***Ventenata* Control Follow Up Survey**

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# Introduction

In 2011 researchers in the Department of Plant, Soil, and Entomological Sciences, in collaboration with the Social Science Research Unit at the University of Idaho conducted a study to assess the level of awareness and concern around the invasive grass, *Ventenata dubia* (North Africa grass). The study was specifically interested in the views of agricultural producers in eastern Washington and north Idaho. In total, 563 producers completed the mail survey. These results were used to understand and document both the spread of *Ventenata* and its impact on the agricultural operations in the region. In addition, the data was used to inform Extension and other University outreach efforts and training to producers about how to control *Ventenata* in their properties. The Social Science Research Unit conducted a follow up survey in June 2014 of the same 563 producers. The goals of the follow up survey were to document changes in *Ventenata* management practices and adoption rates of the proposed decision support tool which resulted from pre-survey data. The *Ventenata* management practices and information developed from the first survey were distributed to producers through workshops and field days. This survey aims to review adoption rate results to indicate the effectiveness of the implementation and distribution of *Ventenata* management practices. The survey also aims to evaluate the effectiveness of management tactics proposed in the decision support tool which resulted from the previous year’s research. The overall goal of the study is to provide a broad assessment of ecological and economic impacts of *Ventenata* in the Inland Northwest.

# Methodology

## Sampling and Data Collection

The survey was conducted as mail survey using a Dillman[[1]](#footnote-1) method (Dillman *et al.* 2009). The first survey’s target population was individual farms of 80 or more acres in six counties in Washington, Oregon, and Idaho. The second survey was sent to producers who responded in the survey in 2011 (563 producers).

The survey instrument was designed in conjunction between SSRU staff, and researchers in the Department of Plant, Soil, and Entomological Sciences and the Department of Agricultural Economics and Rural Sociology. Questions from the initial survey were used as a base but some questions were removed or added. The survey instrument is presented in Appendix A. This study was approved by the University of Idaho Institutional Review Board, protocol number 10-003.

Table 1 describes the three different mailing sent in 2014, the date they were sent and the number of respondents the mail out was sent to. The first survey mailing consisted of a survey introductory letter (Appendix B) and self-addressed stamped envelope. A reminder postcard was sent one week later, followed by a final survey, letter, and self-addressed stamped envelope. Data entry was completed on the 23rd of July 2014, to allow respondents time to mail back their surveys.

Table 1: Data Collection Mailing Schedule

|  |  |  |
| --- | --- | --- |
| **Mailing** | **Date** | **Number of Mailings Sent** |
| First survey mail out | May 6th 2014 | 563 |
| Follow up postcard | May 15th, 2014 | 451 |
| Second survey mail out | June 2nd 2014 | 363 |

We received 291 completed and eligible surveys, and 32 respondents were determined ineligible (no longer farming). The final response rate was 57.5 percent (AAPOR2, AAPOR 2006)[[2]](#footnote-2).



Figure 1: Picture of *Ventenata* that was included

on survey booklet courtesy of Dr. Tim Prather

## Data Limitations

As is custom with self-administered surveys, respondents may leave answers blank or incorrectly follow directions. This survey yielded a moderate frequency of respondent error, resulting in missing data. Fifteen percent of respondents had some error or inconsistency in their survey (forty-three individual respondents). Many respondents left questions blank or did not properly follow skip patterns. Each survey error was evaluated by two SSRU employees to determine if it fell under one of three cases: skipped questions/implied response, skipped questions/missing data, or answered questions that should have been skipped over. Table 2 below describes common mistakes, the proportion of surveys that included this mistake and SSRU action.

Table 2: Response Errors and Solutions

|  |  |  |
| --- | --- | --- |
| **Error** | **Number of respondents who committed error** | **SSRU action** |
| Answered questions that should have been skipped over | 5.8% | Remove the unnecessary/irrelevant data |
| Skipped over questions which should have been answered, was not overlap with other questions | 5.4% | No action-missing data |
| Skipped over questions which should have been answered, overlaps with other question | 4.8% | If the answer is implied or answered in another part of the survey, the data is inputted |

# Results

## *Ventenata* Occurrence, Producer Concern, and Level of Management

Approximately two out of three respondents has heard of *Ventenata*, this is an increase from last year where about half of respondents had heard of the grass. About half (49 percent) of those who did had not heard of the weed in the initial survey indicated they had heard of it in the follow up survey. One out of three producers who had not heard of *Ventenata* before the study indicated that they had heard of the weed in the follow up survey.

A little more than half of producers had seen *Ventenata* growing in their county in the follow up survey. This is an increase from the initial survey where only 40 percent of respondents had seen the grass. About one out of five producers who did not see *Ventenata* in their county indicated that they have seen it in the follow up survey.

When asked about whether, to the best of their knowledge, *Ventenata* was a weed in any of several types of crops or non-crop areas, the crops which have the highest indication are pasture, rangeland, grass hay, and conservation reserve program (CRP) (Figure 2).This has not changed greatly from the initial survey data and where most occurrences of the weed were reported in pasture, roadsides, hay, and CRP acres, though the proportion of producers who have seen or heard of *Ventenata* in each of these areas has decreased greatly.

Figure 2: Locations of *Ventenata*

This survey assessed respondents’ level of concern if *Ventenata* were to establish itself on their property. Of those respondents who had heard of the weed and seen it growing in their county, approximately 60 percent of producers would be ‘very concerned’ if *Ventenata* became established on their property. This is similar to results in the previous survey. Indicating that producers who are aware of the weed continue to see it as a problematic species.

About half of producers who responded have *Ventenata* growing on their property. Although this proportion is lower than the initial survey where about 80 percent of producers had *Ventenata*, 40 percent of those who did not have *Ventenata* at the time of the first survey have now indicated that *Ventenata* is growing on their property. And about 10 percent who indicated it was growing on their property previously, indicated that it was no longer growing on their property.

Sixty three percent of producers feel that *Ventenata* control is ‘very important’ on their property this is a slight increase from 57 percent in the previous survey. About 15 percent of respondents who identified control as ‘very important’ in previous survey now feel that control is only ‘somewhat important’, although approximately one out of three producers who felt that it was ‘somewhat important’ in the initial survey now feel that control is ‘very important’. Rates of *Ventenata* infestation and reduction in yield are near 20-25 percent for pasture, grass hay, and CRP (see Figure 3). These rates are comparable to responses in the initial survey.

Figure 3: Percent Infestation and Reduction in Yield

Approximately 40 percent of producers who have *Ventenata* growing on their property have experienced increased costs to their business resulting in more than $10 an acre due to crops infected with *Ventenata*. This is followed by 32 percent who have experienced increased costs less than $10 an acre and 29 percent who have not experienced an increase in costs. Seven out of ten producers have altered how they manage their operation due to *Ventenata*. While the proportion of producers have changed their operation due to *Ventenata* is relatively the same as in the initial survey, 43 percent of producers who had not changed their management practices by the previous survey indicated that they have change their practices at the time of the follow up survey. Also, about 35 percent of respondents who did not experience any increased costs in affected crops at the time of the initial survey are now experiencing costs to their business. Of these a little less than half are experiencing less than $10 an acre increase and a little more than half are experiencing greater than $10 an acre increase in costs. Finally, when we cross tabulate producer’s percent of control in the initial survey with the level they indicated in the follow up survey most respondents are at the same level they were in 2011 except for those who had the highest proportion of control at the time of the initial survey. Fifty-seven percent of those who had greater than 90% control now have 75% control or less. Although over 40 percent of those who had less than 50% control or about 50% control are now at about 75% control or greater (see Figure 4).

Figure 4: Change in Percent Control Achieved from Initial survey

## Access to Management Decision Making Tool

The University of Idaho Extension implemented a management decision making tool via workshops and/or field days. In the follow up survey 17 percent of producers indicated that they attended a workshop or field day (9 percent attended once, 2 percent attended twice, and 6 percent attended three or more times). Those who attended workshops were more likely to be farming one hundred acres or more and to be experiencing an over $10 per acre increase in costs in crops affected by *Ventenata*. These differences were statistically significant.

While the rate of attendance at workshops or field days were slightly low, generally producers are increasing their use of University Extension materials to find better ways to control *Ventenata*. Twenty-eight percent of producers had accessed Extension related products or educational materials related to *Ventenata*. This proportion has nearly doubled from 13 percent in the initial survey. One out five producers who had not accessed materials in the initial survey indicated that they had on the follow up survey.

## Control of *Ventenata*

One of the main objectives of the study was to understand what producers are doing to control *Ventenata* on their property. A goal of the follow up survey specifically is to see what practices are being used by producers, especially by those who attended an Extension workshop about *Ventenata* management. In the initial survey respondents were asked what practices they use generally. Over 60 percent of producers use mowing or herbicides to control the weed. Cultivation was reported as a control method by 46 percent of respondents.

The follow up survey sought to better understand the variations and combinations of these practices with respect to crop type.Approximately 80 percent of respondents who grow grass hay are applying an effective herbicide when one is registered, and a similar proportion has considered this technique. About half of producers (53 percent) are applying potassium and phosphorus in the fall and nitrogen in the spring to make Timothy Hay more competitive, again a similar proportion is also considering this practice. The least used practice (26 percent) by producers is harvesting Timothy at 4 inch height to make it more competitive (see Figure 5).

