

INTRODUCTION

WHY IDENTIFY WEED SEEDLINGS?

- **Timing / economic injury**
- **Window of opportunity**
- **Ease of control**

CORRECT IDENTIFICATION

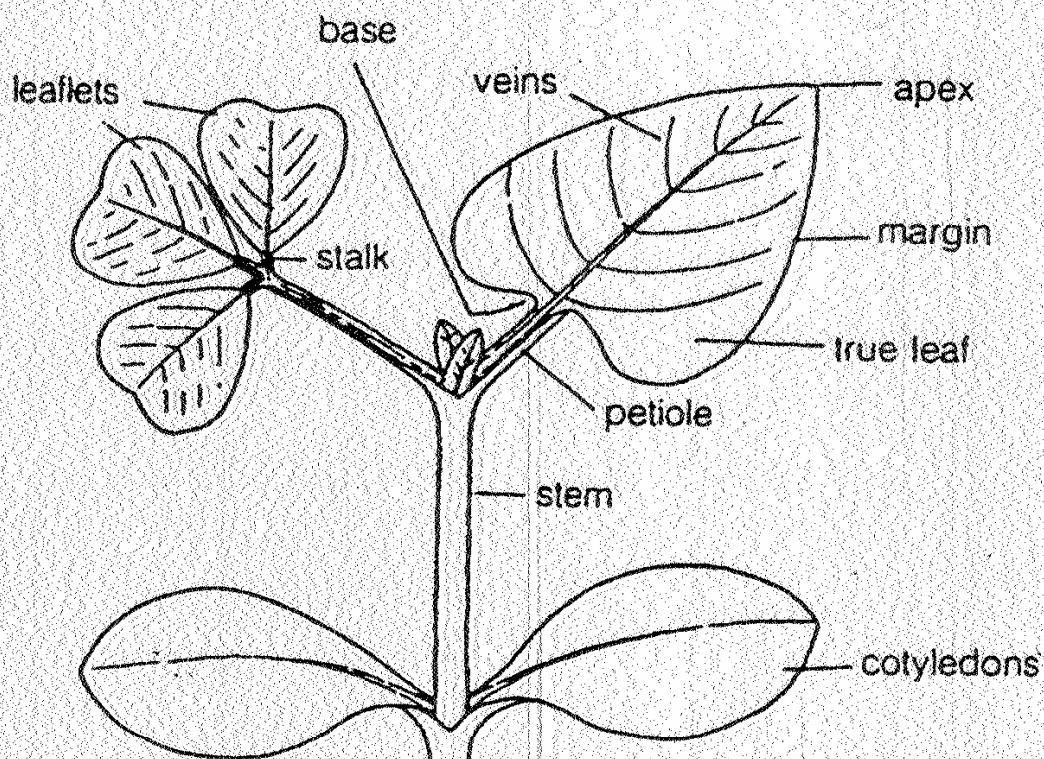
- **Necessary for appropriate management choice**
- **Annual rye grass and silver grass**
- **Storks bill or cape weed**
- **Coriander or bifora**

IDENTIFICATION METHODS

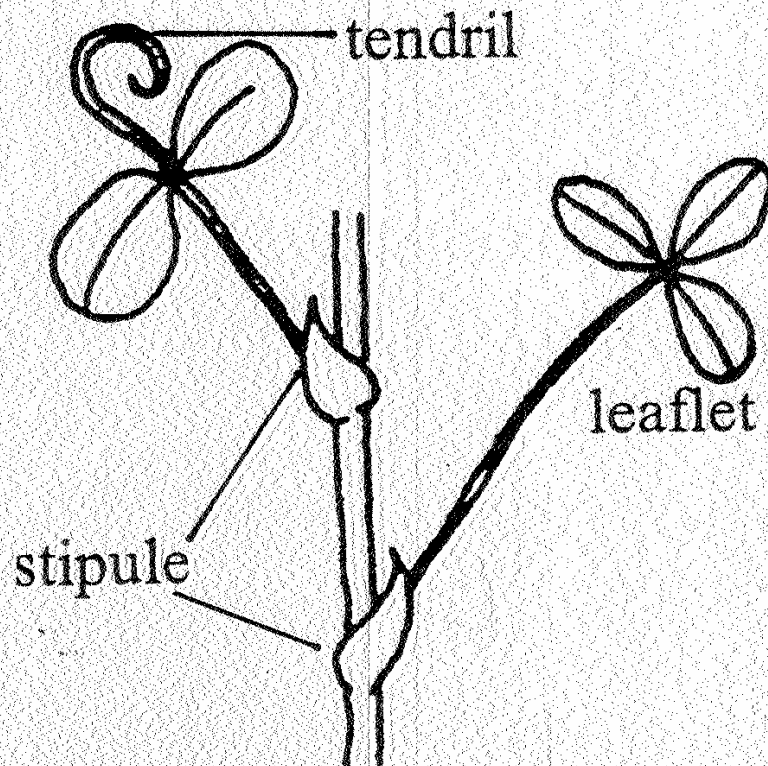
- **Recognition**
- **Description matching**
- **Keys**
- **Asking for help**
- **Using your skills**

BROADLEAF WEEDS

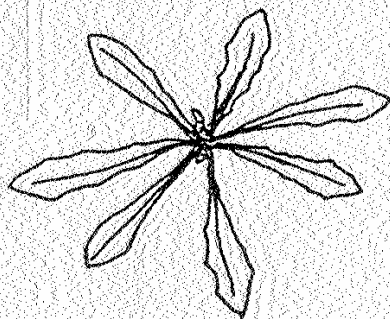
PARTS OF A BROADLEAF WEED



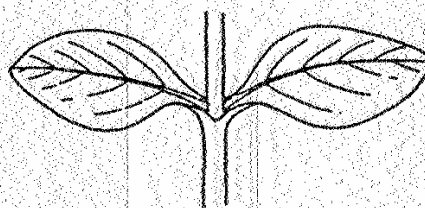
PARTS OF A LEGUME LEAF



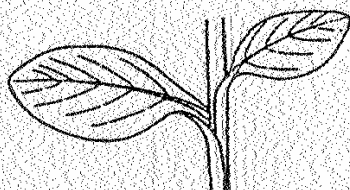
LEAF ARRANGEMENTS



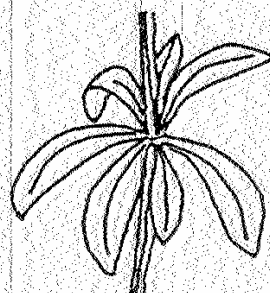
rosette



opposite



alternate



whorled

Weed Identification

☐ Leaf
 ☐ Flower, fruit, seed, root
 ☐ General, stem, cotyledon
 ☐ ID Editor

LEAF:

Arrangement

Features

Colour

LEAF/BLADE:

Tip

Sides

Base

Surface

Size

PETIOLE:

Features

Length

GRASS:

