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Introductory

SPECIES: *Artemisia absinthium*

AUTHORSHIP AND CITATION :

Carey, Jennifer H. 1994. *Artemisia absinthium*. In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <http://www.fs.fed.us/database/feis/> [2007, September 24].

ABBREVIATION :

ARTABS

SYNONYMS :

NO-ENTRY

SCS PLANT CODE :

ARAB3
ARABA
ARABI3

COMMON NAMES :

absinth wormwood
common wormwood
wormwood sage

TAXONOMY :

The currently accepted scientific name for absinth wormwood is *Artemisia absinthium* L. (Asteraceae) [[2](#),[6](#),[7](#),[27](#)]. Most North American authors do not recognize varieties of absinth wormwood. However, Boivin [[2](#)] has classified plants in Canada as insipid wormwood (*A. a.* var. *insipida* Stechmann).

LIFE FORM :

Forb

FEDERAL LEGAL STATUS :

No special status

OTHER STATUS :

NO-ENTRY

DISTRIBUTION AND OCCURRENCE

SPECIES: *Artemisia absinthium***GENERAL DISTRIBUTION :**

Absinth wormwood, native to Europe, was introduced to North America in 1841 [[15](#)]. It is now naturalized across the northern United States and in Canada. It occurs from Nova Scotia west to British Columbia; south to Oregon and Utah; and east through Colorado and Nebraska to Virginia [[3](#),[6](#),[7](#),[17](#),[27](#)].

ECOSYSTEMS :

FRES10 White - red - jack pine
 FRES11 Spruce - fir
 FRES15 Oak - hickory
 FRES17 Elm - ash - cottonwood
 FRES18 Maple - beech - birch
 FRES19 Aspen - birch
 FRES20 Douglas-fir
 FRES21 Ponderosa pine
 FRES22 Western white pine
 FRES23 Fir - spruce
 FRES25 Larch
 FRES26 Lodgepole pine
 FRES29 Sagebrush
 FRES35 Pinyon - juniper
 FRES36 Mountain grasslands
 FRES37 Mountain meadows
 FRES38 Plains grasslands
 FRES39 Prairie

STATES :

CO CT DE ID IL IN IA ME MD MA
 MI MN MT NE NH NJ NY ND OH OR
 PA RI SD UT VT VA WA WI WY AB
 BC MB NB NS ON PE PQ SK

BLM PHYSIOGRAPHIC REGIONS :

1 Northern Pacific Border
 2 Cascade Mountains
 5 Columbia Plateau
 8 Northern Rocky Mountains
 9 Middle Rocky Mountains
 10 Wyoming Basin
 11 Southern Rocky Mountains
 12 Colorado Plateau
 13 Rocky Mountain Piedmont
 14 Great Plains
 15 Black Hills Uplift
 16 Upper Missouri Basin and Broken Lands

KUCHLER PLANT ASSOCIATIONS :

NO-ENTRY

SAF COVER TYPES :

NO-ENTRY

SRM (RANGELAND) COVER TYPES :

NO-ENTRY

HABITAT TYPES AND PLANT COMMUNITIES :

Absinth wormwood primarily grows on disturbed sites within grasslands, pastures, perennial crops, and on land abandoned from cultivation [18].

In Glacier National Park, absinth wormwood was found growing with orchard grass (*Dactylis glomerata*) and mountain hollyhock (*Iliamna rivularis*). On a disturbed site in West Glacier, Montana, absinth wormwood occurs with creeping bentgrass (*Agrostis stolonifera*) and yellow sweetclover (*Melilotus officinalis*) [13].

The upstream portion of islands in the Columbia River is dominated by lupine (*Lupinus* spp.), arrowleaf buckwheat (*Eriogonum compositum*), and absinth wormwood [9].

Absinth wormwood occurs with western snowberry (*Symphoricarpos occidentalis*) in moist ravines in Saskatchewan [18].

MANAGEMENT CONSIDERATIONS

SPECIES: *Artemisia absinthium*

IMPORTANCE TO LIVESTOCK AND WILDLIFE :

Canada geese use absinth wormwood for nesting cover on Columbia River islands but prefer lupine and willow (*Salix* spp.) [9].

PALATABILITY :

Absinth wormwood is unpalatable to fairly palatable to cattle [15,28]. Palatability is listed as poor for horses and good for sheep [28].

NUTRITIONAL VALUE :

Absinth wormwood energy and protein values are listed as fair [28].

COVER VALUE :

NO-ENTRY

VALUE FOR REHABILITATION OF DISTURBED SITES :

NO-ENTRY

OTHER USES AND VALUES :

Absinth wormwood is a medicinal herb often planted in gardens. Absinthol, a volatile oil produced from absinth wormwood flowerheads, was used in French liquors until prohibited in 1915 because of its toxic and addictive effects [8].

OTHER MANAGEMENT CONSIDERATIONS :

Absinth wormwood is considered a weed in pastureland, cropland, and rangeland in the northern Great Plains [14,15]. Although it spreads rapidly on disturbed sites, it is easily controlled by herbicides and/or vigorous competition from grasses [14]. Picloram provides the most rapid and complete control of absinth wormwood, but dicamba, 2,4-D, and glyphosate are also effective. Application techniques are described [14,15].