Figure 5: *Ventenata* Management Practices in Timothy or Grass Hay

When we evaluate producer’s practices based on whether or not they attended a workshop or field day, statistically significant differences emerge. Producers who attended a field day or workshop are twice as likely to harvest Timothy Hay at 4 inches to make it more competitive (43 percent) than those who did not attend a workshop (17 percent). Producers who attended a workshop or field day (97 percent) are also significantly more likely than those who did not attend to apply an effective herbicide when one is registered (77 percent). *Ventenata* contamination affects export of grass for 11 percent of producers who responded.

As Figure 6 demonstrates the most common *Ventenata* management practices adopted or considered among producers with CRP are mowing to rejuvenate stand and spraying an herbicide (about 50 percent), and spraying an herbicide and fertilizing in order to make grasses competitive (a little less than 60 percent).

Figure 6: *Ventenata* Management Practices in CRP

Statistically significant differences also emerged in CRP management practices for *Ventenata* between producers who attended a field day or workshop and those who did not. Those who attended were more likely to adopt the practice of spraying an herbicide and fertilizing to make other grasses more competitive (27 percent) than those who did not (7 percent). In the same way those who attended a workshop (92 percent) were more likely than those who did not (41 percent) to consider mowing to rejuvenate stand and spraying an herbicide.

Figure 7 describes producer practices in pasture. The most adopted and considered techniques are rotating cattle to a different pasture when 50% of the forage has been removed (75 percent adopted, 80 percent considered), and spraying an herbicide and fertilizing to make grasses more competitive (63 percent adopted and 77 percent considered).

Figure 7: *Ventenata* Management Practices in Pasture

Producers who had attended a workshop were more likely to adopt spraying an herbicide and fertilizing to make grasses more competitive (80 percent), and spraying an herbicide along with livestock rotation when 50% of forage has been eaten (67 percent) than those who did not attend a workshop (55 percent and 40 percent respectively).

## Producer Demographics

In order to understand the characteristics of the operations that responded to the survey and are impacted by *Ventenata*, the survey contained two questions to understand the demographic profile of producers and their farming operation.

When asked about the acreage under production, whether owned or leased, many farms (41 percent) had less than 200 acres under production, though 21 percent of operations had more than 1,000 acres under production (Figure 8). These numbers should not be interpreted as total farm size, as pasture and CRP acres are not reported here. These proportions are the same as in the initial survey.

Figure 8: Acres in Production

Similarly to the initial survey, over half of the respondents to the survey had been involved in agriculture for more than 30 years with 14 percent of the respondents were relatively new to farming, having less than 10 years of experience (Figure 9).

Figure 9: Years Involved in Agricultural Production

# Conclusions

Awareness and identification of *Ventenata* has increased since the previous survey. About one out of five producers who did not see *Ventenata* in their county at the time of the initial survey indicated that they have seen it in the follow up survey. One third of producers who had not heard of *Ventenata* at the time of the initial survey indicated that they had heard of the weed in the follow up survey. Approximately two out of three respondents has heard of *Ventenata*. Also more than half of producers had seen *Ventenata* growing in their county. Consistent with other data and the previous survey most occurrences of the weed were reported in pasture, non-crop areas, hay, and conservation reserve program (CRP) acres, although the proportion of those who have seen or heard of Ventenata in each of these area is smaller than in the previous survey. Four out of ten producers who did not have *Ventenata* growing on their property at the time of the initial survey now have the weed. About 43 percent of producers have since altered their management practices due to *Ventenata*. We also found that many producers who achieved high level of control have not been able to maintain it. Although many producers who were at 50% or less are increasing their percentage of control. These results suggest that *Ventenata* is continuing to affect more producers which may explain why levels of concern around the weed remain high, and why most producers view *Ventenata* control as ‘very important’. This is also indicative of the increase in use of Extension materials from 13 percent in the initial survey to 28 percent in the follow up survey.

In the initial survey producers were mostly using herbicides and mowing, followed by cultivation to control *Ventenata*. Our results show a similar tendency. For grass hay most producers are using an herbicide (84 percent). In CRP producers are using herbicide in addition to mowing (55 percent) or fertilization (54 percent). In pasture producers are rotating cattle after 50% of the forage has been removed (75 percent) or using an herbicide along with fertilization (63 percent) or rotating livestock (48 percent).

*Ventenata* management practices were distributed to producers through workshops or field days. Seventeen percent of respondents were able to attend. In grass hay management, those who had attended workshops were more likely to harvest Timothy Hay at 4 inches to make it more competitive (43 percent) than those who did not attend a workshop (17 percent). Producers who attended a workshop or field day (97 percent) are also more likely than those who did not attend to apply an effective herbicide when one is registered (77 percent).

Statistically significant differences also emerged CRP management between those who attended the workshop and those who did not attend. Those who attended were more likely to adopt the practice of spraying an herbicide and fertilizing to make other grasses more competitive (27 percent) than those who did not (7 percent). In the same way those who attended a workshop (92 percent) were more likely to than those who did not (41 percent) to consider mowing to rejuvenate stand and spraying an herbicide.

In terms of *Ventenata* management in pasture, producers who had attended a workshop were more likely to adopt spraying an herbicide and fertilizing to make grasses more competitive (80 percent), and spraying an herbicide along with livestock rotation when 50% of forage has been eaten (67 percent) than those who did not attend a workshop (55 percent and 40 percent respectively).

While management practices were significantly affected by workshop attendance. No statistically significant differences were detected in percent control between those who had attended or not attended a workshop. In the same way no statistically significant differences emerged in percent control between management practices.

# Appendix A: Survey Instrument

Ventenata ControL

Follow up Survey

**Ventenata Control Practices Follow-up Survey**

The invasive grass, *Ventenata*, which is also known as North Africa Grass is a non-native plant that has established itself in the Pacific Northwest in the past twelve years. It primarily affects fields which grow grass hay, or are used for pasture or CRP. The purpose of this follow-up study is to assess if education measures helped producers improve management practices in controlling this invasive weed.

1. Have you heard of the grass, *Ventenata* (sometimes called North Africa Grass), prior to receiving this survey?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

1. Have you seen the weed *Ventenata* growing anywhere in your county, whether in your fields, on other farms, or along roadsides?

\_\_\_\_\_ Yes

\_\_\_\_\_ No 

1. To the best of your knowledge is *Ventenata* a weed in any of the following crops or situations (either in your fields or the fields of others)? (Please mark all that apply).

|  |  |  |
| --- | --- | --- |
| **Field Type** | **I have heard of it in these fields (Circle one)** | **I have seen it in these fields**  **(Circle one)** |
| Rangeland | Yes No | Yes No |
| Pasture | Yes No | Yes No |
| Kentucky Bluegrass | Yes No | Yes No |
| Timothy Hay | Yes No | Yes No |
| Grass hay | Yes No | Yes No |
| CRP (Conservation Reserve Program) | Yes No | Yes No |
| Alfalfa | Yes No | Yes No |
| Non-crop areas (waste areas/ roadsides/ equipment yard) | Yes No | Yes No |
| Other\_\_\_\_\_\_\_\_\_\_\_ | Yes No | Yes No |
| Other\_\_\_\_\_\_\_\_\_\_\_ | Yes No | Yes No |

1. If *Ventenata* became established on your property how concerned would you be?

\_\_\_\_\_ Very concerned

\_\_\_\_\_ Somewhat concerned

\_\_\_\_\_ Not concerned

1. Is *Ventenata* growing on your property?



\_\_\_\_\_ Yes  **Go to next question**

\_\_\_\_\_ No **Go to Q20, page 7**

1. How important is *Ventenata* control on your property?

\_\_\_\_\_ Very important

\_\_\_\_\_ Somewhat important

\_\_\_\_\_ Neither important nor unimportant

\_\_\_\_\_ Somewhat unimportant

\_\_\_\_\_ Very unimportant

1. What percent control have you achieved on your property?

\_\_\_\_\_ Greater than 90% control

\_\_\_\_\_ About 75% control

\_\_\_\_\_ About 50% control

\_\_\_\_\_ Less than 50% control

1. Which crops has *Ventenata* affected on your property? (Please enter 0% if it does not appear in that field type).

|  |  |  |
| --- | --- | --- |
| **Crop/Field Type** | **Estimated Percent Infestation in Fields** | **Estimated Percent Reduction in Yield** |
| Pasture | % | % |
| Kentucky Bluegrass | % | % |
| Timothy Hay |  |  |
| Grass hay | % | % |
| Conservation Reserve Program (CRP) | % | % |

1. Has *Ventenata* increased costs to your business in the affected crops?

\_\_\_\_\_ No

\_\_\_\_\_ Yes, < $10/acre

\_\_\_\_\_ Yes, >$10/acre

1. Has *Ventenata* altered how you manage your operation?

\_\_\_\_\_ No

\_\_\_\_\_ Yes, a little bit

1. Do you grow grass hay?

\_\_\_\_\_ Yes

\_\_\_\_\_ No 🡪 **Skip to Q14**

1. With respect to the following management practices in timothy or other grass hay, circle your answer:

|  |  |  |
| --- | --- | --- |
|  | **Adopted the technique**  **(Circle one)** | **Considering adoption (Circle one)** |
| Harvest timothy hay at 4 inch height to make timothy more competitive | Yes No | Yes No |
| Apply potassium and phosphorus in the fall and nitrogen in the spring  to make timothy competitive | Yes No | Yes No |
| Apply an effective herbicide when one is registered | Yes No | Yes No |