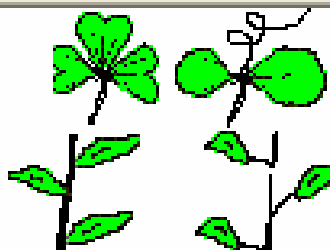
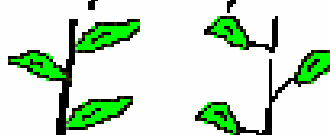
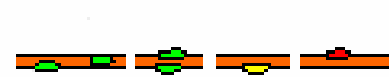
Ligule

Auricles

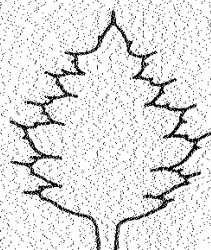
Collar

Sheath

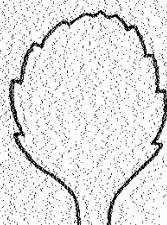
Leaf bud

☐		3 leaf or 2 plus tendril
☐		Alternate
☐		Fingered Palmate
☐		Leaflets Pinnate Bipinnate
☐		Long, Thin & Sheath (Monocot)
☐		Opposite Paired Whorled
☐		Reduced to scales
☐		Rosette or basal

MARGIN SHAPES



spiny



toothed



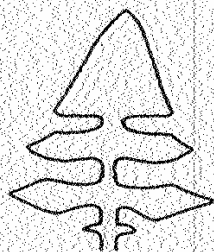
scalloped



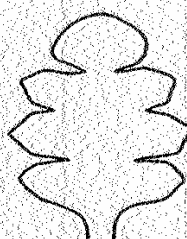
smooth



undulating



deeply lobed



lobed

Weed Identification

Leaf

Flower, fruit, seed, root

General, stem, cotyledon

ID Editor

LEAF:

Arrangement

Features

Colour

LEAF/BLADE:

Tip

Sides

Base

Surface

Size

PETIOLE:

Features

Length

GRASS:

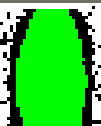
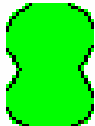
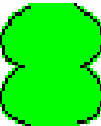
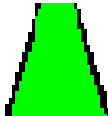
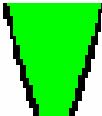
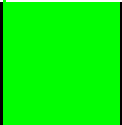
Ligule

Auricles

Collar

Sheath

Leaf bud

☐			Curved Rounded
☐			Indented Constricted
☐			Lobed or toothed
☐			Straight and angular
☐			Straight and parallel

Weed Identification

☐ Leaf
 ☐ Flower, fruit, seed, root
 ☐ General, stem, cotyledon
 ☐ ID Editor

LEAF:

Arrangement

Features

Colour

LEAF/BLADE:

Tip

Sides

Base

Surface

Size

PETIOLE:

Features

Length

GRASS:

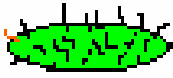
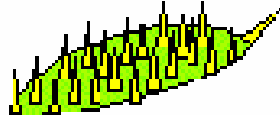
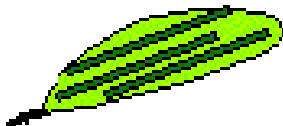
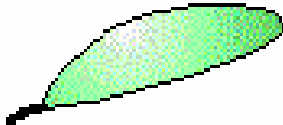
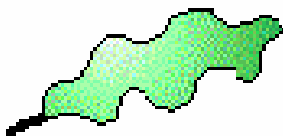
Ligule

Auricles

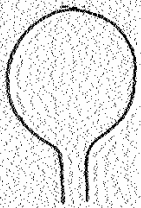
Collar

Sheath

Leaf bud

☐		Folded
☐		Hairless
☐		Hairy
☐		Prickly
☐		Ribbed Striped Grooved
☐		Shiny
☐		Sticky
☐		Top differs to underside
☐		Undulating

LEAF SHAPES



round



oval



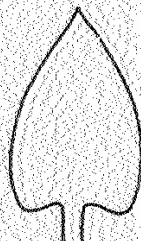
narrow club



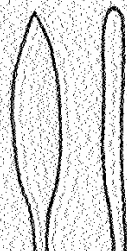
broadly club



diamond



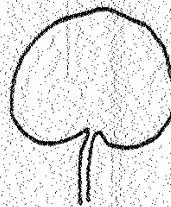
triangular



spear



heart



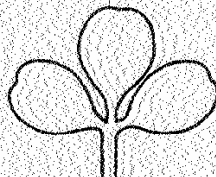
kidney



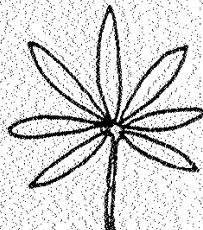
wedge



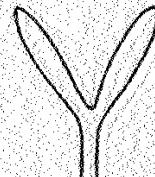
pinnate



trifoliate

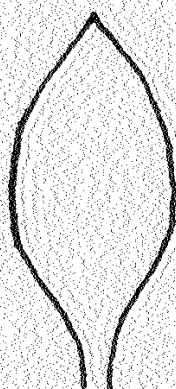


palmate

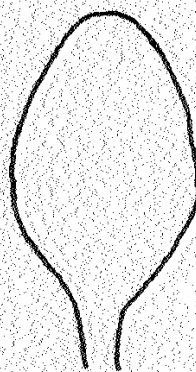


Y-shaped

APEX SHAPES



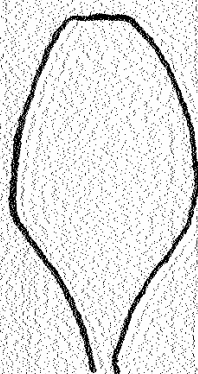
pointed



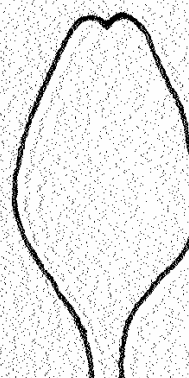
round



round-
pointed



flat



indented or
notched

Weed Identification

Leaf

Flower, fruit, seed, root

General, stem, cotyledon

ID Editor

LEAF:

Arrangement

Features

Colour

LEAF/BLADE:

Tip

Sides

Base

Surface

Size

PETIOLE:

Features

Length

GRASS:

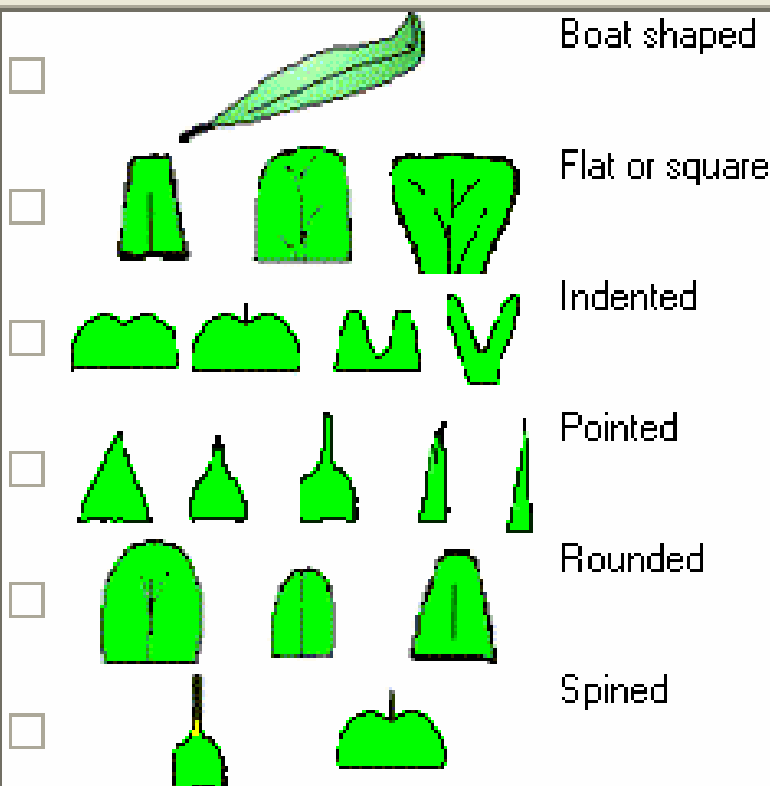
Ligule

Auricles

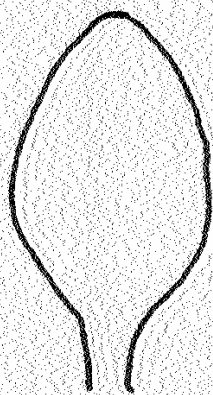
Collar

Sheath

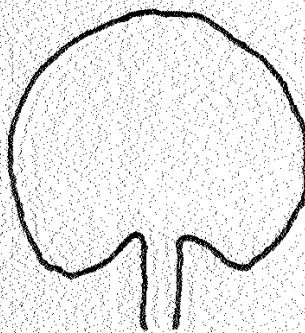
Leaf bud



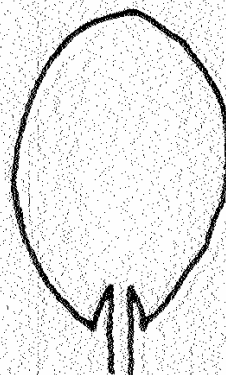
BASE SHAPES



rounded or
smooth



indented



notched

Weed Identification

Leaf | Flower, fruit, seed, root | General, stem, cotyledon | ID Editor

LEAF:

Arrangement

Features

Colour

LEAF/BLADE:

Tip

Sides

Base

Surface

Size

PETIOLE:

Features

Length

GRASS:

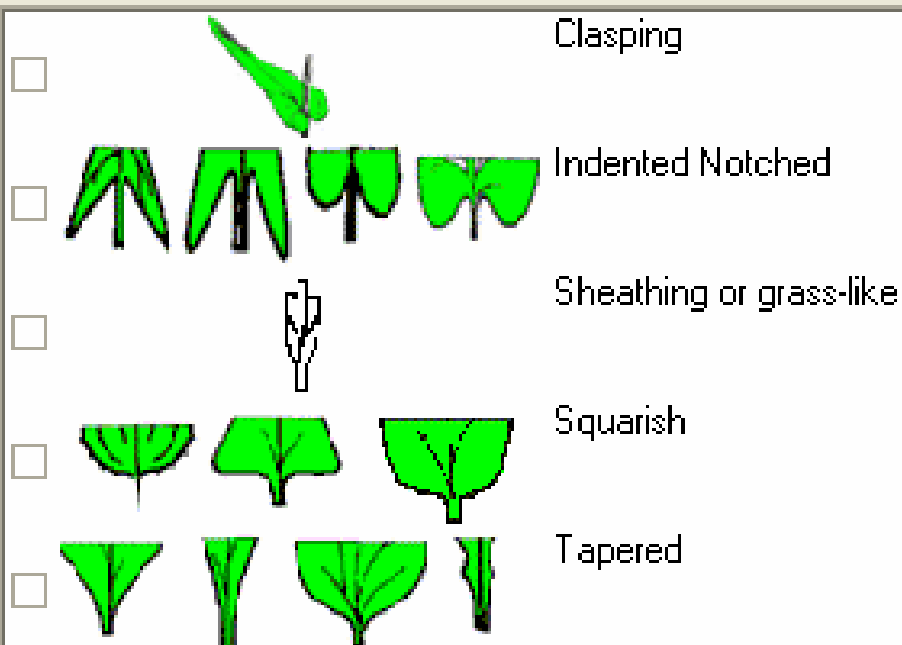
Ligule

Auricles

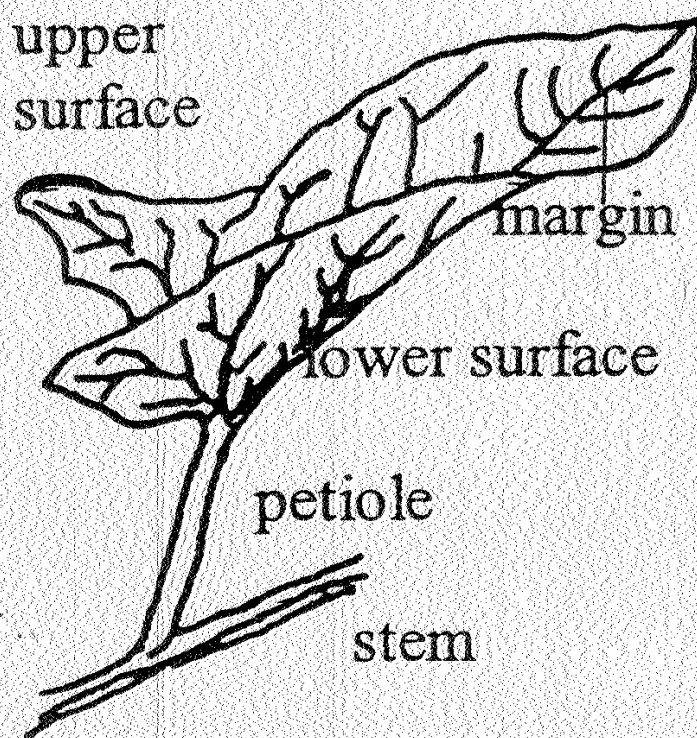
Collar

Sheath

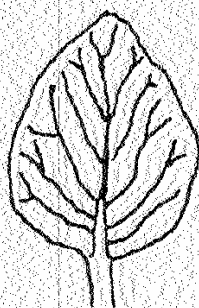
Leaf bud



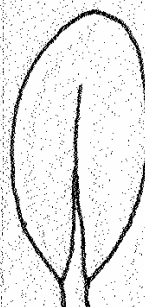
DISTRIBUTION OF HAIRS



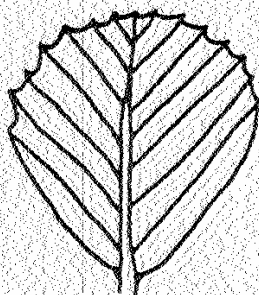
VENATION TYPES



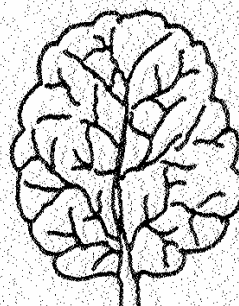
prominent
(distinctive)



not prominent

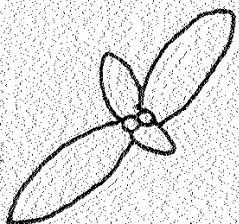


parallel

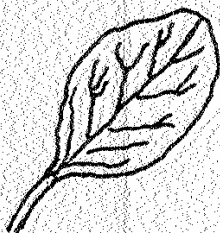


branched

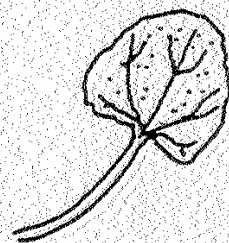
PETIOLE LENGTH



absent
(no petiole)



short
(less than half length
of leaf blade)



long
(greater than the length
of leaf blade)

