

Forage Weed Control Mechanical vs. Chemical

Mississippi Forage Short Course
2010

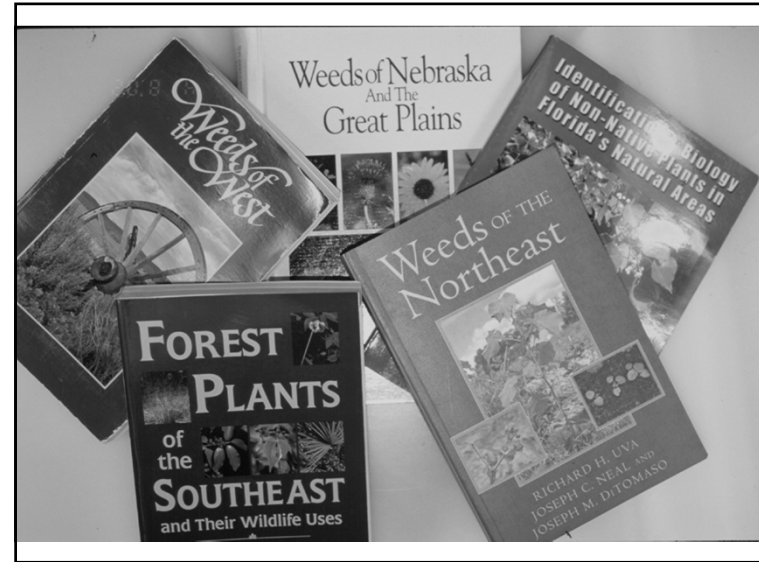
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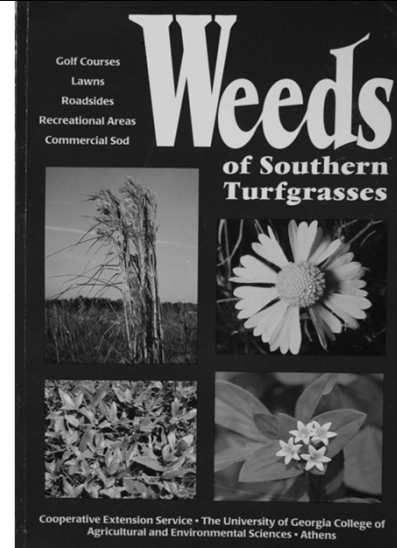
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University of Georgia Press \$39.95
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The brochure cover features the title 'Weeds of Southern Turfgrasses' in large, bold, white letters on a black background. To the left of the title, a list of locations includes 'Golf Courses', 'Lawns', 'Roadsides', 'Recreational Areas', and 'Commercial Sod'. Below the title are four small images: a tall grass, a daisy-like flower, a cluster of small white flowers, and a dense patch of weeds. At the bottom, it reads 'Cooperative Extension Service • The University of Georgia College of Agricultural and Environmental Sciences • Athens'.

Mississippi Turfgrass
Student Association
662/325-2311
Weekdays after 1:00 pm

Ask for Linda Wells

Common weeds in Mississippi pastures
–www.msstate.edu/dept/pss/weeds/pastureweed.html



A collage of black and white photographs showing various types of weeds growing in pastures. The images include tall grasses, broadleaf plants, and dense patches of vegetation in different field settings.

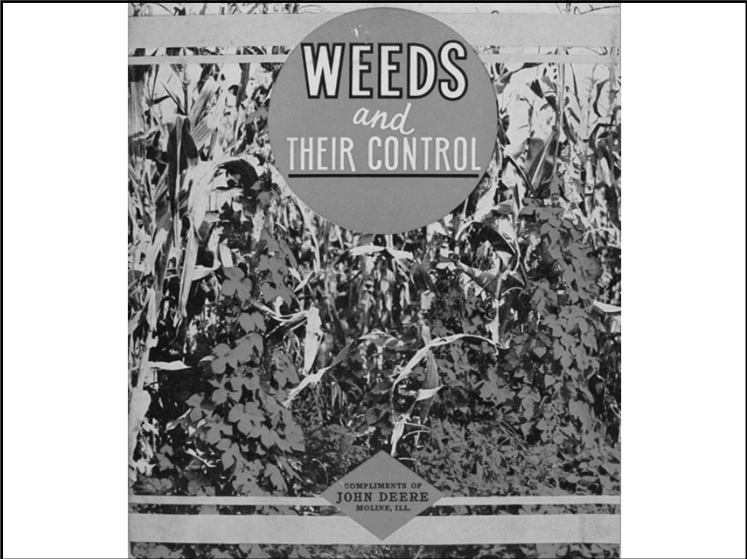
Forage Weeds

Mechanical
versus
Chemical

Mississippi Forage Shortcourse
2010

Forage
producers need
both as well as
cultural and
biological control

because
there is no
one silver
bullet



**We
Resist
You!**

—In Dis-
Purchase
Unreliable

Most weed
and herbicide
resistant to
and grow in
today's farms
and gardens.