1. Does ventenata contamination affect export of your grass hay?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

\_\_\_\_\_ I don’t export my hay

1. Do you manage CRP?

\_\_\_\_\_ Yes

\_\_\_\_\_ No 🡪 **Skip to Q17**

1. With respect to the following mid-contract management practices in CRP, circle your answer:

|  |  |  |
| --- | --- | --- |
|  | **Adopted the technique**  **(Circle one)** | **Considering adoption (Circle one)** |
| Burn in fall to control *Ventenata* | Yes No | Yes No |
| Burn in the spring to control *Ventenata* | Yes No | Yes No |
| Mow to rejuvenate stand and spray an herbicide for *Ventenata* control | Yes No | Yes No |
| Apply fertilizer if soil is deficient to make grasses more competitive | Yes No | Yes No |
| Spray an herbicide and fertilize for *Ventenata* control and make grasses competitive | Yes No | Yes No |

1. Is *Ventenata* control required by Farm Service Agency (FSA) in your county?

\_\_\_\_\_ No

\_\_\_\_\_ Yes

1. Do you manage pasture?

\_\_\_\_\_ Yes

\_\_\_\_\_ No 🡪 **Skip to Q20**

1. With respect to the following management practices in pasture, circle your answer:

|  |  |  |
| --- | --- | --- |
|  | **Adopted the technique**  **(Circle one)** | **Considering adoption (Circle one)** |
| Burn in fall to control *Ventenata* | Yes No | Yes No |
| Burn in the spring to control *Ventenata* | Yes No | Yes No |
| Rotate cattle to a different pasture when 50% of the forage has been removed | Yes No | Yes No |
| Spray an herbicide and fertilize for *Ventenata* control  and to make grasses competitive | Yes No | Yes No |
| Spray an herbicide along with livestock rotation when 50% of forage has been eaten | Yes No | Yes No |

1. Has *Ventenata* in pasture caused you to take any of the following actions?

\_\_\_\_\_ Alter stocking rates

\_\_\_\_\_ Change rotations

\_\_\_\_\_ Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Have you accessed any Extension related products or educational materials related to *Ventenata*?

\_\_\_\_\_ No

\_\_\_\_\_ Yes



**Continue on next page 🡪**

1. Have you attended a workshop or field day that discussed Ventenata?

\_\_\_\_\_ No

\_\_\_\_\_ Yes, once

\_\_\_\_\_ Yes, twice

\_\_\_\_\_ Yes, three or more time

1. How would you prefer to receive information on *Ventenata* management from Extension?

\_\_\_\_\_ Publications

\_\_\_\_\_ Website

\_\_\_\_\_ Field days/demonstrations

\_\_\_\_\_ Other\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. How many acres do you have under production (whether owned or leased)? \_\_\_\_\_\_\_\_\_ total acres
2. How many years have you been involved in agricultural production? \_\_\_\_\_\_\_\_\_ years

Do you have any additional comments about *Ventenata* you’d like to share?

**Thank you for your time. Please return this questionnaire in the self-addressed, stamped envelope provided.**

# Appendix B: Tabular Frequencies

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Have you heard of the grass, *Ventenata* (sometimes called North African Grass), prior to receiving this survey?** | | | | | |
|  | **Frequency** | **Percent** | **Std. Err of** | **95% Confidence Limits** | |
| **Percent** | **for Percent** | |
| **No** | 76 | 39.5% | 7.2% | 25.4% | 53.6% |
| **Yes** | 205 | 60.5% | 7.2% | 46.4% | 74.6% |
| **Total** | 281 | 100 |  |  |  |
| **Frequency Missing = 10** | | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Have you seen the weed *Ventenata* growing anywhere in your county, whether in you fields, on other farms, or along roadsides?** | | | | | |
|  | **Frequency** | **Percent** | **Std. Err of** | **95% Confidence Limits** | |
| **Percent** | **for Percent** | |
| **No** | 85 | 46.3% | 6.7% | 33.2% | 59.5% |
| **Yes** | 190 | 53.7% | 6.7% | 40.5% | 66.8% |
| **Total** | 275 | 100 |  |  |  |
| **Frequency Missing = 16** | | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **To the best of your knowledge is *Ventenata* a weed in any of the following crops or situations (either in your field or the fields of others)?**  **(Please mark all that apply).**  **I have heard of it in these fields** | | | | | |
|  | **Frequency** | **Percent** | **Std. Err of** | **95% Confidence Limits** | |
| **Percent** | **for Percent** | |
| **Rangeland** | 96 | 51.7% | 4.6% | 42.6% | 60.9% |
| **Pasture** | 100 | 55.3% | 4.7% | 46.0% | 64.6% |
| **Kentucky Bluegrass** | 42 | 26.4% | 4.1% | 18.3% | 34.4% |
| **Timothy Hay** | 58 | 34.6% | 4.5% | 25.7% | 43.4% |
| **Grass Hay** | 87 | 47.4% | 4.6% | 38.3% | 56.6% |
| **CRP (Conservation Reserve Program)** | 105 | 55.3% | 4.6% | 46.3% | 64.4% |
| **Alfalfa** | 46 | 24.5% | 3.6% | 17.3% | 31.8% |
| **Non-crop areas (waste areas/roadsides/**  **equipment yard)** | 110 | 57.0% | 4.6% | 48.0% | 66.1% |
|  | | | | | |

***Other Responses***

395 to Daypark

BLM Rangeland

Crop

Lawns

P. Prairie

Rock Pits

Wheat

Wheat fields

Winter Wheat

Oats

State Rangeland

Urban

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **To the best of your knowledge is *Ventenata* a weed in any of the following crops or situations (either in your field or the fields of others)?**  **(Please mark all that apply).**  **I have seen it in these fields** | | | | | |
|  | **Frequency** | **Percent** | **Std. Err of** | **95% Confidence Limits** | |
| **Percent** | **for Percent** | |
| **Rangeland** | 121 | 53.4% | 4.3% | 44.9% | 61.8% |
| **Pasture** | 136 | 56.9% | 4.2% | 48.6% | 65.2% |
| **Kentucky Bluegrass** | 46 | 27.4% | 4.0% | 19.5% | 35.3% |
| **Timothy Hay** | 65 | 34.6% | 4.1% | 26.5% | 42.7% |
| **Grass Hay** | 114 | 52.6% | 4.4% | 44.0% | 61.2% |
| **CRP (Conservation Reserve Program)** | 128 | 57.0% | 4.3% | 48.4% | 65.5% |
| **Alfalfa** | 52 | 27.2% | 3.7% | 19.8% | 34.6% |
| **Non-crop areas (waste areas/roadsides/**  **equipment yard)** | 136 | 61.4% | 4.4% | 52.7% | 70.1% |
|  | | | | | |

***Other Responses***

All farm land wet areas.

