Integrated Strategies
For Goatgrass Control
By: Dusty Eddy, Wasco Co., NRCS
Brian Tuck, Wasco Co. Extension Agent

Recently, there have been more and more complaints about goatgrass control in the small grain growing areas of Wasco Co. Due to the continued drought situation and move towards annual cropping, coupled with an increase in direct seeding, goatgrass has become a serious problem that needs a long term solution. This long-term solution must consider the effects on the environment.

To help growers develop a long term management plan to deal with goatgrass, the following are recommendations supported by research from OSU/WSU:

Basics-
1. Prevent infestations through planting clean seed and equipment sanitation. Clean equipment before moving out of infested areas or into clean areas. Tarp wheat trucks. Don’t drive through infested areas.
2. Prevent seed set by spraying out worst areas in crop or mowing. Spray out field borders and field roads and roadsides. It may take repeated applications.
3. When harvesting reduce the air on combine and cut low to remove seed from field. Do not spread straw and chaff, remove from field if possible. Don’t throw infested straw or chaff into field borders or onto roadsides. Or harvest around worst areas and spot burn in fall.

Crops and Rotation-
1. Increase crop competition by
   a. use of high quality, large, treated seed,
   b. 10% higher planting rates,
   c. plant earlier,
   d. fertilize according to soil tests, avoid over-fertilizing.
   e. place fertilizer with and/or below seed
   f. use narrower row spacings.

2. Grow at least two consecutive spring grain crops if possible, for severe infestations. Include spring grain in the long term rotations to minimize severe infestations. This is probably the most important strategy according to research. (make sure to not plant too early, try and get some spring emergence of JGG before seeding spring wheat)

3. Grow a broadleaf crop in which grassy weeds can be controlled with labeled herbicides. In your area, if this is not possible, chemical fallow worst areas. (monitor fallow areas to prevent JGG seed production in the field AND around field margins).

4. The use of herbicide resistant winter wheat has been shown to be very effective in heavily infested areas. The stewardship program for the herbicide resistant wheat must be followed.

5. As last resort, spot burn in fall when fire will be slow and hot to destroy as much seed as possible. (EQIP cost will have to be deferred on these areas if significant). Research has shown that burning by itself is not a final solution. Burning must be a part of an overall integrated management plan (including crop rotation, competitive wheat crops, and herbicide-resistant wheat). Burning not only reduces long term soil quality, but also represents a potential air quality concern.
6. Cows will spread the goatgrass to uninfested areas. Research indicates that up to 75% of the goatgrass passing through the cow is still viable.

References:
- 2001 Columbia Basin Agricultural Research Center Annual Report page 56, Integrated Management of Jointed Goatgrass in Winter Wheat, by Dr. Dan Ball and Dr. Frank Young (contact either Dusty Eddy or Brian Tuck for copies)
- Dan Ball’s Weed Research website http://oregonstate.edu/dept/weeds/home.html
- PNW STEEP http://pnwsteep.wsu.edu/
- National Jointed Goatgrass Research http://www.jointedgoatgrass.org/