Weed Identification

Leaf | Flower, fruit, seed, root | General, stem, cotyledon | ID Editor

GENERAL:

Type

Growth

Size

STEM:

Shape

Arrangement

Features

Bark

Colour

Size

COTYLEDON:

Tip

Sides

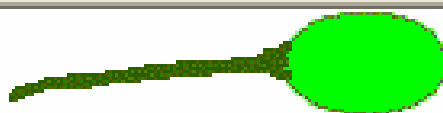
Base

Surface

Petiole

Type

Size

☐

Longer than blade

☐

Shorter than blade

☐

Tiny to none

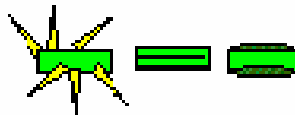
Weed Identification

Leaf | Flower, fruit, seed, root | General, stem, cotyledon | ID Editor

- LEAF:
- Arrangement
- Features
- Colour
- LEAF/BLADE:
- Tip
- Sides
- Base
- Surface
- Size
- PETIOLE:
- Features
- Length
- GRASS:
- Ligule
- Auricles
- Collar
- Sheath
- Leaf bud

☐  Hairless

☐  Hairy

☐  Ribs Wings Stripes Spiny

LEAF MARKINGS

- **Colour** (white, red, purple, pinkish)
- **Shape** (irregular, crescent)
- **Position** (scattered, basal)

Leaf markings will vary according to the environment

LEAF SURFACE STRUCTURE AND COLOUR

- Smooth
- Wrinkled
- Warty
- Pimply
- Glossy
- Frosted
- Dull or
- Succulent

Colour may vary depending on the environment.

Weed Identification

Leaf | Flower, fruit, seed, root | General, stem, cotyledon | ID Editor

LEAF:

Arrangement

Features

Colour

LEAF/BLADE:

Tip

Sides

Base

Surface

Size

PETIOLE:

Features

Length

GRASS:

Ligule

Auricles

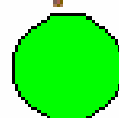
Collar

Sheath

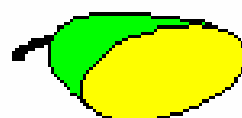
Leaf bud

☐

Aroma

☐

Cylindrical Solid

☐

> 2mm

Fleshy

☐

Hollow

☐

Stipules Ochrea

Weed Identification

Leaf | Flower, fruit, seed, root | General, stem, cotyledon | ID Editor

Selected Characters:

FLOWER:

Colour

Type

Arrangement

Time

Features

FRUIT:

Size

Features

SEED:

Shape

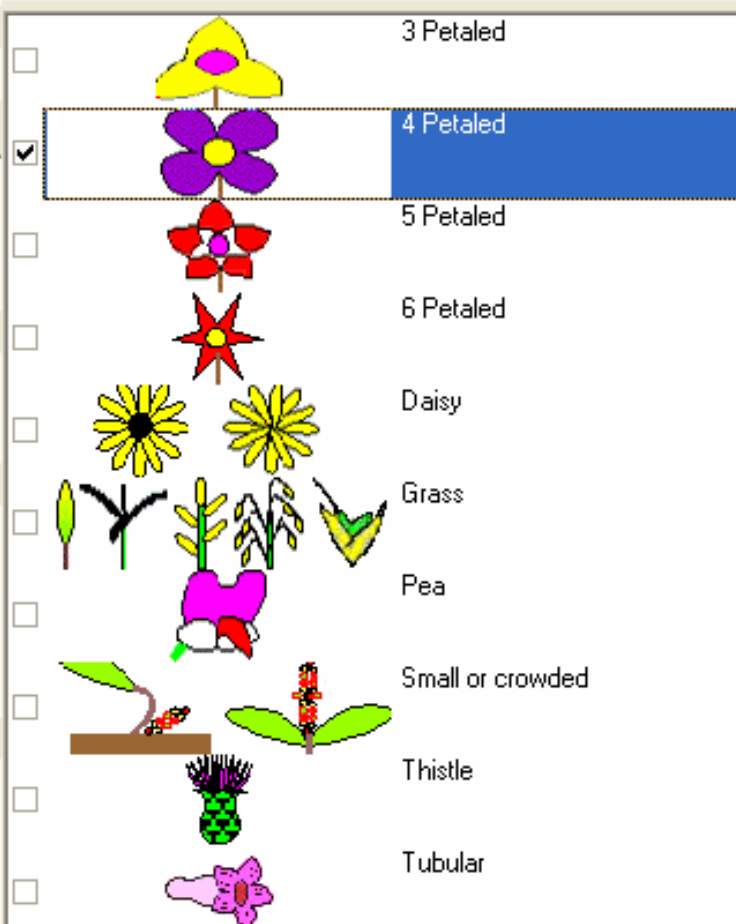
Features

Colour

Size

ROOT:

Type



Flower Type
is 4 Petaled

78 species have these
characters.

☒ Automatically Update

Update Now

Ask

Clear All

Help

Close

Broad leafed weeds key

Key to the identification of broad leafed weeds in their early growth stages

To use the broad leafed weeds key closely observe the seed-leaves (cotyledons), first and second leaves and work seedling through the key. Descriptions relating to cotyledons are in *italics*. Descriptions in **bold** relate to the shape of the cotyledon or leaf. Once a tentative identification has been made turn to the listed page for positive identification.

Page numbers prefixed with CW refer to the *Crop Weeds* book. All other page numbers refer to this book.