BLM Rangeland

Crop

Grave roots

Haying Equipment

Lawns

P. Prairie

Rock Pits

Wheat

Wheat fields

Oats

State Rangeland

Urban

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **If *Ventenata* became established on your property how concerned would you be?** | | | | | |
|  | **Frequency** | **Percent** | **Std. Err of** | **95% Confidence Limits** | |
| **Percent** | **for Percent** | |
| **Very concerned** | 154 | 62.3% | 5.3% | 52.0% | 72.7% |
| **Somewhat concerned** | 107 | 35.4% | 5.0% | 25.5% | 45.8% |
| **Not concerned** | 7 | 2.2% | 1.0% | 0.4% | 4.1% |
| **Total** | 268 | 100 |  |  |  |
| **Frequency Missing = 23** | | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Is *Ventenata* growing on your property?** | | | | | |
|  | **Frequency** | **Percent** | **Std Err of** | **95% Confidence Limits** | |
| **Percent** | **for Percent** | |
| **No** | 106 | 52.5% | 6.2% | 40.3% | 64.6% |
| **Yes** | 166 | 47.5% | 6.2% | 35.4% | 59.7% |
| **Total** | 272 | 100 |  |  |  |
| **Frequency Missing = 19** | | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **How important is *Ventenata* control on your property?** | | | | | |
|  | **Frequency** | **Percent** | **Std Err of** | **95% Confidence Limits** | |
| **Percent** | **for Percent** | |
| **Very important** | 105 | 63.3% | 4.3% | 54.8% | 71.8% |
| **Somewhat important** | 46 | 29.4% | 4.2% | 21.2% | 37.6% |
| **Neither important nor unimportant** | 9 | 5.5% | 1.9% | 1.6% | 9.3% |
| **somewhat unimportant** | 2 | 1.4% | 1.0% | 0.0% | 3.5% |
| **Very unimportant** | 1 | 0.4% | 0.4% | 0.0% | 1.3% |
| **Total** | 163 | 100 |  |  |  |
| **Frequency Missing = 128** | | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **What percent control have you achieved on your property?** | | | | | |
|  | **Frequency** | **Percent** | **Std Err of** | **95% Confidence Limits** | |
| **Percent** | **for Percent** | |
| **Greater than 90% control** | 23 | 13.7% | 2.9% | 8.0% | 19.$ |
| **About 75% control** | 44 | 31.1% | 4.4% | 22.5% | 39.7% |
| **About 50% control** | 33 | 19.0% | 3.2% | 12.6% | 25.3% |
| **Less than 50% control** | 57 | 36.2% | 4.2% | 27.9% | 44.5% |
| **Total** | 157 | 100 |  |  |  |
| **Frequency Missing = 134** | | | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Mean Percent** | **Std Err of** | **95% Confidence Limits** | |
| **Percent** | **for Percent** | |
| **Infestation - Pasture** | 21.4% | 2.7% | 16.0% | 26.8% |
| **Infestation - Kentucky Bluegrass** | 7.1% | 2.0% | 3.0% | 11.2% |
| **Infestation - Timothy Hay** | 13.0% | 3.6% | 5.6% | 20.4% |
| **Infestation - Grass Hay** | 21.2% | 2.8% | 15.6% | 26.9% |
| **Infestation - CRP** | 17.5% | 2.9% | 11.7% | 23.4% |
| **Reduction - Pasture** | 23.7% | 3.5% | 16.8% | 30.6% |
| **Reduction - Kentucky Bluegrass** | 11.3% | 3.9% | 3.2% | 19.4% |
| **Reduction - Timothy Hay** | 16.8% | 6.0% | 4.4% | 29.2% |
| **Reduction - Grass Hay** | 25.2% | 3.7% | 17.8% | 32.7% |
| **Reduction - CRP** | 22.5% | 4.9% | 12.5% | 32.4% |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Has *Ventenata* increased costs to your business in the affected area?** | | | | | |
|  | **Frequency** | **Percent** | **Std Err of** | **95% Confidence Limits** | |
| **Percent** | **for Percent** | |
| **No** | 39 | 28.8% | 4.4% | 20.2% | 37.4% |
| **Yes, < $10/acre** | 50 | 31.9% | 4.1% | 23.8% | 40.0% |
| **Yes, > $10/acre** | 66 | 39.3% | 4.3% | 30.8% | 47.7% |
| **Total** | 155 | 100 |  |  |  |
| **Frequency Missing = 136** | | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Has *Ventenata* altered how you manage your operation?** | | | | | |
|  | **Frequency** | **Percent** | **Std Err of** | **95% Confidence Limits** | |
| **Percent** | **for Percent** | |
| **No** | 40 | 28.8% | 4.3% | 20.4% | 37.2% |
| **Yes, a little bit** | 128 | 71.2% | 4.3% | 62.8% | 79.6% |
| **Total** | 168 | 100 |  |  |  |
| **Frequency Missing = 123** | | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Do you grow grass hay?** | | | | | |
|  | **Frequency** | **Percent** | **Std Err of** | **95% Confidence Limits** | |
| **Percent** | **for Percent** | |
| **No** | 66 | 42.2% | 4.3% | 33.8% | 50.7% |
| **Yes** | 101 | 57.8% | 4.3% | 49.4% | 66.2% |
| **Total** | 167 | 100 |  |  |  |
| **Frequency Missing = 124** | | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **With respect to the following management practices in timothy or other grass hay circle your answer:** | | | | | |
|  | **Frequency** | **Percent** | **Std Err of** | **95% Confidence Limits** | |
| **Percent** | **for Percent** | |
| **Adopted- Harvest timothy hay at 4 inch height to make timothy more competitive** | 19 | 26.0% | 5.7% | 14.6% | 37.4% |
| **Adopted- Apply potassium and phosphorous in the fall and nitrogen in the spring to make timothy more competitive** | 35 | 52.9% | 7.0% | 38.8% | 67.0% |
| **Adopted- Apply an effective herbicide when one is registered** | 61 | 83.5% | 4.7% | 74.2% | 92.9% |
| **Considering- Harvest timothy hay at 4 inch height to make timothy more competitive** | 11 | 22.1% | 6.5% | 9.0% | 35.1% |
| **Considering- Apply potassium and phosphorous in the fall and nitrogen in the spring to make timothy more competitive** | 19 | 57.0% | 9.2% | 38.3% | 75.6% |
| **Considering- Apply an effective herbicide when one is registered** | 35 | 79.8% | 9.9% | 59.9% | 99.7% |
|  | | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Does *Ventenata* contamination affect export of your grass hay?** | | | | | |
|  | **Frequency** | **Percent** | **Std Err of** | **95% Confidence Limits** | |
| **Percent** | **for Percent** | |
| **Yes** | 9 | 8.2% | 2.7% | 2.8% | 13.6% |
| **No** | 12 | 11.7% | 3.4% | 5.0% | 18.3% |
| **I don't export my hay** | 73 | 80.1% | 4.2% | 71.7% | 88.4% |
| **Total** | 94 | 100 |  |  |  |
| **Frequency Missing = 197** | | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Do you manage CRP?** | | | | | |
|  | **Frequency** | **Percent** | **Std Err of** | **95% Confidence Limits** | |
| **Percent** | **for Percent** | |
| **Yes** | 82 | 48.3% | 4.3% | 39.8% | 56.8% |
| **No** | 84 | 51.7% | 4.3% | 43.2% | 60.2% |
| **Total** | 166 | 100 |  |  |  |
| **Frequency Missing = 125** | | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **With the respect to the following mid-contract management practices in CRP, circle your answer:** | | | | | |
|  | **Frequency** | **Percent** | **Std Err of** | **95% Confidence Limits** | |
| **Percent** | **for Percent** | |
| **Adopted - Burn in fall to control *Ventenata*** | 5 | 7.2% | 3.3% | 0.7% | 13.8% |
| **Adopted - Burn in spring to control *Ventenata*** | 9 | 13.2% | 4.4% | 4.3% | 22.1% |
| **Adopted - Mow to rejuvenate stand and spray an herbicide for *Ventenata* control** | 38 | 55.1% | 7.7% | 39.6% | 70.6% |
| **Adopted - Apply a fertilizer if soil is deficient to make grasses more competitive** | 21 | 38.2% | 7.7% | 22.7% | 53.7% |
| **Adopted - Spray an herbicide and fertilize for *Ventenata* control and make grasses competitive** | 38 | 54.1% | 7.4% | 39.2% | 69.0% |
| **Considering - Burn in fall to control *Ventenata*** | 12 | 26.3% | 7.4% | 11.4% | 41.2% |
| **Considering - Burn in spring to control *Ventenata*** | 10 | 19.8% | 6.3% | 7.1% | 32.6% |
| **Considering - Mow to rejuvenate stand and spray an herbicide for *Ventenata* control** | 19 | 56.9% | 11.9% | 32.6% | 81.3% |
| **Considering - Apply a fertilizer if soil is deficient to make grasses more competitive** | 13 | 27.8% | 7.8% | 12.1% | 43.6% |
| **Considering - Spray an herbicide and fertilize for *Ventenata* control and make grasses competitive** | 22 | 52.4% | 10.2% | 31.6% | 73.2% |
|  | | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Is *Ventenata* control required by Farm Service Agency (FSA) in your county?** | | | | | |
|  | **Frequency** | **Percent** | **Std Err of** | **95% Confidence Limits** | |
| **Percent** | **for Percent** | |
| **No** | 26 | 45.8% | 7.3% | 31.1% | 60.5% |
| **Yes** | 36 | 54.2% | 7.3% | 39.5% | 68.9% |
| **Total** | 62 | 100 |  |  |  |
| **Frequency Missing = 229** | | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Do you manage pasture?** | | | | | |
|  | **Frequency** | **Percent** | **Std Err of** | **95% Confidence Limits** | |
| **Percent** | **for Percent** | |
| **No** | 67 | 44.0% | 4.8% | 35.4% | 52.7% |
| **Yes** | 96 | 56.0% | 4.3% | 47.4% | 64.6% |
| **Total** | 163 | 100 |  |  |  |
| **Frequency Missing = 128** | | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Frequency** | **Percent** | **Std Err of** | **95% Confidence Limits** | |
| **Percent** | **for Percent** | |
| **Adopted - Burn in fall to control *Ventenata*** | 7 | 9.7% | 3.7% | 2.3% | 17.0% |
| **Adopted - Burn in spring to control *Ventenata*** | 8 | 11.3% | 4.0% | 3.3% | 19.2% |
| **Adopted - Rotate cattle to a different pasture when 50% of the forage has been removed** | 47 | 74.6% | 5.3% | 64.1% | 85.2% |
| **Adopted - Spray an herbicide and fertilize for *Ventenata* control and to make grasses more competitive** | 46 | 62.9% | 6.7% | 49.6% | 76.3% |
| **Adopted - Spray an herbicide along with livestock rotation when 50% of forage has been eaten** | 31 | 47.8% | 7.0% | 33.8% | 61.8% |
| **Considering - Burn in fall to control *Ventenata*** | 13 | 28.7% | 7.2% | 14.2% | 43.2% |
| **Considering - Burn in spring to control *Ventenata*** | 15 | 33.5% | 7.5% | 18.3% | 48.6% |
| **Considering - Rotate cattle to a different pasture when 50% of the forage has been removed** | 24 | 80.0% | 7.1% | 65.5% | 94.6% |
| **Considering - Spray an herbicide and fertilize for *Ventenata* control and to make grasses more competitive** | 33 | 76.9% | 7.6% | 61.6% | 92.3% |
| **Considering - Spray an herbicide along with livestock rotation when 50% of forage has been eaten** | 26 | 67.8% | 8.5% | 50.4% | 85.1% |
|  | | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Has *Ventenata* in caused you to take any of the following actions?** | | | | | |
|  | **Frequency** | **Percent** | **Std Err of** | **95% Confidence Limits** | |
| **Percent** | **for Percent** | |
| **Alter stocking rates** | 27 | 50.4% | 7.1% | 36.1% | 64.6% |
| **Change rotations** | 22 | 40.6% | 7.0% | 26.5% | 54.7% |
| **Other** | 21 | 35.7% | 6.5% | 22.8% | 48.7% |
|  | | | | | |

***Other actions***

Dollar costs for sprays

Fertilize where feasible, spray with herbicides.

