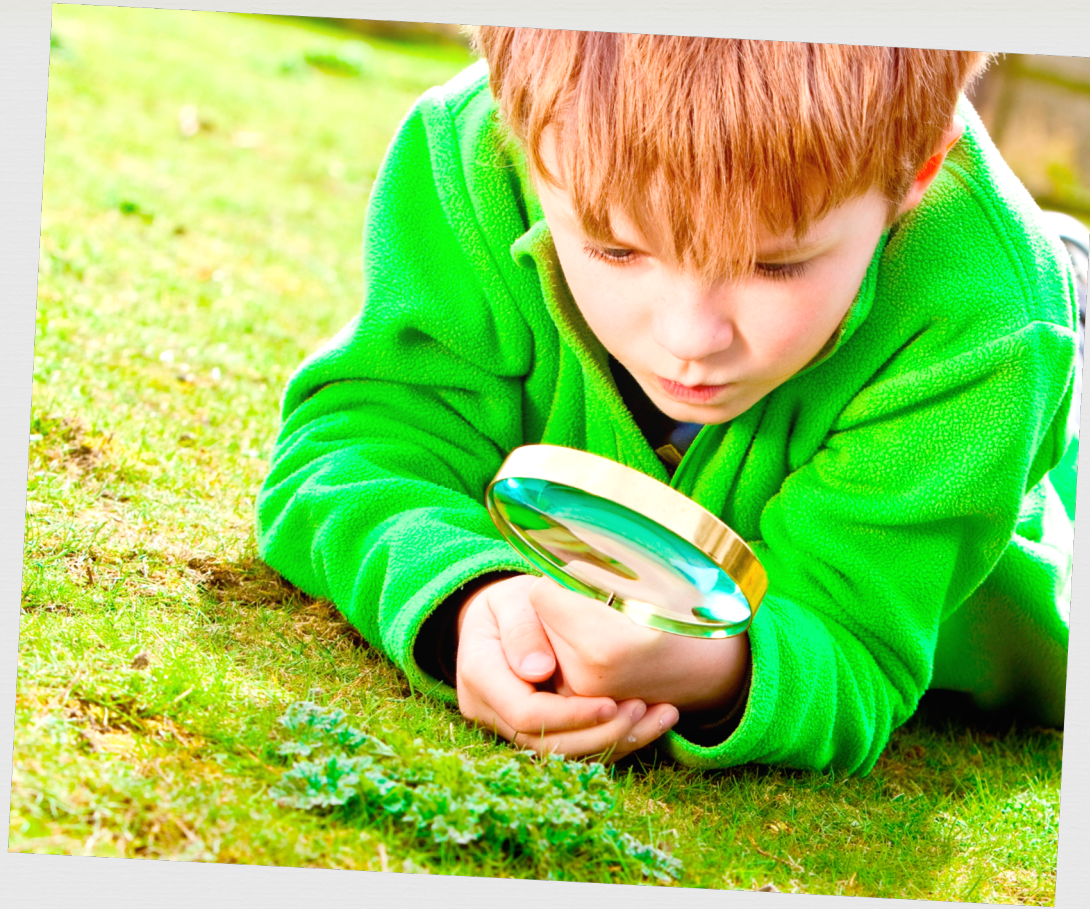


Using the Weed ID Guide to Promote Weed IPM



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The key to good weed management
is correct identification



Identification Guide for
Weeds
in **Cranberries**

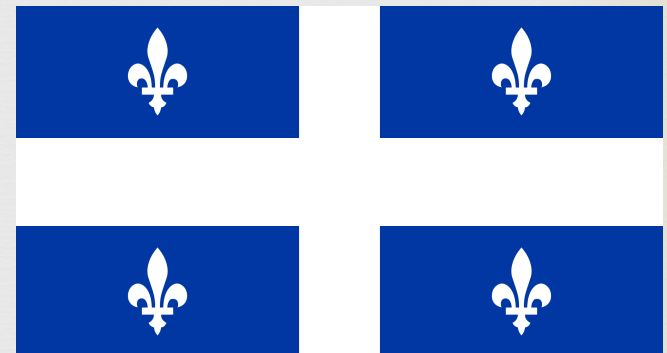
**JUNE
2015**



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Thank you!



