

# Wild four o'clock *(Mirabilis nyctaginea)*

## INTRODUCTION

Wild four o'clock is so named to distinguish it from the ornamental species of four-o'clocks that have larger flowers. The common name arose because the flowers open in late afternoon and do not close until the following morning. The four o'clock plant family is mostly found in the tropical Americas, but wild four-o'clock is native to North America and its original area of distribution was from Texas to Saskatchewan, but it has since spread to each coast and is considered invasive.

It invades disturbed soils, orchards, rangelands, irrigation canals and ditches, riverbeds, waste areas and roadsides.

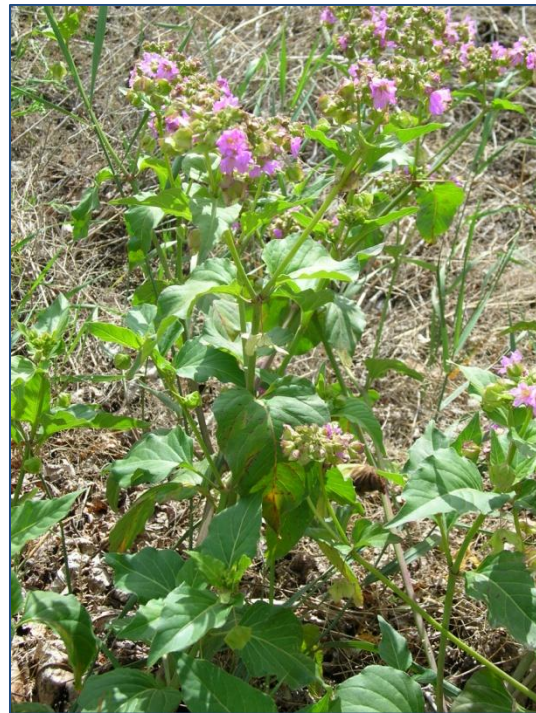
## BIOLOGY

Wild four o'clock is a tap-rooted perennial herb that starts blooming mid-spring and can continue blooming into the hot summer months. It opens its flowers in the afternoon and closes them in the morning to target specific pollinators.

Wild four o'clock plants produce one seed per flower. Towards the end of the growing season, plants produce smaller flowers that are closed off from pollinators so that they may self-pollinate. The majority of the seeds fall close to the plant where they will germinate the following year, but self propagation through root segments is also possible.

## IDENTIFICATION

- Vigorous perennial herb
- Large taproot up to 8 cm in diameter
- Mature plants can be over 1 m tall with branched, square-like stems with nodes
- Stems can be woody at the base
- Leaves are opposite, simple, heart-shaped, 2.5-8 cm long, usually with a pointed tip
- Leaves are widely spaced on the stem and have short petioles
- Flowers are clustered at the top in an inflorescence of 1-5 pink flowers
- Bell-shaped flowers have no petals and resemble little paper lanterns with a whorl of bracts at the base of each flower
- Seeds are oblong, grayish-brown to yellow and appear warty or wrinkled



## INTEGRATED MANAGEMENT

The best overall method of control for wild four o'clock is an integrated program using a combination of control methods. Most infestations can effectively be controlled through mechanical treatments with the option of combining it with herbicide application. If using herbicide, ensure a certified applicator or dispenser has been consulted prior to application to ensure the appropriate herbicide and application method has been chosen in relation to the plant, treatment location, weather and local bylaws. Always follow all label instructions.



### PREVENTION

The most effective way to ensure that your lands do not become infested with wild four o'clock is by prevention. Here are some recommendations to prevent wild four o'clock from invading your property:

- Learn to identify wild four o'clock and prevent seed production.
- Maintain your crops and natural lands in a healthy, vigorous condition to ensure a competitive plant community; competitive perennial grasses and forbs utilize water and nutrients that would otherwise be readily available to wild four o'clock.
- Clean footwear, vehicles and equipment prior to leaving areas infested with wild four o'clock.
- Cooperate with adjacent landowners and encourage them to prevent wild four o'clock spread.
- Immediately re-vegetate disturbed, bare soils with a suitable seed mixture that provides dense, early colonization to prevent weed invasion.
- Ensure soil, gravel and other fill material are not contaminated.

### PHYSICAL CONTROL

Hand pulling is not recommended because the stems break at the crown. The roots are strongly branched and broken root pieces will produce sprouting. Small infestations can be dug out. Repeated mowing or cultivation will prevent seed production and lower the seed bank. Eventually the plant will die from loss of nutrient reserves stored in the root.

If agricultural fields or meadows are infested, plow and plant a cultivated crop for two years. Hoe out remaining plants.

### BIOLOGICAL CONTROL

There are no known biological control agents at this time.

For more information about the Okanagan-Similkameen Invasive Plant Program please visit our website at [www.oasiss.ca](http://www.oasiss.ca) or contact us by telephone at 250-404-0115. For further information on invasive plants in BC check out the provincial websites at: [www.weedsbc.ca](http://www.weedsbc.ca) or [www.bcinvassives.ca](http://www.bcinvassives.ca).