Hand mow infested areas when seed head emerged

Haven't found it on our property yet.

I graze with sheep ventenata is not an issue.

If you spray this stuff it will kill your pasture as well, they are both grass.

Mad to round up 60 acres of pasture and 70 acres of grass hay to completely kill. Planting round up ready alfalfa!

No ventenata in pasture

No.

Put less cows in because they won't eat it.

Replant grass

Reseed and fertilize.

Round up and reseed pasture mix.

Same practices.

Spray

Spray an herbicide.

Spray: Diuron and Sencor. No till. Seed grain. Reseed grain. Reseed to hay.

Take cattle out earlier.

We are reducing carry capacity of cattle

We have torn up pasture and spring cropped with oats to graze for two years and seeded back to grass.

Will begin management this fall.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Have you accessed any Extension related products or educational materials related to *Ventenata*?** | | | | | |
|  | **Frequency** | **Percent** | **Std Err of** | **95% Confidence Limits** | |
| **Percent** | **for Percent** | |
| **No** | 169 | 71.8% | 4.2% | 63.5% | 80.1% |
| **Yes** | 96 | 28.2% | 4.2% | 19.9% | 36.5% |
| **Total** | 265 | 100.0% |  |  |  |
| **Frequency Missing = 26** | | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Frequency** | **Percent** | **Std Err of** | **95% Confidence Limits** | |
| **Percent** | **for Percent** | |
| **No** | 216 | 82.9% | 2.9% | 77.1% | 88.7% |
| **Yes, once** | 35 | 9.3% | 1.9% | 5.5% | 13.1% |
| **Yes, twice** | 9 | 2.1% | 0.7% | 0.6% | 3.6% |
| **Yes, three or more time** | 18 | 5.6% | 1.7% | 2.3% | 9.0% |
| **Total** | 278 | 100.0% |  |  |  |
| **Frequency Missing = 13** | | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **How would you prefer to receive information on *Ventenata* management from Extension?** | | | | | |
|  | **Frequency** | **Percent** | **Std Err of** | **95% Confidence Limits** | |
| **Percent** | **for Percent** | |
| **Publications** | 186 | 73.6% | 4.3% | 65.1% | 82.0% |
| **Websites** | 77 | 28.7% | 4.5% | 19.7% | 37.6% |
| **Field days/demonstrations** | 60 | 21.0% | 3.7% | 13.8% | 28.3% |
| **Other** | 10 | 3.2% | 1.1% | 1.0% | 5.4% |
|  | | | | | |

***Other Responses***

Email

Hands on is good or maybe the best, field days.

I talk to experts on managing *Ventenata.*

Letter

Letter in mail.

Mail outs.

Onsite Rx

Email link to website.

Email notices

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **How many acres do you have under production (whether owned or leased)?** | | | | | |
|  | **Frequency** | **Percent** | **Std. Err of** | **95% Confidence Limits** | |
| **Percent** | **for Percent** | |
| **< 100** | 108 | 31.4% | 4.4% | 22.8% | 40.0% |
| **101-200** | 32 | 10.9% | 2.4% | 6.2% | 15.6% |
| **201-500** | 40 | 22.8% | 8.5% | 6.2% | 39.5% |
| **501-750** | 21 | 8.6% | 2.3% | 4.0% | 13.1% |
| **751-1000** | 15 | 5.3% | 1.5% | 2.3% | 8.3% |
| **> 1000** | 71 | 21.0% | 3.3% | 14.5% | 27.5% |
| **Total** | 287 | 100.0% |  |  |  |
| **Frequency Missing = 4** | | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **How many years have you been involved in agricultural production?** | | | | | |
|  | **Frequency** | **Percent** | **Std. Err of** | **95% Confidence Limits** | |
| **Percent** | **for Percent** | |
| **< 10** | 42 | 14.0% | 2.8% | 8.5% | 19.5% |
| **11-20** | 39 | 10.4% | 2.0% | 6.4% | 14.5% |
| **21-30** | 48 | 14.9% | 2.7% | 9.6% | 20.2% |
| **31-40** | 72 | 24.1% | 3.8% | 16.7% | 31.5% |
| **41-50** | 48 | 14.8% | 2.8% | 9.4% | 20.2% |
| **>50** | 37 | 21.8% | 8.6% | 4.9% | 38.7% |
| **Total** | 286 | 100.0% |  |  |  |
| **Frequency Missing = 5** | | | | | |