Forestry and Agrifoods Agency



Agriculture and Forestry



The Revised Edition



- ❧ Conference calls with N. American weed specialists
- ❧ Species to add? Species to omit?
- ❧ Re-evaluated Priority Ratings
 - ❧ Potentiel de nuisance
- ❧ Included Metric and English units
- ❧ **Similar Species** section
- ❧ **Native / Introduced** status by state, region, province

The Revised Edition

(con't)



- ❧ **De-emphasized organic production**, few ha outside QC
 - ❧ Section on **Flooding**
- ❧ Added **Features Key** to narrow down choices
- ❧ Added **diagrams** to aid in plant ID
 - ❧ Leaf shape, arrangement, etc. (in Annual Herb section)
- ❧ What to do with **Rubus** (dewberry)?
 - ❧ Woody and Suffrutescent plants

Examples of new illustrations



Alternate



Opposite



Whorled



Basal



Palmate



Pinnate



Simple



Rosette

F

F. Leaf arrangements.

DRAWINGS: BRUNO CHAVARRIA

24 ADDITIONAL SPECIES

<i>Andropogon virginicus</i> , Broomsedge bluestem	<i>Maianthemum canadense</i> , Canada mayflower
<i>Cardamine hirsuta</i> , Hairy bittercress	<i>Melilotus officinalis</i> , Sweetclover
<i>Clethra alnifolia</i> , Coastal sweetpepper-bush	<i>Panicum dichotomiflorum</i> , Fall panic-grass
<i>Cyperus dentatus</i> , Toothed flatsedge	<i>Photinia melanocarpa</i> , Black chokeberry
<i>Danthonia spicata</i> , Poverty oatgrass	<i>Pteridium aquilinum</i> , Western bracken-fern
<i>Hieracium aurantiacum</i> , Orange hawkweed	<i>Rumex crispus</i> , Curly dock
<i>Hypericum boreale</i> , Northern St. Johnswort	<i>Sagittaria latifolia</i> , Broadleaf arrowhead
<i>Hypericum gentianoides</i> , Orangegrass	<i>Schoenoplectus americanus</i> , Chairma-ker's bulrush
<i>Hypochaeris radicata</i> , Hairy cat's ear	<i>Setaria pumila</i> , Yellow foxtail
<i>Kalmia angustifolia</i> , Sheep laurel	<i>Sisyrinchium</i> spp., Blue-eyed grass
<i>Lachnanthes caroliniana</i> , Carolina redroot	<i>Smilax glauca</i> , Cat greenbrier
<i>Linaria vulgaris</i> , Butter and eggs	<i>Vicia sativa</i> , Garden vetch

Honorable Mentions



- ❧ **Poison ivy** (with Bristly Dewberry, p.153)
- ❧ **Little bluestem** and **Bushy bluestem**
(with Broomsedge bluestem, pp. 190-191)
- ❧ **Spikerushes**, such as *Eleocharis* (with Narrowpanicle rush, p.212)
- ❧ **Philadelphia panicgrass** (Tuckerman's grass; with Witchgrass, p.180; also in French edition)

Same Color Scheme as French Edition

OVERALL ORGANIZATION

The described weeds are classified in several groups based on their morphological characteristics.

- Basic weed management information (maroon)
- Annual broadleaf herbaceous plants (light green)
- Biennial and perennial broadleaf herbaceous plants (dark green)
- Woody and suffrutescent plants (blue)
- Monocots: annual grasses, perennial grasses, sedges, rushes, and other monocots (orange)
- Miscellaneous plants (purple)
- Priority ratings, resources, glossary, features key, and indexes (maroon)

NATIVE / INTRODUCED STATUS

MA	Massachusetts	ATL	Atlantic Provinces (as a group)
ME	Maine	BC	British Columbia
MI	Michigan	NB	New Brunswick
NJ	New Jersey	NL	Newfoundland
NY	New York	NS	Nova Scotia
RI	Rhode Island	PEI	Prince Edward Island
OR	Oregon	QC	Quebec
WA	Washington		
WI	Wisconsin	as per USDA PLANTS Database	

GENERAL LAYOUT

Text box describing Native / Introduced status; Blooming season.

Botanical description: the characteristics of leaves, stems, flowers, fruit, seed, and method of dispersal are listed. The number of flower parts are mentioned parenthetically, when known, using Newcomb's Wildflower Guide as the authority. Measurements (greater than 5 mm) are presented in both English and metric units. Supplementary information is presented under sub-headings, "Distinctive features" and "Note".

Favorable growing conditions: characteristics of an environment favoring growth of a weed.

