Using geese to control weeds in a poplar plantation

Shannon Poppy of the Agroforesty Unit of ForestFirst (formerly Saskatchewan Forest Centre) was the guest speaker at the Feb. 17/09 meeting of Nature Prince Albert. She described her 2007 research project to test the use of geese as an alternative way to control weeds in a poplar plantation at the Conservation Learning Centre south of P.A.

Agroforestry integrates woody plants (trees and shrubs) into crop rotation on farms. There are five basic practices:

- Alley cropping, where crops such as corn are grown between rows of trees, creating a microclimate that controls erosion and conserves moisture
- Riparian buffers filter out particulates, reduce erosion, etc.
- Forest farm allows for cropping below trees, such as morels.
- Shelter belts reduce water and wind erosion, trap snow, protect livestock, reduce greenhouse gases, provide wildlife habitat, increase crop yields.
- Silvopasture, which combines management of trees, grass and grazers, for example. with all three being marketable products.

In a tree plantation, weed control in the initial years is vital for proper growth. Options to herbicides are mulches, mowing and tillage. Shannon found there was little research from Western Canada about the use of geese to control weeds. She put together a project to test the concept.

In May 2007, 36 Danish geese goslings were purchased from Prince Albert Co-op. They were kept in a shed at Conservation Learning Centre and fed chick starter and weeds: dandelions, lambs quarters, sow thistle and shepherds purse. On June 5, at four weeks of age, 22 goslings (some had died) were released into a fenced test site. Seven in one paddock and 15 in the third, providing for different stocking rates. On the fourth night, all 22 were lost to predators that buried under the reinforced deer fence.

She was able to get 24 two-year-old male geese from the Kyle Hutterite Colony … free. They were released into the paddocks; eight in one and 16 in the other. However, they continually broke down the fence separating them, so they were allowed to graze in one large paddock. They tended to stay close to the water tank (like cattle do) so the tank was frequently moved to different areas of the paddock. In September, 17 geese were removed the CLC (seven lost to predators).

The following observations are noted in her report.

- Average weed height in the control paddock was 82 cm and 37 cm in the grazed paddock
- The geese showed a preference for some weed species over others. Weed species best controlled by the geese included fleabane, wild oats, hawks beard and dandelion. Both Canada thistle and sow thistle showed little sign of grazing.
- At the end of the season it was observed that the geese had striped the bark from two of the trees in the paddock.

From this small demonstration Shannon reached the following conclusions:

- Not all undesirable weed species will be controlled by geese.
- There is a risk of tree damage.

- Managing predation appears to be one of the most problematic and expensive challenges that a landowner will face if using geese in a prairie plantation.

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-Reported by Ruth Griffiths