# Appendix C: Cross Tabulations

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Have you heard of the grass, Ventenata (sometimes called North African Grass), prior to receiving this survey?** | | | | | | |
| **First Survey** | **Second Survey** |  | **Row** | **Std Err of** | **95% Confidence Limits** | |
| **Frequency** | **Percent** | **Row Percent** | **for Row Percent** | |
| **No** | **No** | 67 | 68.293 | 7.5874 | 53.3565 | 83.2296 |
|  | **Yes** | 46 | 31.707 | 7.5874 | 16.7704 | 46.6435 |
|  | **Total** | 113 | 100 |  |  |  |
| **Yes** | **No** | 7 | 4.7299 | 1.8049 | 1.1768 | 8.283 |
|  | **Yes** | 157 | 95.2701 | 1.8049 | 91.717 | 98.8232 |
|  | **Total** | 164 | 100 |  |  |  |
| **Total** | **No** | 74 |  |  |  |  |
|  | **Yes** | 203 |  |  |  |  |
|  | **Total** | 277 |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Have you seen the weed *Ventenata* growing anywhere in your county, whether in your fields, on other farms, or along roadsides?** | | | | | | |
| **First Survey** | **Second Survey** | **Frequency** | **Row** | **Std Err of** | **95% Confidence Limits** | |
| **Percent** | **Row Percent** | **for Row Percent** | |
| **No** | **No** | 69 | 79.0225 | 5.7884 | 67.6257 | 90.4193 |
|  | **Yes** | 32 | 20.9775 | 5.7884 | 9.5807 | 32.3743 |
|  | **Total** | 101 | 100 |  |  |  |
| **Yes** | **No** | 14 | 11.1651 | 2.9731 | 5.3115 | 17.0188 |
|  | **Yes** | 153 | 88.8349 | 2.9731 | 82.9812 | 94.6885 |
|  | **Total** | 167 | 100 |  |  |  |
| **Total** | **No** | 83 |  |  |  |  |
|  | **Yes** | 185 |  |  |  |  |
|  | **Total** | 268 |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **If *Ventenata* became established on your property how concerned would you be?** | | | | | | |
| **First Survey** | **Second Survey** | **Frequency** | **Row** | **Std Err of** | **95% Confidence Limits** | |
| **Percent** | **Row Percent** | **for Row Percent** | |
| **Very concerned** | **Very concerned** | 85 | 77.2416 | 4.2709 | 68.8108 | 85.6724 |
|  | **Somewhat Concerned** | 26 | 22.7584 | 4.2709 | 14.3276 | 31.1892 |
|  | **Very concerned** | 0 | . | . | . | . |
|  | **Total** | 111 | 100 |  |  |  |
| **Somewhat Concerned** | **Very concerned** | 24 | 43.0873 | 7.0839 | 29.1035 | 57.0711 |
|  | **Somewhat Concerned** | 33 | 52.0847 | 7.1097 | 38.0501 | 66.1192 |
|  | **Very concerned** | 2 | 4.828 | 3.6601 | 0 | 12.0531 |
|  | **Total** | 59 | 100 |  |  |  |
| **Very concerned** | **Very concerned** | 0 | . | . | . | . |
|  | **Somewhat Concerned** | 0 | . | . | . | . |
|  | **Very concerned** | 1 | 100 | 0 | 100 | 100 |
|  | **Total** | 1 | 100 |  |  |  |
| **Total** | **Very concerned** | 109 |  |  |  |  |
|  | **Somewhat Concerned** | 59 |  |  |  |  |
|  | **Very concerned** | 3 |  |  |  |  |
|  | **Total** | 171 |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Is Ventenata growing on your property?** | | | | | | |
| **Q6Growing** | **Q5Growing\_2** | **Frequency** | **Row** | **Std Err of** | **95% Confidence Limits** | |
| **Percent** | **Row Percent** | **for Row Percent** | |
| **No** | **No** | 14 | 59.8306 | 11.8271 | 36.4837 | 83.1775 |
|  | **Yes** | 8 | 40.1694 | 11.8271 | 16.8225 | 63.5163 |
|  | **Total** | 22 | 100 |  |  |  |
| **Yes** | **No** | 16 | 11.9362 | 2.9952 | 6.0235 | 17.8488 |
|  | **Yes** | 133 | 88.0638 | 2.9952 | 82.1512 | 93.9765 |
|  | **Total** | 149 | 100 |  |  |  |
| **Total** | **0** | 30 |  |  |  |  |
|  | **1** | 141 |  |  |  |  |
|  | **Total** | 171 |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **How important is Ventenata control on your property?** | | | | | | |
| **Q8Important** | **Q6Important\_2** | **Frequency** | **Row** | **Std Err of** | **95% Confidence Limits** | |
| **Percent** | **Row Percent** | **for Row Percent** | |
| **Very important** | **Very important** | 70 | 84.8385 | 3.9067 | 77.1097 | 92.5674 |
|  | **Somewhat important** | 13 | 14.2369 | 3.8218 | 6.6758 | 21.7979 |
|  | **Neither important nor unimportant** | 1 | 0.9246 | 0.9257 | 0 | 2.7561 |
|  | **somewhat unimportant** | 0 | . | . | . | . |
|  | **Very unimportant** | 0 | . | . | . | . |
|  | **Total** | 84 | 100 |  |  |  |
| **Somewhat important** | **Very important** | 15 | 33.5256 | 8.1751 | 17.3522 | 49.6991 |
|  | **Somewhat important** | 19 | 50.6673 | 9.4816 | 31.9092 | 69.4255 |
|  | **Neither important nor unimportant** | 5 | 15.807 | 7.0814 | 1.7974 | 29.8167 |
|  | **somewhat unimportant** | 0 | . | . | . | . |
|  | **Very unimportant** | 0 | . | . | . | . |
|  | **Total** | 39 | 100 |  |  |  |
| **Neither important nor unimportant** | **Very important** | 1 | 15.1879 | 15.6526 | 0 | 46.1548 |
|  | **Somewhat important** | 3 | 84.8121 | 15.6526 | 53.8452 | 100 |
|  | **Neither important nor unimportant** | 0 | . | . | . | . |
|  | **somewhat unimportant** | 0 | . | . | . | . |
|  | **Very unimportant** | 0 | . | . | . | . |
|  | **Total** | 4 | 100 |  |  |  |
| **Somewhat unimportant** | **Very important** | 0 | . | . | . | . |
|  | **Somewhat important** | 0 | . | . | . | . |
|  | **Neither important nor unimportant** | 2 | 50.3061 | 30.7403 | 0 | 100 |
|  | **somewhat unimportant** | 1 | 49.6939 | 30.7403 | 0 | 100 |
|  | **Very unimportant** | 0 | . | . | . | . |
|  | **Total** | 3 | 100 |  |  |  |
| **Very unimportant** | **Very important** | 0 | . | . | . | . |
|  | **Somewhat important** | 0 | . | . | . | . |
|  | **Neither important nor unimportant** | 0 | . | . | . | . |
|  | **somewhat unimportant** | 0 | . | . | . | . |
|  | **Very unimportant** | 1 | 100 | 0 | 100 | 100 |
|  | **Total** | 1 | 100 |  |  |  |
| **Total** | **Very important** | 86 |  |  |  |  |
|  | **Somewhat important** | 35 |  |  |  |  |
|  | **Neither important nor unimportant** | 8 |  |  |  |  |
|  | **somewhat unimportant** | 1 |  |  |  |  |
|  | **Very unimportant** | 1 |  |  |  |  |
|  | **Total** | 131 |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **What percent control have you achieved on your property?** | | | | | | |
| **Q16Percent** | **Q7Control** | **Frequency** | **Row** | **Std Err of** | **95% Confidence Limits** | |
| **Percent** | **Row Percent** | **for Row Percent** | |
| **Greater than 90% control** | **Greater than 90% control** | 8 | 43.1241 | 12.3877 | 18.577 | 67.6712 |
|  | **About 75% control** | 6 | 32.1804 | 11.4647 | 9.4624 | 54.8984 |
|  | **About 50% control** | 1 | 5.6476 | 5.526 | 0 | 16.5977 |
|  | **Less than 50% control** | 3 | 19.0479 | 10.1772 | 0 | 39.2147 |
|  | **Total** | 18 | 100 |  |  |  |
| **About 75% control** | **Greater than 90% control** | 3 | 14.0013 | 8.0027 | 0 | 29.8591 |
|  | **About 75% control** | 13 | 63.1581 | 11.1631 | 41.0377 | 85.2785 |
|  | **About 50% control** | 2 | 8.8392 | 6.1473 | 0 | 21.0206 |
|  | **Less than 50% control** | 3 | 14.0013 | 8.0027 | 0 | 29.8591 |
|  | **Total** | 21 | 100 |  |  |  |
| **About 50% control** | **Greater than 90% control** | 3 | 11.2356 | 6.2024 | 0 | 23.5261 |
|  | **About 75% control** | 8 | 32.5907 | 9.7117 | 13.3464 | 51.835 |
|  | **About 50% control** | 11 | 48.5237 | 10.475 | 27.7668 | 69.2806 |
|  | **Less than 50% control** | 2 | 7.6499 | 5.2504 | 0 | 18.054 |
|  | **Total** | 24 | 100 |  |  |  |
| **Less than 50% control** | **Greater than 90% control** | 3 | 4.8778 | 2.8078 | 0 | 10.4417 |
|  | **About 75% control** | 8 | 21.2851 | 8.7507 | 3.945 | 38.6252 |
|  | **About 50% control** | 10 | 19.8093 | 6.2625 | 7.3998 | 32.2188 |
|  | **Less than 50% control** | 28 | 54.0278 | 8.4974 | 37.1897 | 70.866 |
|  | **Total** | 49 | 100 |  |  |  |
| **Total** | **Greater than 90% control** | 17 |  |  |  |  |
|  | **About 75% control** | 35 |  |  |  |  |
|  | **About 50% control** | 24 |  |  |  |  |
|  | **Less than 50% control** | 36 |  |  |  |  |
|  | **Total** | 112 |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Has Ventenata increased costs to your business in the affected area?** | | | | | | |
| **Q18Costs** | **Q9Increased\_2** | **Frequency** | **Row** | **Std Err of** | **95% Confidence Limits** | |
| **Percent** | **Row Percent** | **for Row Percent** | |
| **No** | **No** | 13 | 65.4235 | 10.9389 | 43.7536 | 87.0934 |
|  | **Yes, < $10/acre** | 4 | 15.7117 | 8.0165 | 0 | 31.5923 |
|  | **Yes, > $10/acre** | 6 | 18.8648 | 7.811 | 3.3912 | 34.3384 |
|  | **Total** | 23 | 100 |  |  |  |
| **Yes, a little bit** | **No** | 8 | 14.5165 | 5.3124 | 3.9927 | 25.0403 |
