

Weed Focus: Thistles

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We generally see 4 types of thistles in North Carolina plus the sowthistle, which, while not particularly desirable, isn't as undesirable as the others. Three are in the genus *Cirsium*: yellow thistle (*C. horridulum*), Canada thistle (*C. arvense*, which isn't native to Canada), and bull thistle (*C. vulgare*). The fourth, musk thistle, is *Carduus nutans*. Only the yellow thistle is native to North America. They are all considered cool season. Canada thistle and musk thistle are on the USDA invasive species list. Bull thistle and yellow thistle are generally considered to be noxious



Photos (from top left): bull thistle, musk thistle, yellow thistle (photos courtesy of S. Freeman) and Canada thistle (photo credit to echinaceaproject.org)

weeds (they are listed as such in 46 states, but are on the endangered list in the other 4). They are either biennial or perennial. Biennials establish from seed the first year and form a rosette with a deep tap root (see photos, below). During their second year of growth, they send up a tall shoot that flowers and sets seed for the next generation of plants, after which it senesces and dies. All of them tend to like sunny, open areas, such as over-grazed pastures or road banks. Seeds can last 20 or more years, making control difficult; however, they do not tend to compete successfully in well managed pastures with adequate grass cover.

On the positive side, thistles tend to have very rich (high sugar) nectar, which makes them especially attractive to pollinators and birds. The seeds rank high on the dietary choice list of

numerous birds, especially finches. The fluff from the seeds is used as nesting material, so from the wildlife management perspective, thistles may have a desirable place in the landscape.



Rosettes of biennial thistles: yellow thistle (above) and bull thistle (right)



The plants are non-toxic from the chemical perspective; however, because of their thorns, they can cause injury to the mouths of livestock. Animals tend to shy away from eating them unless they are extremely hungry.

Control of thistles in pastures: Preventing seed production is critical. Healthy, vigorous pastures tend to reduce the potential for thistle establishment by shading thistle rosettes, limiting their potential for seed production. Smaller biennials can be dug up by hand if the infestation is small; however, this isn't practical on the large scale. Mowing can be effective if timing is correct (when the stems are hollow and the plant can no longer send up new flowering shoots), although mowing must take place before the flowers have formed. Herbicides can also be used to control thistles; however, they are more effective on first year rosettes. The common chemical, 2, 4-D, can be used on rosettes very effectively. GrazonNext HL will control flowering thistles; however, if seeds have already formed, they can remain viable and mowing may be the best option, at this point, to minimize the number of new seeds. Timing control is the key and often thistles are not considered to be a problem until flowers are visible. It is critical to spray before this time, so we recommend walking your pastures in the spring to scout for pest plants so you can catch them early. Scouting in late winter, before the spring grass flush, is the optimum time.

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