In small quantities
weed seeds
that you have
had need to
be used. It
is your best
to grow to
weed, what
to be with.

Look for an
improvement
in weed
resistance to
Many weeds
in which the
seed and its
resistance are
improved
possibly, the
community
to which they
may have
been sent.

The individual farmer is almost helpless against the introduction of most weed seeds by means of the wind; the situation requires community action. Most of the states, and some townships and counties, have weed laws which are enacted to prevent certain weeds from going to seed, but these laws are not always as rigidly enforced as they should be.

Community cleanliness with regard to weeds is, therefore, essential to any far-sighted policy of weed control.

*It is very often
hard to see
the danger
of the
weed
seed.*

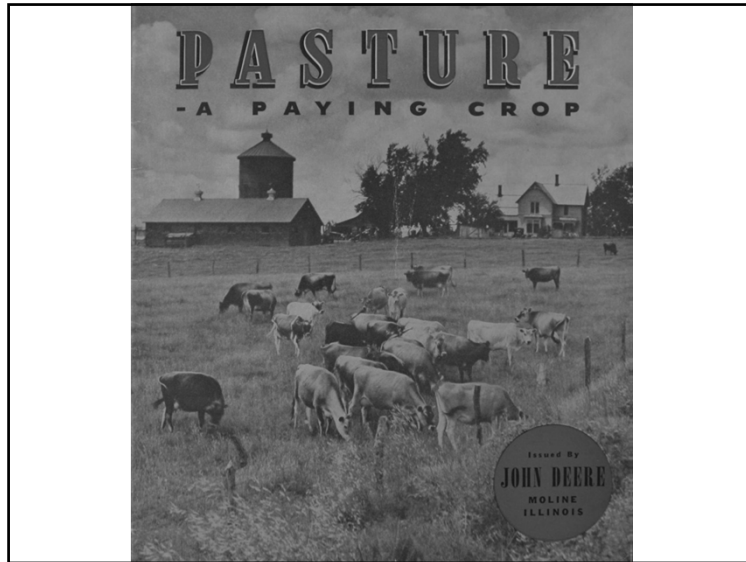
*Unless you
know of the
seed. Most of
the seeds that
are sent to
seed, have
been so rigidly
enforced.*

*Like it is hard,
and generally
the most
to be so, and
"unreliable."*

*After handling,
especially in
high exposure
and if you
get a mixture
of it.*

*It is better
to be better
the plant hard
to be better
it. While it
is a hard matter
of the matter
to be better.*

Spraying weeds with Diesel oil on ditch banks—a satisfactory control method on small infestations. The costs are reported to run about the same as in the case of the chlorates.



with clipping is a successful practice in weed control. See Table 3 below.

When a tractor with a mower attachment is used to clip a pasture, the weeds are cut and scattered over the field.

Table 3—Number of Weeds per Acre on Adjacent Renovated and Unrenovated Portions of 30 Widely Distributed Permanent Bluegrass Pastures in Western and Southwestern Wisconsin

No. of pastures on which determinations were made	Year portions of pastures were renovated	Average number of weeds per acre in 1937		
		Portion not renovated	Portion renovated	Per cent reduction
15	1934	937,067	132,667	85.8
12	1935	1,019,833	146,167	85.7
1	1929	2,554,000	162,000	93.6
1	1935	1,004,000	90,000	91.0
1	1936	808,000	218,000	73.0



CHEMICAL WEED CONTROL RECOMMENDATIONS 17

1 to 1½ pounds per acre on a 12-inch band basis. Seed bed preparation and application of sprays should be done in the same manner as recommended for cotton. The pre-emergence treatment is not recommended for use on heavy clay soils such as Buckshot, Houston, etc.

A single directional spraying with one of the herbicidal oils recommended FOR COTTON has given good control of most young annual weeds in soybeans when applied correctly and at the proper time. An oil treatment of 5 gallons per acre when the soybeans are from 12 to 16 days past emergence and applied exactly as prescribed for use in cotton, is recommended where no pre-emergence chemical is used and an early annual weed problem exists. Under no conditions should the rate of 5 gallons per acre be exceeded.

Other than suggested elsewhere under specific weeds, no recommendation is made for the use of chemicals to control perennials, such as Johnson grass and deep-rooted vines, and certain other weeds that may develop after the last cultivation.