|  | **Yes, < $10/acre** | 24 | 38.2658 | 6.5522 | 25.2859 | 51.2457 |
|  | **Yes, > $10/acre** | 33 | 47.2177 | 6.6423 | 34.0594 | 60.3759 |
|  | **Total** | 65 | 100 |  |  |  |
| **Yes, a lot** | **No** | 2 | 8.5484 | 6.0475 | 0 | 20.5285 |
|  | **Yes, < $10/acre** | 9 | 31.6042 | 9.1872 | 13.4044 | 49.804 |
|  | **Yes, > $10/acre** | 16 | 59.8474 | 9.8768 | 40.2817 | 79.4132 |
|  | **Total** | 27 | 100 |  |  |  |
| **Total** | **No** | 23 |  |  |  |  |
|  | **Yes, < $10/acre** | 37 |  |  |  |  |
|  | **Yes, > $10/acre** | 55 |  |  |  |  |
|  | **Total** | 115 |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Has Ventenata altered how you manage your operation?** | | | | | | |
| **Q19Manage** | **Q10Altered\_2** | **Frequency** | **Row** | **Std Err of** | **95% Confidence Limits** | |
| **Percent** | **Row Percent** | **for Row Percent** | |
| **No** | **No** | 16 | 56.4396 | 10.0666 | 36.5149 | 76.3642 |
|  | **Yes, a little bit** | 17 | 43.5604 | 10.0666 | 23.6358 | 63.4851 |
|  | **Total** | 33 | 100 |  |  |  |
| **Yes, a little bit** | **No** | 3 | 4.0578 | 2.3181 | 0 | 8.646 |
|  | **Yes, a little bit** | 60 | 95.9422 | 2.3181 | 91.354 | 100 |
|  | **Total** | 63 | 100 |  |  |  |
| **Yes, a lot** | **No** | 2 | 7.1458 | 5.1322 | 0 | 17.3038 |
|  | **Yes, a little bit** | 27 | 92.8542 | 5.1322 | 82.6962 | 100 |
|  | **Total** | 29 | 100 |  |  |  |
| **Total** | **0** | 21 |  |  |  |  |
|  | **1** | 104 |  |  |  |  |
|  | **Total** | 125 |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Workshop** | **Has Ventenata increased costs to your business in the affected area?** | **Frequency** | **Row** | **Std Err of** | **95% Confidence Limits** | |
| **Percent** | **Row Percent** | **for Row Percent** | |
| **Did not attend** | **No** | 31 | 33.5083 | 5.5464 | 22.551 | 44.4657 |
|  | **Yes, < $10 an acre** | 38 | 36.2573 | 5.2386 | 25.9079 | 46.6066 |
|  | **Yes, < $10 an acre** | 34 | 30.2344 | 4.9205 | 20.5135 | 39.9552 |
|  | **Total** | 103 | 100 |  |  |  |
| **Attended** | **No** | 8 | 18.1832 | 6.0588 | 6.2134 | 30.1531 |
|  | **Yes, < $10 an acre** | 12 | 22.0639 | 5.8154 | 10.575 | 33.5529 |
|  | **Yes, < $10 an acre** | 31 | 59.7528 | 7.2235 | 45.4821 | 74.0235 |
|  | **Total** | 51 | 100 |  |  |  |
| **Total** | **No** | 39 |  |  |  |  |
|  | **Yes, < $10 an acre** | 50 |  |  |  |  |
|  | **Yes, < $10 an acre** | 65 |  |  |  |  |
|  | **Total** | 154 |  |  |  |  |
| p – value 0.0041 | | | | | | |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **workshop** | **Adopted- Harvest timothy hay at 4 inch height to make timothy more competitive** | **Frequency** | **Row** | **Std Err of** | **95% Confidence Limits** | |
| **Percent** | **Row Percent** | **for Row Percent** | |
| **Did not attend** | **No** | 29 | 82.593 | 6.1881 | 70.2231 | 94.9629 |
|  | **Yes** | 8 | 17.407 | 6.1881 | 5.0371 | 29.7769 |
|  | **Total** | 37 | 100 |  |  |  |
| **Attended** | **No** | 15 | 56.7395 | 10.0926 | 36.5646 | 76.9144 |
|  | **Yes** | 11 | 43.2605 | 10.0926 | 23.0856 | 63.4354 |
|  | **Total** | 26 | 100 |  |  |  |
| **Total** | **No** | 44 |  |  |  |  |
|  | **Yes** | 19 |  |  |  |  |
|  | **Total** | 63 |  |  |  |  |
| p-value 0.0198 | | | | | | |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **workshop** | **Adopted- Apply an effective herbicide when one is registered** | **Frequency** | **Row** | **Std Err of** | **95% Confidence Limits** | |
| **Percent** | **Row Percent** | **for Row Percent** | |
| **Did not attend** | **No** | 11 | 23.2082 | 6.7033 | 9.8421 | 36.5742 |
|  | **Yes** | 34 | 76.7918 | 6.7033 | 63.4258 | 90.1579 |
|  | **Total** | 45 | 100 |  |  |  |
| **Attended** | **No** | 1 | 3.3369 | 3.3121 | 0 | 9.941 |
|  | **Yes** | 26 | 96.6631 | 3.3121 | 90.059 | 100 |
|  | **Total** | 27 | 100 |  |  |  |
| **Total** | **No** | 12 |  |  |  |  |
|  | **Yes** | 60 |  |  |  |  |
|  | **Total** | 72 |  |  |  |  |
| p-value - 0.0209 | | | | | | |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **workshop** | **Adopted - Burn in spring to control Ventenata** | **Frequency** | **Row** | **Std Err of** | **95% Confidence Limits** | |
| **Percent** | **Row Percent** | **for Row Percent** | |
| **Did not attend** | **No** | 25 | 93.0622 | 4.0728 | 84.8641 | 100 |
|  | **Yes** | 3 | 6.9378 | 4.0728 | 0 | 15.1359 |
|  | **Total** | 28 | 100 |  |  |  |
| **Attended** | **No** | 13 | 73.4664 | 9.969 | 53.3997 | 93.533 |
|  | **Yes** | 6 | 26.5336 | 9.969 | 6.467 | 46.6003 |
|  | **Total** | 19 | 100 |  |  |  |
| **Total** | **No** | 38 |  |  |  |  |
|  | **Yes** | 9 |  |  |  |  |
|  | **Total** | 47 |  |  |  |  |
| p-value – 0.0338 | | | | | | |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **workshop** | **Considering - Mow to rejuvenate stand and spray an herbicide for Ventenata control** | **Frequency** | **Row** | **Std Err of** | **95% Confidence Limits** | |
| **Percent** | **Row Percent** | **for Row Percent** | |
| **Did not attend** | **No** | 8 | 58.9604 | 13.7716 | 30.7033 | 87.2175 |
|  | **Yes** | 9 | 41.0396 | 13.7716 | 12.7825 | 69.2967 |
|  | **Total** | 17 | 100 |  |  |  |
| **Attended** | **No** | 1 | 8.1725 | 8.081 | 0 | 24.7532 |
|  | **Yes** | 10 | 91.8275 | 8.081 | 75.2468 | 100 |
|  | **Total** | 11 | 100 |  |  |  |
| **Total** | **No** | 9 |  |  |  |  |
|  | **Yes** | 19 |  |  |  |  |
|  | **Total** | 28 |  |  |  |  |
| p-value - 0.0016 | | | | | | |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **workshop** | **Adopted - Spray an herbicide and fertilize for Ventenata control and to make grasses more competitive** | **Frequency** | **Row** | **Std Err of** | **95% Confidence Limits** | |
| **Percent** | **Row Percent** | **for Row Percent** | |
| **Did not attend** | **No** | 16 | 45.3817 | 9.1234 | 27.161 | 63.6024 |
|  | **Yes** | 22 | 54.6183 | 9.1234 | 36.3976 | 72.839 |
|  | **Total** | 38 | 100 |  |  |  |
| **Attended** | **No** | 5 | 20.3144 | 8.1056 | 4.1264 | 36.5025 |
|  | **Yes** | 23 | 79.6856 | 8.1056 | 63.4975 | 95.8736 |
|  | **Total** | 28 | 100 |  |  |  |
| **Total** | **No** | 21 |  |  |  |  |
|  | **Yes** | 45 |  |  |  |  |
|  | **Total** | 66 |  |  |  |  |
| p-value - 0.0486 | | | | | | |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **workshop** | **Adopted - Spray an herbicide along with livestock rotation when 50% of forage has been eaten** | **Frequency** | **Row** | **Std Err of** | **95% Confidence Limits** | |
| **Percent** | **Row Percent** | **for Row Percent** | |
| **Did not attend** | **No** | 22 | 61.2814 | 8.8168 | 43.6327 | 78.9301 |
|  | **Yes** | 15 | 38.7186 | 8.8168 | 21.0699 | 56.3673 |
|  | **Total** | 37 | 100 |  |  |  |
| **Attended** | **No** | 7 | 33.0823 | 10.2756 | 12.5134 | 53.6512 |
|  | **Yes** | 15 | 66.9177 | 10.2756 | 46.3488 | 87.4866 |
|  | **Total** | 22 | 100 |  |  |  |
| **Total** | **No** | 29 |  |  |  |  |
|  | **Yes** | 30 |  |  |  |  |
|  | **Total** | 59 |  |  |  |  |
| p-value - 0.0436 | | | | | | |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **workshop** | **How many acres do you have under production (whether owned or leased)?** | **Frequency** | **Row** | **Std Err of** | **95% Confidence Limits** | |
| **Percent** | **Row Percent** | **for Row Percent** | |
| **Did not attend** | **a < 100** | 87 | 31.0439 | 5.176 | 20.8546 | 41.2331 |
|  | **b 101-200** | 28 | 12.2807 | 2.9805 | 6.4135 | 18.148 |
|  | **b 201-500** | 34 | 26.4515 | 10.1162 | 6.5372 | 46.3659 |
|  | **c 501-750** | 12 | 6.3783 | 2.2035 | 2.0405 | 10.7161 |
|  | **d 751-1000** | 11 | 5.3115 | 1.7747 | 1.8178 | 8.8051 |
|  | **e > 1000** | 44 | 18.5341 | 3.6648 | 11.3198 | 25.7485 |
|  | **Total** | 216 | 100 |  |  |  |
| **Attended** | **a < 100** | 15 | 23.0322 | 5.7971 | 11.6201 | 34.4442 |
|  | **b 101-200** | 4 | 6.823 | 3.4239 | 0.0829 | 13.5631 |
|  | **b 201-500** | 5 | 7.3607 | 3.258 | 0.9471 | 13.7742 |
|  | **c 501-750** | 7 | 18.2721 | 7.3958 | 3.7129 | 32.8313 |
|  | **d 751-1000** | 4 | 6.4863 | 3.3054 | 0 | 12.9931 |
|  | **e > 1000** | 27 | 38.0258 | 6.6139 | 25.0059 | 51.0456 |
|  | **Total** | 62 | 100 |  |  |  |
| **Total** | **a < 100** | 102 |  |  |  |  |
|  | **b 101-200** | 32 |  |  |  |  |
|  | **b 201-500** | 39 |  |  |  |  |
|  | **c 501-750** | 19 |  |  |  |  |
|  | **d 751-1000** | 15 |  |  |  |  |
|  | **e > 1000** | 71 |  |  |  |  |
|  | **Total** | 278 |  |  |  |  |
| p-value - 0.0009 | | | | | | |