Cotyledons

<i>club-shaped</i>	go to page 13
<i>diamond-shaped</i>	go to page 11
<i>do not emerge</i>	go to page 11
<i>heart- or kidney-shaped</i>	go to page 14
<i>none</i>	go to page 11
<i>oval</i>	go to page 15
<i>round</i>	go to page 12
<i>spear-shaped</i>	go to page 12
<i>tiny (less than 2 mm long)</i>	go to page 14
<i>triangular</i>	go to page 11
<i>Y-shaped</i>	go to page 11

LEGUMES KEY (Cotyledons emerge, first leaf single, second leaf trifoliate) go to page 18

Cotyledons Y-shaped Yellow burrweed CW66

Cotyledons none

first leaf trifoliate, brown flecks Soursob CW126

Cotyledons diamond-shaped

first leaves diamond-shaped

margin minutely toothed, star-like hairs *Malcolmia* 70

pimply surface, hairless Common iceplant CW37

first leaves oval, prominent centre vein Willow herb 107

Cotyledons triangular

base entire, no petiole Pimpernel CW140

base notched, petiole long

first leaf round, margin lobed and undulating Bladder ketmia 105

..... Small-flowered mallow 106

Cotyledons do not emerge

first leaf a pair of leaflets (sometimes three)

leaflets **spear-shaped** Vetch CW112, 96, 100, 102

leaflets **oval**, apex pointed, large, hairless, glossy,

stipules variable, terminal tendrils short, spear-shaped Broad/faba bean 97

leaflets **heart-shaped**, margin slightly toothed, stipule broad Pea 92

leaflets **club-shaped**, apex notched, stipule spear-shaped Lentil 83

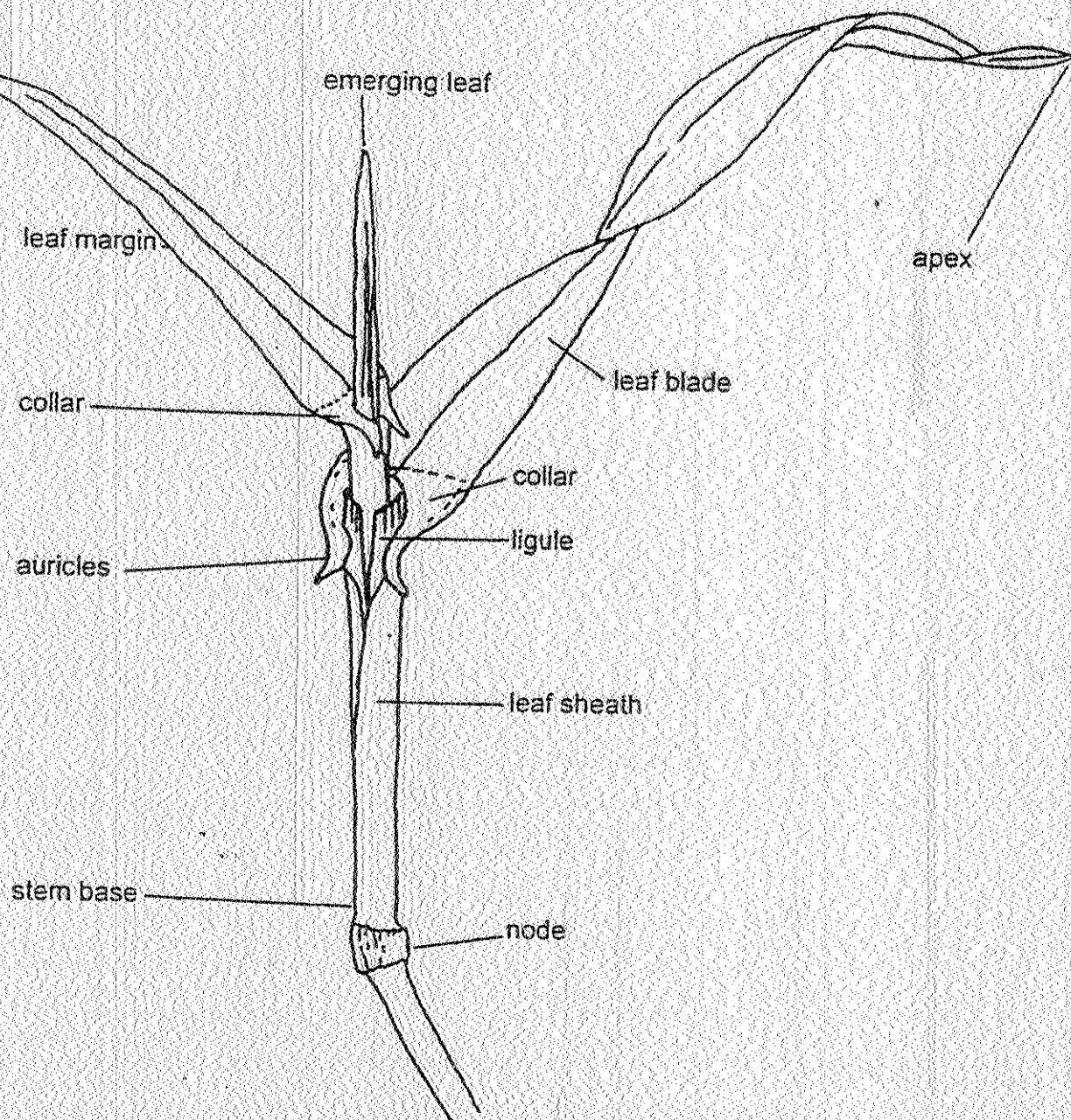
leaflets **replaced by a tendril**, stipules broad, leaf-like Semi-leafless field pea 92