Prevention and suppression: proactive cultural or mechanical measures to minimize the impact of a weed.

Similar species: if appropriate, similar species are mentioned, highlighting differences with the described weed.

PRIORITY RATINGS

- **Impact** of a given weed on the cranberry plants themselves: 8 = killing or significantly crowding out cranberry plants; 4 = reducing vine vigor; 2 = reducing yield; 1 = little effect.
- **Biological form or type** of a given weed: 8 = perennial plant similar to the cranberry in growth pattern, having extensive systems of rhizomes and/or stolons; 4 = perennial plant different than that of a cranberry, producing rhizomes or stolons; 2 = perennial or biennial plant, producing shoots (suckers) or producing few rhizomes or stolons; 1 = annual plant.
- **Invasive/reproductive capacity** of a given weed: 8 = very vigorous production of stolons and rhizomes, propagation via plant parts, bulbs, seed; 4 = low to moderate production of stolons and rhizomes, some propagation via plant parts, by seed; 2 = propagation by seed only, with a high production of seed; 1 = propagation by seed only, with few seed produced.
- **Adaptation to typical cranberry habitat** of a given weed: 8 = well-adapted to typical bog conditions, difficult to pull; 4 = well-adapted, easy to pull; 2 = marginally adapted, difficult to pull; 1 = marginally adapted, easy to pull.

Example of Priority Rating Page

Common Name	Criteria				Priority rating*	
	Impact	Biological type	Capacity to spread	Adaptation to bogs	Points	Sign
Plants						
Annual ragweed	1	1	1	1	4	■
Nodding beggartick	1	1	2	4	8	■ ■
Devil's beggartick	1	1	1	1	4	■
Lambsquarters	1	1	2	1	5	■
Oakleaf goosefoot	1	1	2	1	5	■
American burnweed	1	1	2	4	8	■ ■
Marsh cudweed	1	1	1	4	7	■
Orangegrass	1	1	1	4	7	■
Jewelweed	1	1	1	4	7	■
Green carpetweed	1	1	2	1	5	■
Marshpepper knotweed	1	1	2	4	8	■ ■
Curlytop knotweed	1	1	2	1	5	■
Spotted ladythumb	1	1	2	1	5	■
Arrowleaf tearthumb	1	1	2	4	8	■ ■

Latin name also included as first column (not shown)

pp.
279 -
286

Features Key

The Features Key will help you to identify an unknown plant by walking you through a sequence of distinctions about the plant's characteristics including plant type, leaf type, leaf arrangement, flower color, presence of hairs, etc.

It will help you narrow down the identity of an unknown plant to a few possible species. If you are not familiar with some terms in the Features Key, go to pp. 15-17 for illustrations of leaf types and arrangements; go to the Glossary on pp. 275-278 for specific terms. Details on structures that distinguish grasses, found on pp. 171-173. Since the interpretation of plant characteristics is not always clear-cut, several species occur more than once to increase your chances of arriving at the correct identification.



Getting Started. Choose the Plant Type by determining if your unknown plant is an Herbaceous Broadleaf, a Woody Plant, a Grass-like Plant, Stems with Bristles or Thorns, or Other.

Herbaceous Broadleaf Plant, go to Section 1. Within Section 1, go through the following steps to identify the plant. See pp. 15-17 for illustrations of leaf types and arrangements.

1. Leaf type: Simple leaves (go to “a”) or Compound leaves (go to “b”).
2. Leaf arrangement: Within “a”, choose alternate (i), opposite (ii), whorled (iii), or basal leaves (iv). Within “b”, count the number of leaflets (i-iii) or if mostly basal leaves (iv).





Extension Tools



Current Chart Book

- ❧ Priority 1: no tolerance
- ❧ Priority 2: problematic
- ❧ Priority 3: less worrisome
- ❧ Priority 4: low concern

Weed ID Guide

- ❧ low priority 
- ❧ medium priority 
- ❧ high priority 
- ❧ very high 





Extension Tools



2015 Chart Book

- ☞ Priority 1: no tolerance
- ☞ Priority 2: problematic
- ☞ Priority 3: less worrisome
- ☞ Priority 4: low concern

2016 Chart Book

- ☞ High priority 
- ☞ Very high priority 
- ☞ Medium priority 
- ☞ Low priority 

Weed listings and IPM recommendations will align
with ratings in ID Guide

Useful for workshops;
have growers bring in their own weeds



Questions ??