# Appendix D: Letters and Postcard

April 29, 2014

The University of Idaho’s Social Science Research Unit, in collaboration with researchers from the Plant, Soil, and Entomological Science Department (PSES) in the College of Agricultural and Life Sciences, is conducting a study of agricultural producers in the Inland Northwest. We are seeking to understand your current management practices of the weed, Ventenata dubia. This survey is being funded by a grant from Western Sustainable Agriculture Research and Education (SARE). Our study has met the criteria for the University of Idaho’s Institutional

Review Board for “human subject research” under federal regulations and University policy.

Results from the survey will be used to determine if education measures helped to assist producers in developing best management practices for the control of this weed.

We are sending this follow up survey to Inland Northwest producers who participated and completed the first survey 3 years’ ago. In order that the results will truly represent the management practices of producers in your area, and to help us understand the current distribution of Ventenata, it is important that each questionnaire in the sample be completed and returned. The questionnaire has an identification number for mailing purposes only. The information you provide will be completely confidential. This survey is voluntary and if you prefer not to answer a question please skip over it and go to the next question. Neither your name nor any identifying information will be used with the data.

Please return the survey in the postage paid, self-addressed envelope provided. Once the study is complete, the final report will be available on University websites, including the SSRU website (http://www.agls.uidaho.edu/ssru).

If you have any questions about the survey, you may call the Social Science Research Unit toll-free at 1-877-542-3019. In addition, you may contact Barbara Foltz, Survey Operations Manager at 208-885-5595.

Thank you for your assistance!

Sincerely,

Barbara Foltz

Survey operations Manager

Social Science Research Unit

**Ventenata Management Practices Survey May 2014**

Last week a follow up questionnaire seeking information about management practices of the weed, Ventenata dubia was mailed to you. If you have already completed the questionnaire and returned it to us, please accept our sincere thanks. If not, please do so today. It is extremely important that your responses be included in this study. We will use the information to assess the workshops and trainings for the best management practices for the control of this noxious weed.

If by chance you did not receive the questionnaire, please call the Social Science Research Unit, toll-free, at (1-877-542-3019) and another survey will be sent to you.

Sincerely,

Barbara Foltz, Survey Operations Manager

Social Science Research Unit

May 20, 2014

About three weeks ago, the University of Idaho’s Social Science Research Unit, in collaboration with researchers from the Plant, Soil, and Entomological Science Department (PSES) in the College of Agricultural and Life Sciences, sent you a survey regarding your awareness and current management practices of the weed, Ventenata dubia. This survey is being funded by a grant from Western Sustainable Agriculture Research and Education (SARE).

We are sending this follow-up survey to Inland Northwest producers who participated and completed the first survey 3 years ago. In order that the results will truly represent the management practices of producers in your area, and to help us understand the current distribution of Ventenata, it is important that each questionnaire in the sample be completed and returned. The questionnaire has an identification number for mailing purposes only. This project has been certified as exempt by the Institutional Review Board at the University of Idaho. The information you provide will be completely confidential. Neither your name nor any identifying information will be used with the data.

Please return the survey in the postage paid, self-addressed envelope provided. Once the study is complete, the final report will be available on University websites, including the SSRU website (http://www.agls.uidaho.edu/ssru).

If you have any questions about the survey, you may call the Social Science Research Unit toll-free at 1-877-542-3019. Thank you for your assistance!

Sincerely,

Barbara Foltz

Survey Operations Manager

Social Science Research Unit

# Appendix E: Final Comments

A well publicized field day would be helpful.

Although present on my farmland it is primarily in waste areas, therefore is not an economic loss to my farming operations.

Believe this is first time for hearing about this weed.

Better get started showing ways to control!

Cattle and horses will graze Ventenata when there is nothing else to graze, but the fences need to be very good. Cattle and horses will consume Ventenata in hay in the winter, they don't like it but they will eat it.

Comment on Q5: I really don't know what this is.

Do you actually have any herbicide that really works that is affordable! Not from talking to other small land owners. Our neighbors have spray and still have it.

Farm in 2 states. It looks like wild oats. I asked my Simplot agent. We don't have any of this grass.

Get some sheep. Graze at the right time. Problem solved.

Had 55 of CRP in Latah County. Put back into crop 3 years ago to better control Ventenata. Now field is in R (rotation) ready alfalfa.

I am retired, only have a small horse pasture, will not be interested in a program.

I am sure every hour spent on control will pay big dividends in the future, sorry just haven't gotten into it as of yet.

I can't afford to spray. I would if I could get help for this.

I can't identify Ventenata so I am unaware of a problem in this area. [Respondent did not answer Q5, wrote in 'I don’t know']

I did not know what to look for. I have cheat, medusa head, jointed goat, blubous blue, maybe others in cropland and pastures. I will look for Ventenata now.

I do not have Ventenata in my hay fields. I have 4 acres of developed Palouse Prairie that I started in 2004. It was infected with Ventenata 2005. U of I weed research put out plats on it once 4 years. Use of outreach has been very effective when applied

I don't know what it is.

I have been dealing with Ventenata for 29 years.

I have been retired from active production farm since 2005. I am still a landlord. I have not been keeping current on herbicides, etc. since 2008.

I have controlled Ventenata using round-up or powerflex or metribuzia. I have never heard that I need to [unclear] or fertilize.

I have to spray herbicide every year just to control Ventenata. It seems to be a losing battle. Rose brush is also terrible to control.

I understand that chemical that is labeled for barley is not labeled for Ventenata, but is effective in controlling Ventenata. If this is true, maybe you/we need to get appropriate chemicals that control this species labeled so we are legal when using it!

I'm seeing areas on south facing canyon slopes where Ventenata is crowding out stem thistle which I consider a plus.

If there is Ventenata on this property I want to know how it got here.

It is one of the most difficult weeds to control. To control this weed is costly.

It would be helpful to know what property you are inquiring about.

It's a pain to manage, expensive and doesn't seem to work well with upland planting and spraying.

Keep up the good work on Ventenata research!

Keep working on it (Ventenata). It's bad stuff!

Last fall I sprayed 3/4 of pericle outside on my timothy fields but this spring I had so much Ventenata I decided to raindrop my timothy and start over. I have been working on this for several years. If I figure out something that works I will let you know

Metribuzin/Diuron tank mix applied to rangeland, CRP or hay ground gives excellent control. Apply 2 consecutive years and weed is gone. Apply in Feb/March in Latah Co. FSA/NRSC recommend other chemicals. Waste of time.

Minimum till is good for Ventenata production.

Most of my information has come from farm magazines. Little info or help has come from extension or county weed control.

Mowing in crested wheat increases Ventenata. If leave crested wheat alone, it suppresses it pretty well. (Grass water by area).

Much of our pasture is mountain grazing and burning is not appropriate. This is Timberland - our fields at the home ranch do not seem to have it.

My seven acres of land is not under production of any kind and is not considered an active farm.

Need more registered chemical options for control of Ventenata, wind grass, rattail fescue, cheat grass in hay, especially timothy hay as it seems to be "fragile" when it comes to chemical use.

Not an economic liability to me.

Not really sure what it looks like or if I have it on my property!

Not right now.

So far, I have used Round-up in the fall and heavy fertilizer both fall and spring with some snaps.

Sorry, I really know nothing about farming. I inherited the land and do not manage the 2 acres of open fields.

Still looking for control without hurting the good grasses.

Tell it to go home.

The hardest areas to control are the interspaces between bunch grasses where spacing is adequate for grasses but may support forbs?

The landowner asked the farmer to fill out this questionnaire. We tried to fill this out in regard to the landowner's property, not our total farmed acres.

The man that does my hays tried to spray it out with a product recommended for it, but it didn't do much.

Tim Prather and John Wallace have been a big help in making management decisions.

Ventenata is a minor problem for me. 80 acre farm is tillable. 20 acre pasture Cottonwood Butte, no Ventenata.

Very mixed results from spraying, from no visible results to very successful kill?

Very, very tough weed. But no help from chemical co. Because of their costs to label.

We didn't have a problem until the county sprayed the roads with RoundUp!

We need more control of the geese in CRP.

We need more labeled chemicals to control it.

We really need more research on Ventenata. The chemicals are only so good, but we do not have anything to put back on treated acres to compete with Ventenata reinfection.

We see it in adjoining crop land fields. It either gets sprayed out with round up or tilled out.

What elevation does it grow?

Why does farm service like to say that fertilizer is not recommended to control Ventenata. I fertilize it even a few grasses are present and it really helps those grasses spread and become more competitive. Even if only a few blades of grasses are present,

Would like to get rid of it. Weed spray and round-up some of it. I have not had to do this. Husband did but he died 3 years ago.

Would like to see county more involved roadsides and ext. involved CRP acres.

1. Dillman, D., J.D. Smyth, and L.M. Christian. 2009. Internet, Mail, and Mixed-mode Surveys: The Tailored Design Method. John Wiley and Sons, Inc. Hoboken, NJ. [↑](#footnote-ref-1)
2. The American Association for Public Opinion Research (AAPOR). 2006. Final Disposition of Case Codes and Outcome Rates for Surveys, 4th Edition. Lenexa, KS: AAPOR. Available at: <http://www.aapor.org/pdfs/standarddefs_4.pdf> [↑](#footnote-ref-2)