first leaf 5-7 leaflets

leaflets **oval**, margin toothed, apex pointed, hairy Chickpea 81

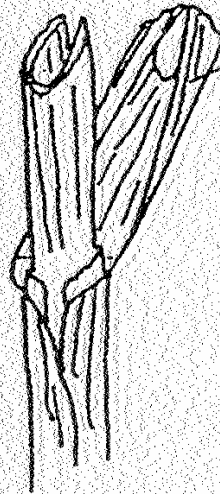
NARROWLEAF WEEDS

PARTS OF A GRASS PLANT

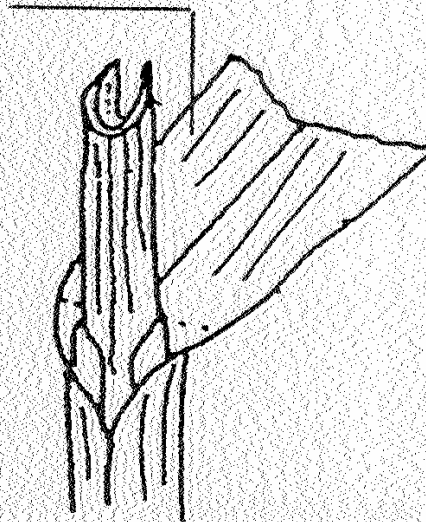


LEAF BLADE

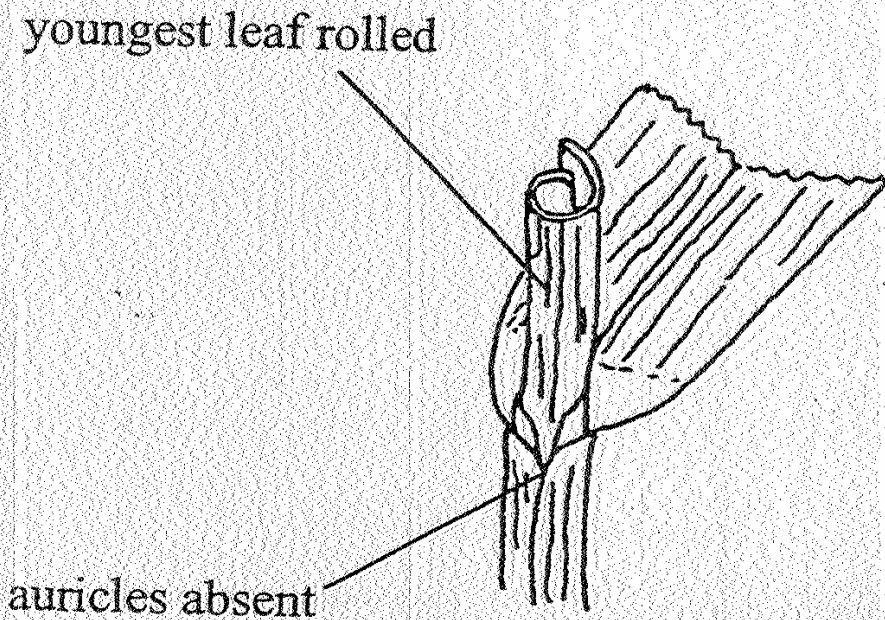
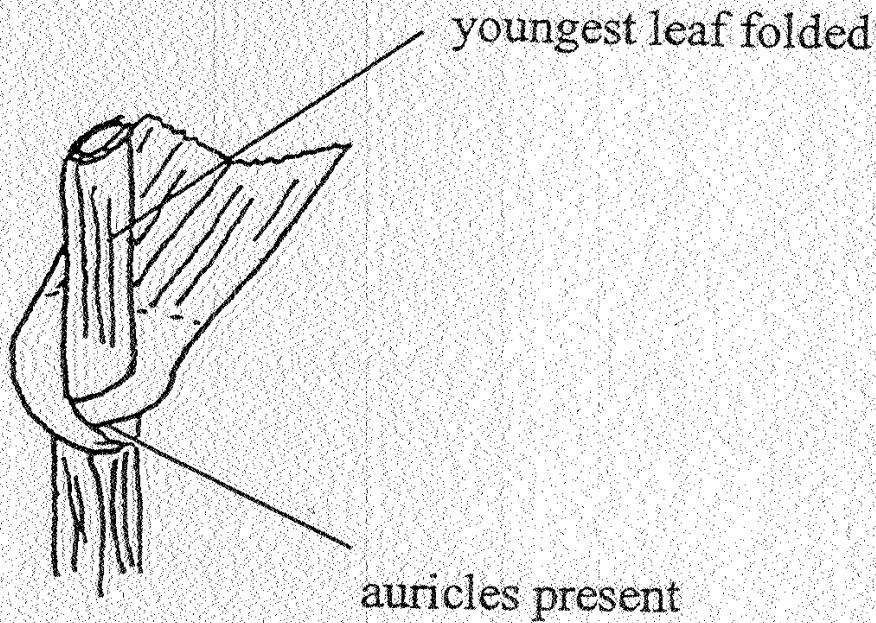
folded



flat



YOUNGEST LEAF AND AURICLES



Weed Identification

Leaf | Flower, fruit, seed, root | General, stem, cotyledon | ID Editor

LEAF:

Arrangement

Features

Colour

LEAF/BLADE:

Tip

Sides

Base

Surface

Size

PETIOLE:

Features

Length

GRASS:

Ligule

Auricles

Collar

Sheath

Leaf bud



Weed Identification

Leaf | Flower, fruit, seed, root | General, stem, cotyledon | ID Editor

LEAF:

Arrangement

Features

Colour

LEAF/BLADE:

Tip

Sides

Base

Surface

Size

PETIOLE:

Features

Length

GRASS:

Ligule

Auricles

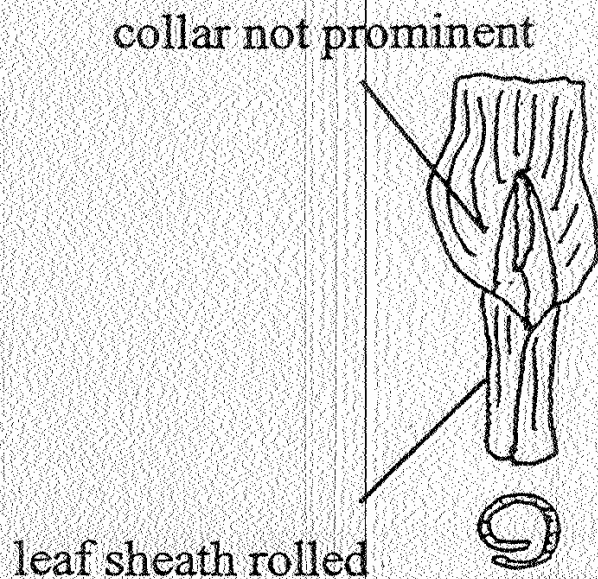
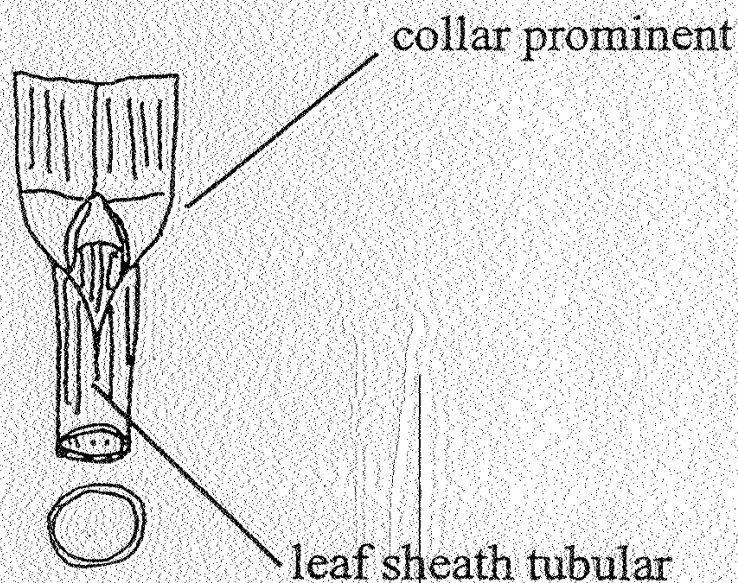
Collar

Sheath

Leaf bud

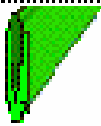
☐		Large or overlapping
☐		None
☐		Small
☐		Tuft of hairs