PERMANENT PASTURE

With the trend toward increased grassland farming, the control of weeds in pasture is becoming a more serious problem. In order to help ensure a maximum return from a pasture program, it is essential to control weeds competing with grasses and legumes. Until recently the mower has been the only means the farmer had of keeping weeds under control, but now 2,4-D can be employed safely to control most broadleaf weeds which infest permanent pastures. If done according to recommendations, mowing will give fair control of weeds, but in many cases the practice is not closely adhered to or is restricted because of terrain features.

Studies conducted since 1939 indicate that the following recommendations are sound and worthy of wide employment on permanent pastures infested with broadleaf weeds.

Use 2/3 to 1 pound of the amine 2,4-D per acre in 20 gallons water as a broadcast spray application. First treatment should be made in early summer (April-May), followed by a retreatment in mid-summer (July), if needed.

Pasture grasses and legumes should be well established and the weeds should have emerged but should still be small when treatment is made. It is hazardous to treat seedling grasses or legumes. Treatments should not be made during long, droughty periods because stunted or slowly growing weeds are somewhat resistant to the 2,4-D spray.

Bermuda grass, Dallis grass, fescue, Johnson grass, white and ladino clover, lespedeza and black medic are not injured to any significant extent by the treatment. First growth may be retarded for a short period in these plants but they quickly recover. Pasture species severely injured by 2,4-D are crimson clover, red clover, bur clover, hop clover, vetch, and wild winter peas.

Excellent control of most broadleaf weeds such as bitterweed, tarweed or sunflower, ragweed, horseweed and aster-weed can be expected.

Observe all precautions on the label of the 2,4-D container and exercise extreme care to prevent drift of spray to growing cotton and other susceptible crop or ornamental plants.





Herbicides for forage crops

- 2,4-D (several)
 - ester
 - Amine
- 2,4-DB (several)
- Clarity (dicamba)
- Remedy (triclopyr)
- Cimarron (metsulfuron)
- Velpar (hexazinone)
- Gramoxone Inteon (paraquat)
- Glyphosate (several)
- Weedmaster (2,4-D + dicamba)
- Grazon P+D (2,4-D + picloram)
- Crossbow (2,4-D + triclopyr)
- Aim (carfentrazone)
- Pursuit (imazethapyr)
- Cimarron Max (Ally/Weedmaster copack)
- Cimarron Plus (metsulfuron + chlorsulfuron)
- Telar (chlorsulfuron)
- Pastureguard (triclopyr + fluroxypyr)
- Surmount (picloram + fluroxypyr)
- Milestone (aminopyralid)
- Grazon Next (aminopyralid + 2,4-D)
- Overdrive (dicamba + diflufenzopyr)
- Journey (Plateau + glyphosate)
- Arsenal Powerline (imazapyr)
- Lineage Clearstand (imazapyr + metsulfuron)
- Maverick (sulfosulfuron)
- Chaparral (aminopyralid + metsulfuron)
- Pastora (metsulfuron + nicosulfuron)

Generics

- Metsulfuron (Cimarron, Accurate, Chism, Report, Patriot, etc.)
- Triclopyr (Remedy, Redeem, Triclopyr, Candor, etc.)
- Picloram (Tordon, Picloram, etc.)
- 2,4-D+picloram (Grazon, Picloram + D, Toram, Trooper, etc.)
- Imazapyr (Arsenal, Polaris, etc.)
- 2,4-D+dicamba (Weedmaster, Brash, Pasturemaster, Rangestar, Rifle D, etc.)
- Dicamba (Banvel, Cruise Control, Diablo, Rifle, etc.)
- Glyphosate (too many to name)
- 2,4-D (too many to name)

Aim

- 0.5 to 1.5 oz/A with NIS and 2.5 lbs/A AMS
- No grazing or haying restrictions
- 7 days between applications; no more than 3 per season
- Bitterweed, spiny amaranth, buffalobur, cocklebur, woolly croton, jimsonweed

New herbicides

- Pastora (nicosulfuron + metsulfuron)
- Grazing interval on Velpar shortened to 0 days grazing restriction
- MAT 28 (aminocyclopyrachlor)
 - +2,4-D?
 - +metsulfuron?
 - +chlorsulfuron?



Granular formulations available for some herbicides, such as Spike and Pronone Power Pellets (Velpar), are very convenient to apply, but these are easily overdosed.

