

# **Weed Control in Horse Pastures**

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## **Introduction**

In pastures, most "weeds" are not a problem and don't require any specific control programs when good grazing management is applied. A weed is any undesirable plant species growing in a specific crop. When referring to pastures, most plants that are commonly referred to as weeds, are not "problem weeds". For the majority of "common weeds", they are actually quite palatable and nutritious if the pasture is maintained in a vegetative state and is not allowed to become too mature. For example, dandelions which are often considered a problem weed in hay and other crops, is actually very high in crude protein and is palatable when it is young and vegetative.

## **Indicator Weeds**

Problem weeds should be a sign to you, the horse owner. The presence of weeds is telling you that you need to change your grazing management. There are several possible reasons for weeds:

- 1) If the grazing pressure is not heavy enough (ie. a low stocking rate) for the pasture area or paddock, less desirable plant species will not be eaten and they will become too mature and thus are even less palatable or desirable to horses. These weeds also become stronger and more competitive than the other more desirable plant species, which will lead to an even higher percentage of these weeds/plants in the pasture.
- 2) Over-grazing caused by too high a stocking rate or too long a period of time, or too early in the spring and too late in the fall will also lead to weed problems. Poor grazing management results, killing out the desirable species, reducing the strength or thickness of the sod and disturbing the soil. All of these will lead to areas of bare soil. It is in areas of bare soil that weed seeds produced by those stronger, less desirable species become established. In low damp areas, poisonous plants like horsetail may become established.
- 3) Some weeds or plant species are signs of poor fertility. For example, Orange Hawk Weed (Devil's Paint Brush) are signs of low phosphorus. Poor establishment and survival of legumes indicate a possible low pH problem. The appearance of moss can mean low nitrogen levels and/or poor soil drainage. Taking a soil test is the first step to determine how to correct these problems.

## **Poisonous Plants**

There are a few weeds that are potentially toxic to grazing horses. These weeds and their toxic affects are described in the Ontario Ministry of Agriculture and Food:

Common Weeds Poisonous to Grazing Livestock - Part A,

Common Weeds Poisonous to Grazing Livestock - Part B and

## **Poisoning of Livestock By Plants**

An excellent reference for poisonous plants is *Poisonous Plants of Canada*, Publication 1842/E, available from the Canadian Government Publishing Centre Ottawa K1A 0S9, ISBN 13467-5. This information is also available at <http://res.agr.ca/brd/poisonpl/>

In most cases, poisonous plants can be present in horse pastures and the horses will not touch them unless there is nothing else to eat.

## **True Pasture Weeds**

Thistles, in particular Canada Thistle and Burdock, are often the most difficult weeds to control in pastures and are frustrating when grooming manes and tails. To control these weeds, you first must be able to identify the weeds and understand the difference in growing habits. Publication 505, *Ontario Weeds* is a good reference book to help you to identify weeds.

Weeds in pasture can be best described by dividing them into whether they are annual, biennial or perennial.

Annual weeds are usually only a problem in the year the pasture is first established (seeded). When the ground is disturbed there is an abundance of annual seeds which have laid dormant in the soil and now germinate. Wild mustard is the most bothersome of the annual weeds and if consumed in large quantities could be poisonous.

Common Burdock, Bull Thistle, Scotch Thistle, Nodding Thistle are biennial, which means that in the first (germination) year, they form a basal rosette with several leaves that lay fairly close to the ground. It is not until the second year that biennials produce a stem which will produce seeds. Canada Thistle and Milk Weed are perennial weeds, which means that they can live and produce seed for several years.

Mechanical control such as clipping pastures will help to prevent some weeds from producing seed, but it may not kill the individual plant, therefore requiring more than one clipping per year. Clipping some perennial weeds will actually stimulate the plant to put up new shoots such as with milk weed. Using a shovel can be effective only if you dig into the ground 2 or 3 inches to cut off the root below the crown, particularly with burdock.

With chemical control, again it is important to know what type of weed you are dealing with before selecting a herbicide or the method of application. If you spray an area with a non-selective herbicide such as Roundup, bare soil will be exposed. If you apply a broadleaf selective herbicide such as 2-4D, it will take out the desirable legumes in the area also.

The annual weeds are usually eliminated at seeding time when using a cover crop. However, if you are direct seeding or when you disturb the soil, annuals will germinate. Clipping them during

the first year will prevent them from going to seed. In subsequent years, they will not be a problem unless you disturb the soil.

With Canada Thistle and Milk Weed, the best time to apply a product such as Roundup is when it is in the late bud-early flower stage. In this stage, perennial plants are trying to replenish their roots, so that it can regrow again to produce more seed another year. The application of Roundup at this stage will lead to better translocation of the herbicide into the plant roots for a more effective control. In biennials, the best time to apply herbicides is when the weed is in year one, the basal rosette stage. When biennials are in their second year, the goal is to reproduce, therefore the nutrients are flowing out of the roots and chemical control is usually not very effective at this stage. In areas that are very thick with weeds, spot spraying may be necessary. Once the weeds have been killed by spot spraying, you will need to re-introduce desirable forage species (legumes and grasses) to these areas.

With other species of livestock some success has also been achieved by using a wick-weeder to apply herbicide. The wick is used to sweep or wipe the leaves of the weeds with a concentrated mixture of water and herbicide, while not contacting the leaves of the desirable species. Using the wick-weeder after a paddock has been grazed ensures that the desirable plant species have been grazed down so that the weeds are the only plants to come in contact with the wick-weeder. In the "golf green" height areas, wick application of herbicide may be of use. In the rough areas of horse pastures it would remove all of the grasses as well as the weeds. With weeds like Canada Thistle, it would be a good idea to wick the plant in at least two directions to get better herbicide coverage and absorption. For more information on products, rates and comments, see Publication 75, Guide to Weed Control. There is a section on both mechanical and chemical weed control for pastures.

If you plan to remove the weeds, you also need to be prepared to do something to replace the weeds with more desirable species. The best and most economical weed control program on pasture is to use good grazing management to prevent "pasture weeds" from becoming established in the first place. Refer to the OMAFRA information sheet Managing Horse Pastures for suggestions in this area. Further information and copies of Ministry publications can be obtained from your local office of the Ontario Ministry of Agriculture, Food and Rural Affairs.