COLLAR AND LEAF SHEATH

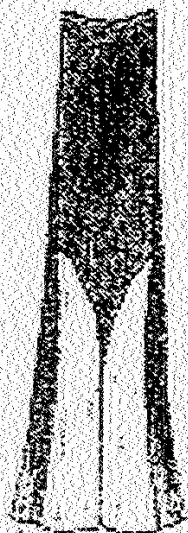


Weed Identification

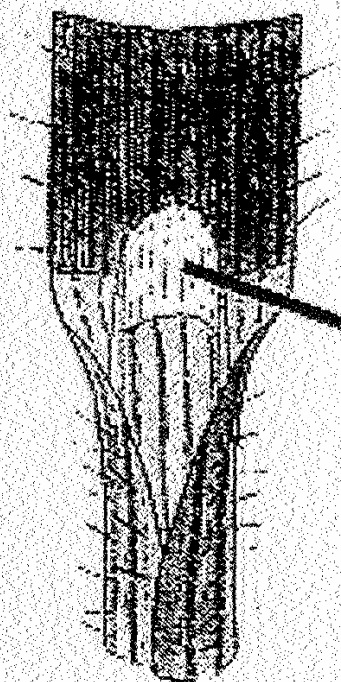
Leaf | Flower, fruit, seed, root | General, stem, cotyledon | ID Editor

LEAF:	☐		Base reddish
Arrangement	☐		
Features	☐		Flattened
Colour	☐		
LEAF/BLADE:	☐		Hairless or smooth
Tip	☐		Hairy or rough
Sides	☐		Rolled Overlapping
Base	☐		Striped
Surface	☐		Tubular Fused
Size	☐		
PETIOLE:	☐		
Features	☐		
Length	☐		
GRASS:			
Ligule			
Auricles			
Collar			
Sheath			
Leaf bud			

LIGULE



ligule
absent



ligule

ligule
present

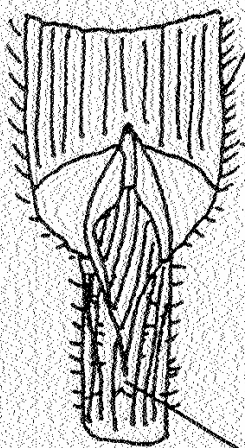
Weed Identification

- Leaf
- Flower, fruit, seed, root
- General, stem, cotyledon
- ID Editor

LEAF:	☐		Hairy ring
Arrangement	☐		Membranous
Features	☐		
Colour	☐		
LEAF/BLADE:	☐		None
Tip			
Sides			
Base			
Surface			
Size			
PETIOLE:			
Features			
Length			
GRASS:			
Ligule			
Auricles			
Collar			
Sheath			
Leaf bud			

HAIRS

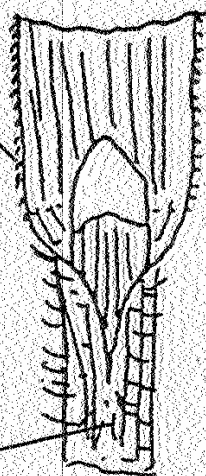
long hairs pointing up



stem red

(Stem bleeds & leaves a red mark on paper)

short hairs pointing down



stem green

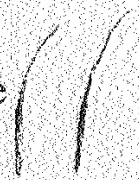
(No mark left on paper)

WEED SEEDS

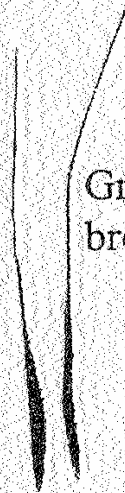
Soft
brome



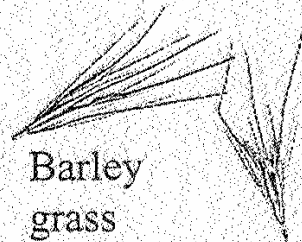
Red
brome



Great
brome



Barley
grass



Prairie
grass



Silvergrass



Phalaris



Lesser
canary
grass



Annual
ryegrass



Paradoxa
grass



Sand
fescue



Weed Identification

Leaf Flower, fruit, seed, root General, stem, cotyledon ID Editor

FLOWER:

Colour

Type

Arrangement

Time

Features

FRUIT:

Size

Features

SEED:

Shape

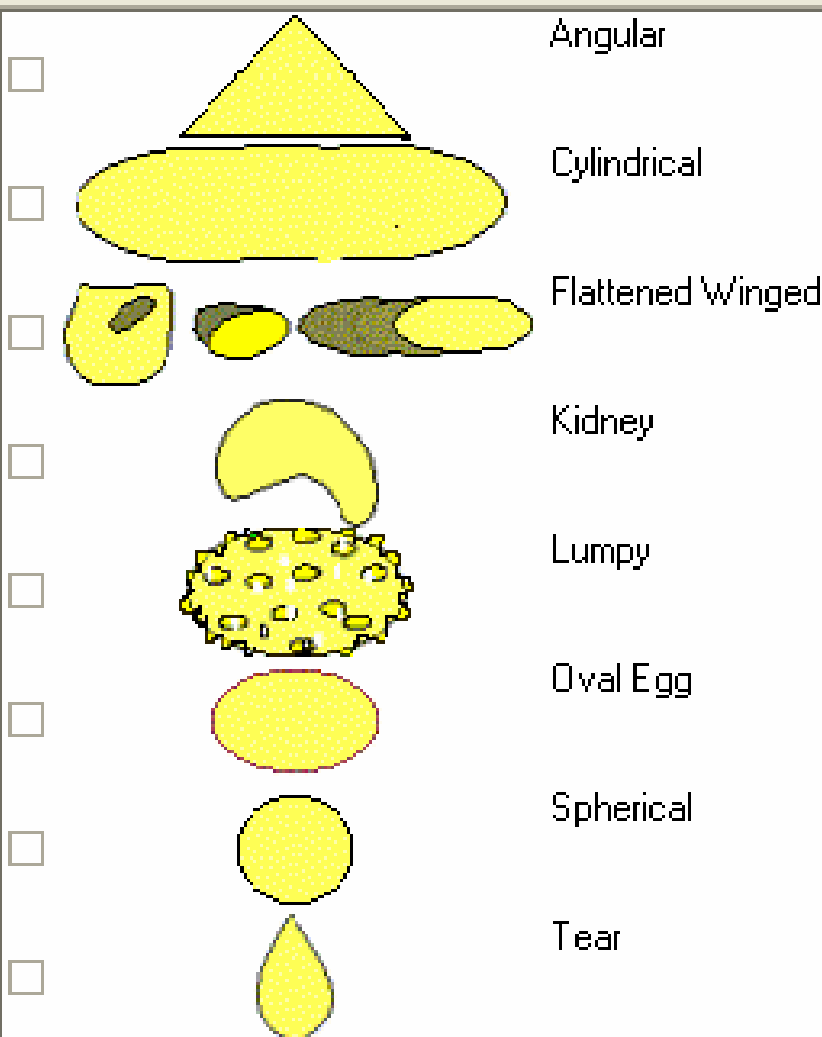
Features

Colour

Size

ROOT:

Type



Weed Identification

Leaf Flower, fruit, seed, root General, stem, cotyledon ID Editor

FLOWER:

Colour

Type

Arrangement

Time

Features

FRUIT:

Size

Features

SEED:

Shape

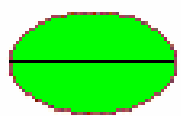
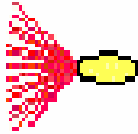
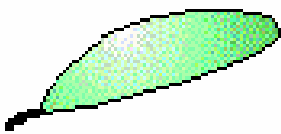
Features

