

Wooly Distaff Thistle

Article and photos by Ricky Linex
Wildlife Biologist, Natural Resources Conservation Service

Since the inception of the bi-monthly *Plant Profile* articles, 120 plants have been featured. The vast majority of these, 99% in fact, were native plants and beneficial to Texas wildlife, livestock or for reducing soil and water erosion. This month's profile of wooly distaff thistle, or more commonly just called distaff thistle, is both an introduced plant and a true weed with few redeeming values. Once detected, distaff thistle should not be allowed to spread and infest your property. The year of 2019 will long be remembered as a year of distaff thistle spreading into new areas and expanding across ranches in counties where it has previously been seen. Plant reference books note its arrival in Texas as early as 1970 in northern McCulloch County. In about 1975 it was noticed by Edwin Kessler growing on a farm in McClain County, Oklahoma. It was noticed as a new weed in San Saba and Mills County in the mid to late 1970's. When I began work with the Soil Conservation Service, now known as the Natural Resources Conservation Service (NRCS), in the Goldthwaite field office in the summer of 1982, Danny Long, then county extension agent in Mills County was promoting the results of recently completed test plots to control distaff thistle.

It seemed to fall off the radar of invasive observations during dry periods of the past four decades, but enough plants were germinating and maturing seed to increase its spread to 21 counties in 1990 as reported in *Regeneration Potential of Distaff Thistle in Central Texas* by Carolyn E. Phelan, Christopher A. Call, and Barron S. Rector. This four-page document contains information on seed production, viability of seed and management implication in Texas.

Distaff thistle is an annual weed that begins growth in late fall and early winter and forms a rosette that bolts up during early spring and matures into a plant that by mid-May of this year could touch the top wire of a five-wire barbwire fence. A first clue for distaff thistle identification is a gray-green foliage, thin spider web appearance in the leaves with spiny tips on all leaves. Plants are normally seen 24-36 inches in height although this year has seen some up to 44 inches. The stems are erect with stiff branching in the upper half. Leaves have deeply cut lobes showing coarse teeth between the lobes with all parts of the leaves and teeth spine-tipped. The upper sides of all leaves show the wooly or cottony cobweb like hairs that gives the plant a grayish cast. The flowers, like many thistles, do not have ray flowers but have yellow disk flowers with length-wise red veins. Sometimes the flower color appears white rather than yellow but still shows the red veins.

The study conducted by Phelan et al described seed production on a 100 foot transect across an Adobe ecological site in Burnet County averaging 10 plants/ft² with 1.4 seed heads per plant and 28 seeds per seed head. Viable seed was calculated at 93 percent meaning the area was capable of producing 360 seeds per square foot. You can see that each year the plants are allowed to produce seed the seed bank increases drastically. Seeds are believed to remain viable buried in the soil for five to 10 years.

Without treatment the stems that mature and die will remain standing for at least another year making it difficult to walk through these areas for animals or people. The most efficient control are chemicals applied while the plants are in the rosette stage. Unfortunately, as with many weeds, we tend to ignore the weed problem until the plants are approaching maturity when it becomes too late to effectively use chemicals. Mowing at the right time can be effective as can summer prescribed

burns to reduce seed production. Reducing ground disturbance is also suggested to suppress the weed. One conservation practice that does seem to reduce occurrence of distaff thistle is healthy grass cover that shades out the annual thistle. This grass cover is the result of good grazing management. One last point, as you are reading this article now, seeds of distaff thistle are germinating and beginning to form young rosettes. Plan your action now to control them at the right stage of growth.

#

Photo captions:

1 Distaff Thistle growth as tall as the fence by mid-May



2 Close-up of the Distaff flower shows the red veins in the flower petals and the spiderweb-like hairs giving the plant a grayish color.



3 Chemical control of Distaff works when applied in the early spring rosette stage, the damage has been done for this year, a mid-May application is too late.



4 Early July shredding of pasture may not prevent seeds from maturing and non-mown areas will produce seeds.



5 Maturing in July and August this plant has produced seeds for future infestation of Texas lands.



6 Distaff Thistle seeds rapidly spread from initial establishment along public roads.



7 Distaff thistle seeds can remain viable in the soil for 5 to 10 years.



8 Initial infestation seen along ranch roads can be brought in and spread by visitors to the land.



9 Distaff thistle marching from road into pasture covering 25 yards per year.



10 Rosettes of Distaff thistle taken January 30, 2020 in Stephens County, Texas.