Absinth wormwood, which contains the sesquiterpene lactone absinthin, can be toxic to other plants in its vicinity. Studies of its effect on the germination of other plants are inconclusive [15]. Although absinth wormwood leaf extracts inhibited the germination of needle-and-thread grass (*Stipa comata*), they stimulated the germination of green needlegrass (*S. viridula*) [10].

Absinth wormwood taints milk when eaten by cows [14].

BOTANICAL AND ECOLOGICAL CHARACTERISTICS

SPECIES: *Artemisia absinthium*

GENERAL BOTANICAL CHARACTERISTICS :

Absinth wormwood is a nonnative, long-lived, fragrant, perennial herb that grows each year from a woody base. An individual plant has 20 or more stems each growing 1.3 to 4.9 feet (0.4-1.5 m) tall. The fruit is a cypsela without a pappus. The well-developed root system consists of a taproot occasionally reaching 2 inches (5 cm) in diameter with shallow lateral branches extending 6 feet in all directions [18]. Absinth wormwood may be weakly rhizomatous [14,27]. The roots lack the interxylary bark of some *Artemisia* spp. which protects the roots from desiccation [15].

RAUNKIAER LIFE FORM :

Hemicryptophyte

REGENERATION PROCESSES :

Absinth wormwood reproduces primarily by seed and is a prolific seed producer [15,18,24]. Although the small seeds do not have any specific morphological provision for dispersal, they are easily scattered in hay and by wind, water, and animals. The seeds retain their viability for 3 to 4 years [15]. Viable absinth wormwood seeds have been found in the soil of undisturbed prairie grasslands in North Dakota [11].

Germination rates were measured under various pretreatment and

photoperiod conditions. Germination was best on moist soils. It occurred over a wide range of temperatures between 41 and 104 degrees Fahrenheit (5-40 deg C) [15].

Absinth wormwood invades extreme northern environments during warm periods but may not reproduce successfully. Absinth wormwood was present in northeastern Manitoba in 1989 but had not produced seeds when observed in late summer [20].

Maw and others [15] and Staniforth and Scott [20] did not find any evidence of vegetative reproduction by absinth wormwood. However, Selleck and Coupland [18] suggested that absinth wormwood may regenerate from shallow lateral root branches when plowed. Welsh and others [27] reported that absinth wormwood has a rhizomatous caudex, and Lym and others [14] stated that absinth wormwood may spread by rootstock.

SITE CHARACTERISTICS :

Absinth wormwood grows on disturbed sites such as along fencelines and roadsides, on borrow pits and gravel piles, and on overgrazed pastures and fields recently abandoned from cultivation [15].

Absinth wormwood grows on a variety of soils from gravels to clay loams [15]. It grows on gravelly soils in Glacier National Park [13], and on a cobble-gravel substratum on the upstream portion of Columbia River islands where sand is washed away each spring during high water [8].

Absinth wormwood grows best in moist habitats. During drought it dies out on coarse, gravelly soils but survives in ravines and on north-facing slopes [15,18].

Absinth wormwood occurs from 5,000 to 7,000 feet (1,500-2,100 m) elevation in Colorado [28].

SUCCESSIONAL STATUS :

Absinth wormwood colonizes open, disturbed sites. Establishment is minimal where there is a closed grass stand [15]. Absinth wormwood seedlings which germinated in an ungrazed stand of needle-and-thread grass did not survive [18].

Absinthe wormwood tolerates some shade [15]. It was found growing vigorously within a tree plantation with approximately 60 percent crown cover [18].

SEASONAL DEVELOPMENT :

Absinth wormwood growth begins in early spring and flowerstalks are produced by mid-July [15]. Absinth wormwood flowers July through September [3,15,28]. In North Dakota, absinth wormwood began flowering the second week of August [22]. Seeds mature in early fall. Seedlings emerge from early spring to August whenever moisture and warmth are available. Rosettes form by the end of the first growing season [15].

FIRE ECOLOGY

SPECIES: Artemisia absinthium

FIRE ECOLOGY OR ADAPTATIONS :

Although top-killed by fire, absinth wormwood probably reestablishes after fire by sprouting from undamaged perennating buds [21] or regenerating from buried seed.

POSTFIRE REGENERATION STRATEGY :

Caudex, growing points in soil
Ground residual colonizer (on-site, initial community)

FIRE EFFECTS

SPECIES: Artemisia absinthium

IMMEDIATE FIRE EFFECT ON PLANT :

Low-severity fire readily top-kills absinth wormwood and may completely kill some plants. Because absinth wormwood perennating buds are at or near the soil surface, they are susceptible to fire [21].

DISCUSSION AND QUALIFICATION OF FIRE EFFECT :

NO-ENTRY

PLANT RESPONSE TO FIRE :

Absinth wormwood perennating buds will sprout if they survive fire. Annual early spring prescribed fires were conducted in a South Dakota prairie infested with absinth wormwood. Dormant fine fuels ranged from 2,000 to 2,400 kilograms per hectare. Nearly two-thirds of the absinth wormwood survived the first fire and regrew, but four consecutive annual spring fires reduced absinth wormwood by 96 percent [21].

DISCUSSION AND QUALIFICATION OF PLANT RESPONSE :

NO-ENTRY

FIRE MANAGEMENT CONSIDERATIONS :

Spring fire can reduce absinth wormwood on northern mixed prairie sites during years with adequate fuel. However, abundant green herbaceous material can reduce fire severity during the spring and thus reduce fire damage to absinth wormwood [21].

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SPECIES: Artemisia absinthium

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