METHODS AND MATERIALS FOR MANAGING WEEDS IN CHRISTMAS TREES

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VALUABLE REFERENCES

• **WEED IDENTIFICATION**
  - *WEEDS OF THE NORTHEAST*
    CORNELL UNIV. PRESS.

• **HERBICIDE PROPERTIES & USES**
  2006 *NEW ENGLAND GUIDE TO CHEMICAL WEED & BRUSH CONTROL IN CHRISTMAS TREES*
  COOPERATIVE EXTENSION OR ON THE WEB

• **SOURCE OF LABELS**
  www.CDMS.net
WHY CONTROL WEEDS?

• TO SHORTEN ROTATION
• TO IMPROVE QUALITY
• TO INCREASE PROFITS
CHRISTMAS TREE HERBICIDES

PREEMERGENCE

• SIMAZINE – PRINCEP, SIM-TROL
• ATRAZINE – AATREX
• OXYFLUORFEN – GOAL, GALIGAN
• FLUMIOXAZIN – SUREGUARD
• ORYZALIN – SURFLAN
• PENDIMETHALIN – PENDULUM
• S-METOLACHLOR – PENNANT MAGNUM
• NAPROPAMIDE - DEVRINOL
CHRISTMAS TREE HERBICIDES

POSTEMERGENCE

• GLYPHOSATE – ROUNDUP, MANY OTHERS
• TRICLOPYR – GARLON 3A
• ASULAM - ASULOX
• PRONAMIDE - KERB
• CLETHODIM - ENVOY
• FLUAZIFOP- BUTYL - FUSILADE
• SETHOXYDIM - VANTAGE
• CLOPYRALID - STINGER
WEED LIFE CYCLES

- **ANNUALS** – COMPLETE THEIR LIFE CYCLE IN ONE YEAR. EXAMPLES- ANNUAL GRASSES - CRABGRASS, FOXTAILS, BARNYARD GRASS – ANNUAL BROADLEAVES - PIGWEED, RAGWEED ETC.

- **BIENNIALS** - COMPLETE LIFE CYCLE IN 2 YEARS. EXAMPLES- WILD CARROT, MULLEIN, BURDOCK.

- **PERENNIALS** – LIVE MANY YEARS BY OVERWINTERING ROOTSTOCKS, RHIZOMES, TUBERS. EXAMPLES- QUACKGRASS, TIMOTHY, BINDWEEDE, GOLDENROD, SMOOTH BEDSTAW ETC.
QUACKGRASS
RHIZOMATOUS GRASSES SPREAD INTO TREATED BANDS IN SUMMER.
• POSTEMERGENCE GRASS HERBICIDES

• CONTROL ONLY GRASSES, NOT SEDGES OR BROADLEAVES.

• SAFE OVER CONIFERS AND MOST DECIDUOUS PLANTS AND BROADLEAF PLANTS.

  1- ENVOY - CLETHODIM
  2- FUSILADE - FLUAZIFOP BUTYL
  3- VANTAGE - SETHOXIDIM
Horseweed
A STRANGE NEW WEED!
SMOOTH BEDSTRAW
CONTROL OF BEDSTRAW

• GARLON 3A - 21 FL. OZ / A or
• ROUNDPUP “ORIGINAL” - 32-43 FL. OZ / A
• GARLON SAFE IN GRASSY ROW MIDDLES
• FALL OR SPRING DORMANT
• DRY FOLIAGE
• SUREGUARD 12 OZ + ROUNDPUP ‘O’ 11/3 QTS/A IN SPRING BEFORE BUD BREAK.
GOLDENROD
Hedge bindweed
SITE PREPARATION

• CONTROL PERENNIAL WEEDS AND BRUSH THE SEASON BEFORE PLANTING

• BRUSH- ROUNDUP OR GARLON.

