

## South Dakota Saltcedar Phenology and Identification

Michelle K. Ohrtman and Sharon A. Clay\*

\* First and second authors: Post-doctoral Research Associate and Professor, South Dakota State University, Department of Plant Science, Brookings, SD 57007. Corresponding author's E-mail: michelle.ohrtman@sdstate.edu.

For a full description of saltcedar phenology see the Global Invasive Species Database <http://www.issg.org/database/species/ecology.asp?si=72&fr=1&sts=sss&lang=EN>

Saltcedar plants in South Dakota and other northern states are more genetically similar to *T. ramosissima* which extends farther north than other species in its native range (Baum 1978; Friedman et al. 2008). Saltcedar plants successful in northern plains' states exhibit the following traits relative to southern plants:

- smaller stems,
- delayed leaf emergence (typically late April to May),
- high energy investment in root material,
- truncated seed release periods (typically between early July and early September),
- greater cold hardiness,
- early-fall bud set and leaf senescence, and
- stem dieback in the winter

(Friedman et al. 2008, 2011; Lesica and Miles 2001; Pearce and Smith 2003; Sexton et al. 2002, 2006).

### Cultivated Saltcedar (From Seed to 12 Weeks of Age)



Vial containing 100 saltcedar seeds. Photo courtesy of Tabi Christner.



Five day old saltcedar seedlings. Colored circles are pin heads (2 mm diameter).



Three week old saltcedar seedlings. Metal pin heads are ~2 mm diameter.



Four week old saltcedar grown in cone-tainers (5 cm diameter by 21 cm depth).



Eight week old saltcedar grown in cone-tainers (5 cm diameter by 21 cm length).



Twelve week old saltcedar grown in cone-tainers (5 cm diameter by 21 cm length).

## Saltcedar in the Field



Flowers of saltcedar growing along the Cheyenne River in Pennington County, SD.



Seeds of young saltcedar growing along the Cheyenne River in Pennington County, SD.





Young saltcedar plants along the Cheyenne River in Pennington County, SD.



Excavated young saltcedar plant along the Cheyenne River in Pennington County, SD.



Young saltcedar plant along the Cheyenne River in Pennington County, SD.



Mature saltcedar next to a dense patch of young saltcedar plants along the Cheyenne River in Pennington County, SD.



Saltcedar plants establish on moist substrates such as those adjacent to lakes and rivers. These young saltcedar plants are located along the edge of a pond adjacent to the Cheyenne River in Pennington County, SD.



Saltcedar plants growing on a bar of the Cheyenne River at the Wild Horse Sanctuary in Fall River County, SD. Photo courtesy of Amy Mesman.



Saltcedar seedlings along the Cheyenne River at the Wild Horse Sanctuary in Fall River County, SD. Photo courtesy of Amy Mesman.



Mature saltcedar plants found on a gravel pit near Wasta, SD.





Young saltcedar plants (pink flowers) growing on a gravel pit near Wasta, SD. Photo courtesy of Amy Mesman.