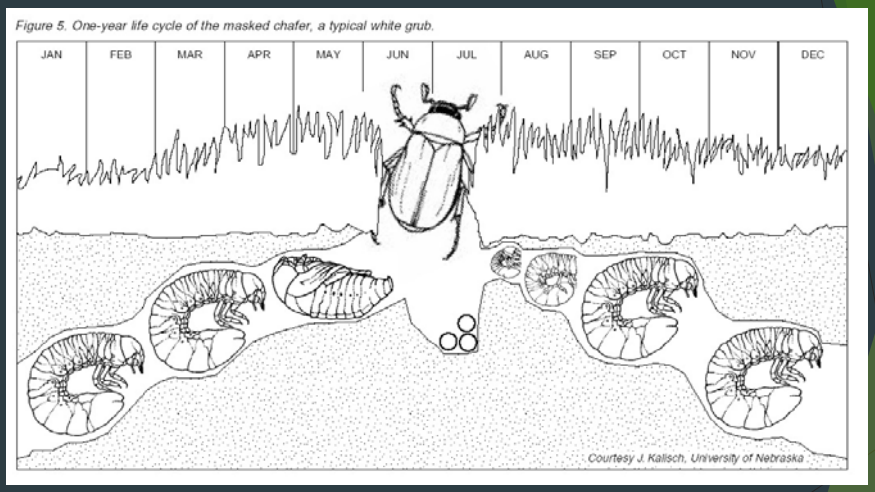
Best time to perform activity
Second-best time to perform activity
Do not perform activity

74

Grub control

ENT-10 : Controlling White Grubs in Turfgrass

75



76

77

Control

Preventative

- Long acting and best applied in May-July
- Broadcast treatment to large areas of unknown grub population

Curative

- Chemical applications made in July and August
- Spot treatments to areas know to have a problem

78

On the web…

- www.uky.edu/ag/ukturf

79

80


Turfgrass Science
University of Kentucky
Home
About Us
Continuing Ed
Resources
News
Tips and Recommendations for Maintaining Home Lawns
(The agronomic content of the following publications is sound. However, cultivars listed on some of the publications may be dated--always check variety recommendations for a list of current cultivars by clicking here)
Establishment
Lawn Establishment in Kentucky
Renovating Your Lawn
Lawn Renovation (video)
Selecting the Right Grass for Your Kentucky Lawn
Improved Turfgrass Varieties Can Reduce Your Environmental Impact
Kentucky bluegrass variety recommendations
Tall fescue variety recommendations
Turfgrasses of Kentucky
List of Sod Producers in Kentucky
Check out our series of videos for homeowners
Fertilizing
Fertilizing Your Lawn
Water Quality and Nutrient Management at Home
Principles of Home Landscape Fertilization
Soil Test Recommendations
Liming Kentucky Lawns
Soil Testing and Fertilizers for Home Lawns (video)
Organic Lawn Fertilizers (video)
Fertilizer Calculator
Calibrating Fertilizer Spreaders for the Home Lawn
Mowing
Mowing Your Kentucky Lawn
Blade Sharpening (video)
Seasonal Lawn Mower Maintenance (video)
Daily Mower Maintenance and Cutting Heights (video)
Mulching Tree Leaves for a Better Lawn (video)
Weed Control
Weed Control for Kentucky Home Lawns
Identification and Control of Henbit and Purple Deadnettle
Herbicide Recommendations for Weed Control in Kentucky Bluegrass and Tall Fescue Lawns for Professional Applicators
Turfgrass Weed Control for Professionals
Insect Control
Controlling White Grubs in Turfgrass
Insecticides for Control of White Grubs in Kentucky Turfgrass
Japanese Beetles in the Urban Landscape
Earthworms: Thatch-Busters
Yard Wasps
Disease Control
Disease Management in the Home Lawn
Calendar for Diseases of Cool-Season Grasses in Kentucky
Homeowner's Guide to Fungicides
Brown Patch Disease in Kentucky Lawns
Patch Diseases in Kentucky Bluegrass Lawns
General Pest Information
Managing Mole Problems in Kentucky
Mole Control in Lawns (video)
A No-math Method of Calibrating Backpack Sprayers and Lawn Care Spray Guns
Backpack Sprayer Calibration (video)
Calibrating Boom Sprayers for Turf Applications
Miscellaneous
Should You Aerate Your Lawn? (video)
Low-Maintenance Lawn Care, Stressing Pest Avoidance and Organic Inputs
Irrigation Tips to Conserve Water and Grow a Healthy Lawn
Considering the Environment in the Maintenance of Your Kentucky Lawn
Aerifying and Dethatching Lawns
Ornamental Grasses for Kentucky Landscapes
Kentucky lawn
UKAg

81