SPECIES ACCOUNT FOR COMMON TANSY (TANACETUM VULGARE)

1.0 BACKGROUND

Common tansy, *Tanacetum vulgare* (L.), native to Europe, was commonly used as an ornamental in English gardens. It was transported to North America for medicinal purposes as early as the late 1600s. Common tansy was also used to line coffins, preserve meats, cure ailments, induce abortions and ironically prevent miscarriages. Common tansy can be poisonous; the alkaloids in the plant have a cumulative effect, and when used in moderation may not be harmful. However, there have been cases of deaths related to overconsumption in both humans and livestock (LeCain and Sheley 2006). Because of its popular uses, the governor of Massachusetts listed common tansy as a necessary plant for colonial herb gardens in the 1600s. This led to widespread cultivation of common tansy and the inevitable escape of the plants into fields and roadsides (LeCain and Sheley 2006). It is now listed as a noxious weed in five US states and three Canadian provinces.

1.1 Taxonomic Overview

*Scientific Name*

*Tanacetum vulgare* (L.)

*Family*

Asteraceae; Synonym: Compositae

*Common Name(s)*

Common Tansy

Garden Tansy

Golden Buttons

2.0 DESCRIPTION

Common tansy is a perennial, herbaceous member of the sunflower family. Leaves of common tansy are arranged alternately on the purplish-red stem and are deeply lobed and finely divided (pinnate). The distinct, button-like flowers are yellow and lack ray flowers. Seeds are yellowish brown, and the stem is purplish-red. The plants can grow to 1.5 m tall.

3.0 DISTRIBUTION

3.1 North America

Common tansy arrived in North America with the first European settlers. It was widely planted and cultivated for ornamental and medicinal purposes. It escaped from cultivation, and over the years has established itself throughout the fields and roadsides of North America. By the 1800s common tansy was growing wild throughout the north-eastern US. It was first documented in Montana in 1936 (LeCain and Sheley 2006) and by the early 1950s it was established as far west as California. Currently
only the four most south-eastern states and Texas are free of common tansy in the US (USDA 2007). In Canada, no national distribution maps are easily located, but there have been tansy records from Nova Scotia to British Columbia (Blanchan 2007).

### 3.2 British Columbia

Common tansy is concentrated south of 55° N in BC (Douglas et al. 1998), but is present in all agricultural reporting regions of the province. It is considered a major concern in the Kootenay, Okanagan, Omineca, and Skeena regions.

### 3.3 Regional

According to current IAPP inventory records (MOFR 2007), common tansy is known to occur at 868 sites in the Prince George Timber Supply Area (PGTSA). IAPP is a new database with known errors and field surveys suggest that common tansy actually occurs at approximately two thirds of the recorded common tansy sites. Specific areas of concern are along Hwy 16, both east and west. There is a heavy concentration of sites near Dome Creek, along Hwy 16 east, and these sites persist within private property and into forestry roads. Along Hwy 16 west, the Northwest Invasive Plant Council (NWIPC) is currently proposing a containment area with Moricetown as the eastern border. One source of the initial spread of common tansy in this area is reputed to be sand/gravel laid on roadways. Between these two key infestations, frequent and mainly smaller (i.e., numerous plants in size) infestations of common tansy currently occur.

### 4.0 PLANT CHARACTERISTICS

#### 4.1 Habitat

Common tansy is commonly found at low- to mid-elevations. It grows well in dry areas with direct sunlight and well-drained, fertile soil conditions. Newly disturbed sites, river-banks or riparian habitats, and pasture-lands are preferred locations for common tansy. Common tansy often occurs in small clusters, although large infestations, encompassing major portions of fields or entire sections of river-bank, also occur.

Field data conducted in the PGTSA suggest that slope plays little role in the distribution of tansy. Although many sites are located on north aspects (4/10 sites sampled), these areas were cleared of vegetation, and sun was available at the site for large portions of the day despite its direction of slope. Common tansy was primarily found within coarse soils in moist cool BEC zones (i.e. SBSmk1). In these areas there are likely few plants that can establish on the well drained micro-sites making them relatively vulnerable to invasive plants with high seed production that are easily dispersed. Tansy is dispersed by wind and root fragments.

#### 4.2 Life Cycle

Common tansy is a perennial forb that typically flowers from July to September depending on elevation and location (MAFF 2002). It spreads by seed and vegetatively from roots and creeping rhizomes. It can re-grow from root fragments that have been broken off.

Although little information exists about the potential longevity of common tansy seed in the soil seed bank, it is reported the plants produce a large number of seeds (50,000) each year (Skelton 2003,
Whitson et al. 2000). It is through these seeds and by vegetative growth that tansy progresses from generation to generation.

4.3 Impacts

Annually, invasive plants cost British Columbia over fifty million dollars in lost productivity (Forest Practices Board 2006). Common tansy has a direct impact on agriculture and forestry practices. By displacing native vegetation and shifting the successional development of ecosystems, common tansy can successfully monopolize specific micro-sites. Common tansy plants are able to readily establish in freshly disturbed sites, and once established remove available resources (i.e. light and nutrients) that would otherwise be available to native grasses and forbs. Common tansy provides little grazing value, and as a result can devastate agricultural lands.

Although toxic to cattle in large doses, common tansy seems to have little ill effect on sheep and goats, which can be used to effectively graze common tansy (Skelton 2003, Elpel 2000).

5.0 CONTROL

Common tansy is best managed by a combination of control strategies carefully applied in an integrated approach. Integrated Pest Management (IPM) is a decision-making process that includes identification and inventory of invasive plant populations, assessment of the risks they pose, development of well-informed control decisions that use a combination of methods, and monitoring the success of treatments. In the case of common tansy, chemical treatments are an effective method of removal when used in conjunction with mechanical treatments.

5.1 Biological Control

No biological control agents are currently available for common tansy. However, a new (2006) initiative is underway to establish a common tansy biocontrol program in North America.

5.2 Chemical Control

Selective herbicides are available for broadleaf weeds, which will help preserve grasses when applied at the recommended rates. Selective herbicides effective in control of common tansy include: picloram, picloram/2,4-D, metsulfuron methyl, and aminopyralid.

The best time for treatment of common tansy is between the early flower (bud) to bloom stage (Dow AgroSciences 1998). Because this plant has been known to grow near river-banks, use extreme caution and follow herbicide labels when working around water. Application of herbicides on Crown land must be carried out under the supervision of a certified pesticide applicator. The Environmental Protection Division of the BC Ministry of Environment administers the Integrated Pest Management Act and regulates the sale, use and handling of pesticides in the province.

5.3 Mechanical Control

There are a number of mechanical treatment options available. However, when used independent of other control methods, they are generally ineffective, as the plants can re-grow from portions of the root. Treatments such as mowing and hand-pulling, when used in conjunction with chemical treatments can be effective. Mowing before seed set prevents seed production but encourages increased vegetative
reproduction. There is currently no information available for the impacts of fire on common tansy (MAFF 2002). Using sheep and goats to graze may also help limit the height of plants, and enable surrounding grasses to compete with tansy (Elpel 2000).

6.0 REFERENCES