• PERENNIAL WEEDS AND GRASSES- ROUNDUP, REPEATED IF NECESSARY, ESPECIALLY BEFORE PLANTING SEEDBEDS OR TRANSPLANT BEDS.
Fall Roundup . . . + Spring Princep
ROUNDUP IN FALL, NO HERBICIDE IN SPRING
A BASIC WEED MANAGEMENT PROGRAM

- ROUNDUP &/GARLON BEFORE PLANTING.
- PREEEMERGENCE HERBICIDE[S] AFTER PLANTING.
- ROUNDUP IN FALL FOR BRUSH OR PERENNIALS.
- STINGER GOAL OR POST- GRASS HERBICIDES IN SUMMER, IF NEEDED.
CONTROLLING EMERGED WEEDS IN THE SPRING

- PRINCEP + AATREX
- PRINCEP + GOAL
- PRINCEP + ROUNDPUP “ORIGINAL”
- SUREGUARD + ROUNDPUP ‘ORIGINAL’
  1 PINT TO 1 QUART/A
SUREGUARD

- BROAD SPECTRUM PREEMERGENCE
- FOR DORMANT CONIFERS ONLY
- FOR TRANSPLANT BEDS, FIELD, NOT SEEDBEDS
- ADD ROUNDUP ‘O’ FOR EMERGED WEEDS AND SMOOTH BEDSTRAW.
- POOR CONTROL OF MOST PERENNIALS
PLANT FAMILIES CONTROLLED BY STINGER

- PEA- ALFALFA, CLOVERS, VETCHES.
- ASTER – THISTLES, HORSEWEED, GOLDENROD, ASTERS.
- SMARTWEED- DOCKS, SMARTWEEDS, RED SORREL.
- MANY BROADLEAVES AND ALL GRASSES ARE NOT CONTROLLED!
Glyphosate Formulations

• Over 44 different products
• Not all are labeled for Christmas trees

• Roundup “Original” – our standard
• Equivalent formulations include
  Glyphos
  Credit
  Glyphosate 4

• Formulations are not important if sprays are fully directed
Roundup injury from adding surfactant or over-applying
SHIELDED SPRAYS OF ROUNDUP WILL BECOME MORE COMMON:

a) TO REDUCE COSTS.
b) TO REDUCE RISKS OF LEACHING.
c) TO IMPROVE CONTROL OF PERENNIAL WEEDS.
MANKAR ULV SPRAYERS

- APPLY UNDILUTED ROUNDUP AT ABOUT 1 QUART/A.

- A SHIELDED CONTROLLED DROPLET APPLICATOR (CDA).
SHIELDED SPRAYER-QUEBEC MODEL
ROUNDUP + 2,4-D IN JUNE
SHIELDED SPRAYING
ONTARIO STYLE
HERBICIDE RESISTANT WEEDS

- CAUSED BY USING THE SAME CHEMISTRY YEAR AFTER YEAR.
- EX.- TRIAZINE RESISTANT PIGWEED, LAMBSQUARTERS, HORSEWEED ETC.
- EX.- ROUNDUP RESISTANT HORSEWEED IN MID- ATLANTIC STATES, RAGWEED IN KY.
- USE COMBINATIONS, ROTATE HERBICIDES WITH DIFFERENT MODES OF ACTION.
HOARY ALYSSUM
SUPPRESSION INSTEAD OF BARE SOIL?

SUPPRESSION OK -

• FOR STEEP SLOPES
• ROCKY SITES
• SHORT-TERM CONTROL
• THREE TO FOUR APPLICATIONS / YR. OFTEN NEEDED
Weed suppression with Roundup – CT

Knapsack sprayer, TK-2 Nozzle
6 ft swath, 9 gal/A

1 – Late April – 1 oz/gal, 9 oz/A

2 – Late June – ½ oz/gal, 4.5 oz/A

3 – Late July – 1 to 2 oz/gal, 9 – 18 oz/A
Weed Suppression – Michigan

2 Knapsack applications

May 15, Before flush, and June 10

Roundup 4 oz +

Goal 16 oz. +

Stinger 3 oz/A
Base trimming reduces need for SHIELDING
Off-center nozzles set too low