Colour

Size

ROOT:

Type

☐		Awns or spines
☐		Grooved
☐		Hairless
☐		Hairy
☐		Pappus
☐		Ridged
☐		Rough Warty Dimpled
☐		Shiny
☐		Smooth

POINTS TO REMEMBER

MOST GRASSES HAVE

- No auricles
- Rolled emerging leaf

RED BASES INDICATES

- Spiny Burr Grass
- Wimmera Rye Grass or
- Silver Grass

LEAF TWIST

- Wheat, Barley clockwise
- Wild Oats anti-clockwise

POINTS TO REMEMBER

ANNUAL RYEGRASS

- Young: shiny leaf back and no auricles
- Older: auricles.
- Emerging leaf: rolled and squashed appears folded

PHALARIS

- All phalaris' are hairless
- Dull leaf surface
- *Phalaris paradoxa* and *Phalaris aquatica* bleed
- If the ligule is less than twice the length of the collar,
Phalaris paradoxa
- If the ligule is greater than twice the length of the collar
and
 - bleeds RED *Phalaris aquatica*
 - bleeds DARK GREEN *Phalaris minor*

COMMON MISTAKES (NARROWLEAF WEEDS)

WILD OATS AND PHALARIS

Confused if no hairs seen on wild oats

- check for seed
- check for bleed

PHALARIS SPECIES

Check for hairs and bleed

- if red, then paradoxa grass or perennial phalaris
- if green, then lesser canary grass

RYEGRASS, SILVERGRASS, POA BULBOSA, TOADRUSH

- Ryegrass shiny back of leaf
- Silvergrass and Poa bulbosa same sheen both surfaces
 - Silvergrass long leaf and pointed apex
 - Poa Bulbosa short leaf and hooded apex
- Toad rush very short, no ligule

HELPFUL CHARACTERISTICS FOR IDENTIFYING NARROWLEAF WEEDS IN THE Paddock

IN Paddock SITUATIONS

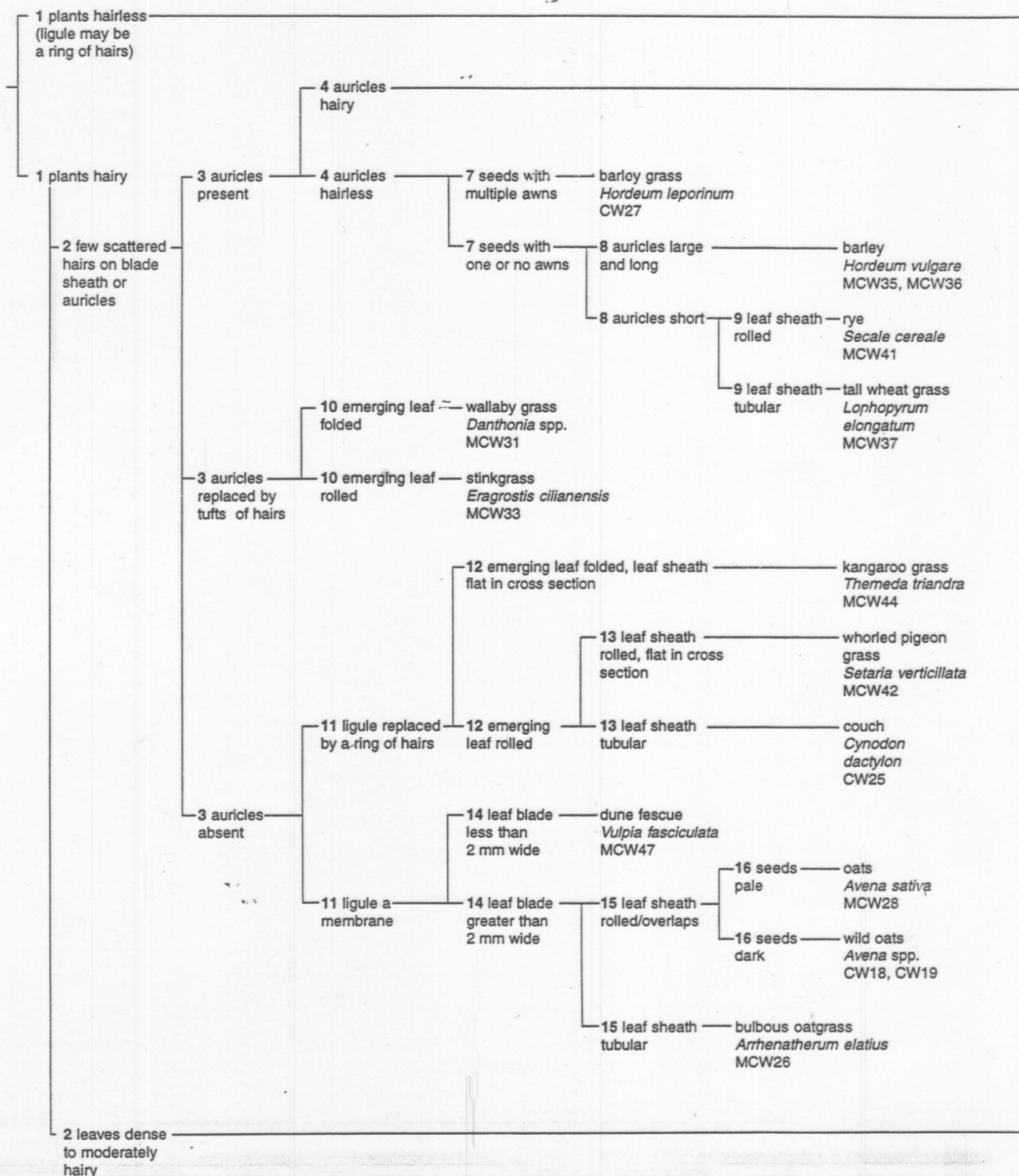
- Look between rows
- Look for the seeds. The seed will help distinguish between:
 - Great brome and Soft brome
(large, long awn and small none)
 - Wild oats and cultivated oats
(dark seed and light seed)
 - Barley grass and Barley
(long awns and no awns)
- Use the light to pick up hairs and surface texture.

CEREALS

**Barley is big and bare
Wheat is wee and whiskery
Oats have none**

- **Triticale is the same as wheat**
- **Rye has wheat sized auricles without the hairs**
- **Wild oats are the same as oats**

Key to vegetative features of narrow leafed weeds



LEGEND MCW – More Crop Weeds
CW – Crop Weeds

WEED ASSOCIATIONS

- Local knowledge
- Use other weeds as pointers
- Use your peers
- Keep records
- Monitor

Examples:

Acid soils prone to waterlogging over winter: capeweed, toad rush, loose strife, phalaris and crassula are common.

Lighter textured, acidic soils: capeweed, geraniums, sorrel, ryegrass and silver grass may be found.

Mallee alkaline sands: brome grass, ryegrass, capeweed, caltrop, skeleton weed, and medics.

Wimmera grey clays: fumitory, deadnettle, rough poppy, musk, bedstraw, mustards.