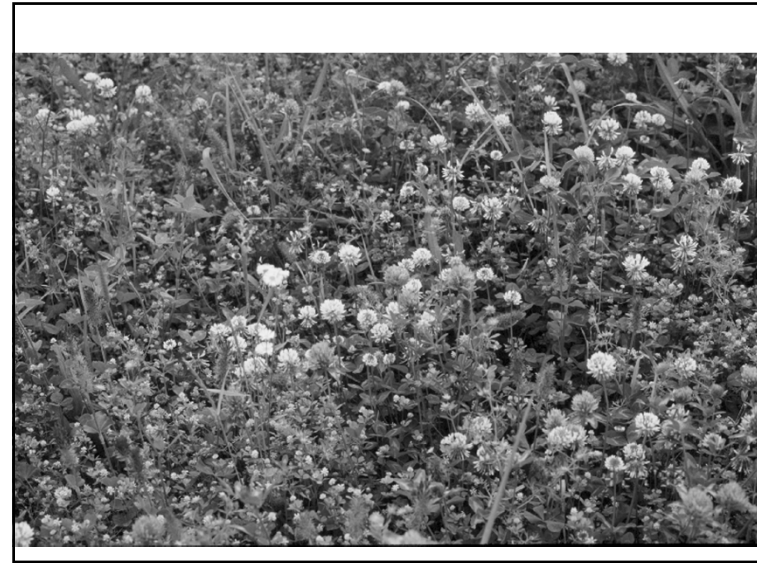
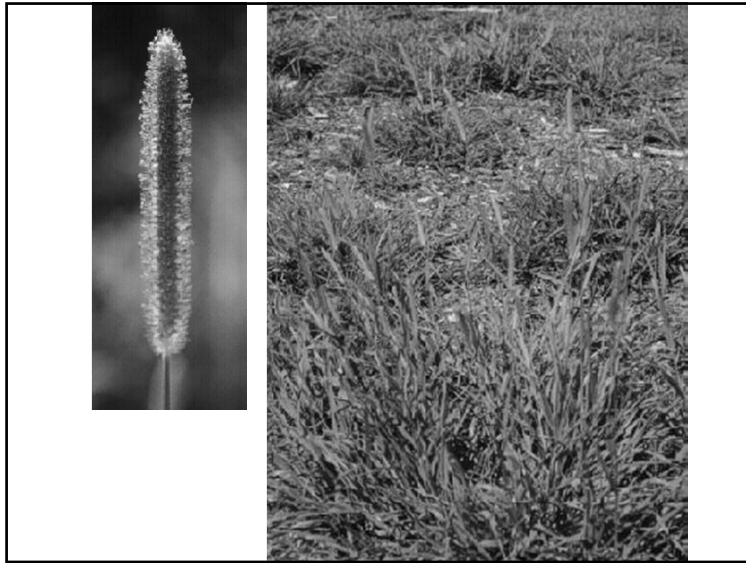




- Velpar DF - 1 to 1.5 lb/A or 3.5 pt/A
Velpar L for smutgrass control. ~~Do not graze cattle or harvest hay less than 60 days after application.~~ Do not seed ryegrass less than 60 days after treatment.

Pastora

- Inconsistent control of knotroot foxtail, dallisgrass; poor on large crabgrass;
- Excellent on horsenettle;
- Repeat treatments needed for johnsongrass;
- Slight injury at 3 WAT evaluation;
- Adding diuron to mix reduced Tifton 44 injury.



Current research

- Clover tolerance to herbicides
- Potential forage herbicides
- Spray tip evaluation
- Herbicide tolerant ryegrass
- New forage tolerance to herbicides

6th Circuit Court of Appeals Ruling on Pesticide Applications

January 7, 2009 Action

- Vacated 2006 EPA rule which exempted pesticides/fertilizers applied near or into U. S. waters from National Pollutant Discharge Elimination System permits under Clean Water Act even if pesticides were applied according to EPA label.

Opinions Issued

- Any spray nozzle used for pesticide application is now considered “Point Source”
- Any chemical/fertilizer residue remaining beyond effective life of pesticide is now “Pollutant.” All biological pesticides are also “Pollutants.”
- Pesticides/fertilizers applied to land but eventually get into water are “Regulated Discharges.”

Waters of the U. S.

- Any drainage which flows into a ditch which in turn flows into a navigable creek

Effect

- Every business that applies any type of pesticide, chemical or fertilizer will be required to obtain a NPDES permit.
- Permits must be obtained 180 days in advance and must be open for public hearing.
- Applicators without a permit will be subject to citizen lawsuits and can be fined \$27,500 per day if pollutants are found in water flowing from site of application.

EPA Response

- Asked for 2 year stay before implementation
- Types of pesticide applications likely to require NPDES permit: mosquito control, weed control in lakes, weed control in irrigation ditches and drains, wide-area aquatic invasive weeds, wide-area insect suppression programs, pesticides used in forestry programs applied over water of the U. S.

Forage
producers need
both plus some