University of Idaho Extension

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Over The Wire

A Beef Cattle E-Letter for Area Cattle Producers

# Spring Planted Forages; An Option for Growers and Cattle Producers

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## *It's Difficult to Produce High Quality Hay:*

Producing high quality hay in North Central Idaho is a big challenge for growers. Most years the forage is at its optimum quality in early June and should be harvested at this time. However, the weather is usually wet at that time of year and hay harvest is postponed until late June or early July when drying conditions are favorable. Protein and energy levels are thus lower due to grasses and legumes being at a more mature growth stage. In turn, cattle producers that feed this hay are faced with providing supplements to meet the nutritional requirements of their cattle.

## *Maybe There is a Solution?*

I met with my beef cattle producer advisory group three years ago, and they suggested that research trials be conducted to evaluate spring planted forages that could be grown for hay production and or late season grazing. The goal of seeding spring annual forages would be to determine if higher quality forage could be produced. Seeding the annual forage in the first half of May and harvesting the hay in early to mid July might work great for forage growers. The producers were also looking to determine if the spring seeded crops were not cut for hay and left standing, could they provide high quality grazing forages for the late summer and early fall grazing.

*July 2018 Spring Seeded Forage Plots – Mart Thompson Farm, Nezperce*

## *Research Trials Established:*

Research trials analyzing various spring planted crops for hay and forage production was established and seeded in the spring of 2018 and again in the spring of 2019 at Joe Chicane's farm near Grangeville and Mart Thompson's farm near Nezperce.

Several spring seeded forage crops were identified and seeded in the trials to be tested. The species seeded in 2018 included:

- Triticale 141 – Beardless, versatile spring planted triticale

- Otana Oats – A relatively tall, mid-season oat with a plump, short, white kernel, and blue green foliage. Has a good yield and satisfactory resistance to lodging under dryland conditions.
- Proleaf 234 Oats – A leafy forage oat with excellent forage quality. It is a medium-late maturing oat with superior disease resistance.
- Everleaf 114 Oats – A very late maturing, medium height forage oat. It has good straw strength, long wide leaves, improved leaf to stem ratio, high nutritional quality and tonnage, and excellent disease tolerance.
- Everleaf 126 Oats – A late maturing, tall variety. Creates very dense canopy, thus the leaf to stem ratio is higher resulting in higher quality forage.
- NZA 4.41 Oats – An upcoming variety of forage oat from ProGene Plant Research.
- Haybet Barley – A two-rowed hooded spring forage barley. It has white kernels and a high protein content.
- Stockford Barley – Two-row hooded, medium early maturity, high yield and quality. Widely adapted.
- Proso Millet – Warm season grass grown for grain, bird seed, and/or ethanol production.
- German Millet – A foxtail millet that is taller, later maturing and well suited to forage production.
- Triticale 141/Flex Peas Mix – Flex peas are a white-flowered, long-vined plant with exceptional forage growth, frost tolerance, very palatable and highly digestible, excellent seedling vigor, late maturing leaf type plant.
- Proleaf 234/Flex Peas Mix
- Stockford Barley/Flex Peas Mix

The test plots were seeded on May 15, 2018 and harvested July 16, 18 and 24th. The species were harvested at their determined optimum quality.

Plots were cut and weighed and samples were taken and dried to determine percent moisture. This allowed for dry matter yield. This is different than cutting hay, baling at 15% moisture which will show higher yield due to the moisture content. Samples of each specie was taken and analyzed for crude protein content.

The test trial was repeated in the spring of 2019. Once again two locations were seeded on the same farms in Idaho and Lewis Counties.

The species planted were changed with Triticale and the Triticale mixes dropped from the trials.

Below is a listing of the spring forage crops seeded in 2019 with the descriptions of the species listed previously in the 2018 section:

- Otanas Oats
- Proleaf 234 Oats
- Everleaf 114 Oats
- Everleaf 126 Oats
- NZA 4.14 Oats
- Haybet Barley
- Stockford Barley
- Proso Millet
- German Millet
- Stockford Barley/Flex Peas

The 2019 test plots were seeded on May 10th and harvested on July 16th. The Lewis County plot was abandoned due to poor emergence because of wet conditions at planting time and grass sod competition.

The Idaho County plot was a success, however, there was some heavy wild game (deer and elk) grazing on some of the varieties. The wild game grazed the Everleaf 126 and 114 Oats, along with the NZA 4.14 Oats. The barley, peas and millet were not grazed.

## *Results:*

Combined results from both 2018 and 2019 at the three sites showed differences in yield for various species and in general the tonnage was acceptable but not outstanding.

Crude protein was good but not great. However, the protein levels were all higher than the levels seen with average grass hay produced on the Camas Prairie except for Haybet Barley which was at about the same level.

On page three is a table that provides information on the varieties tested, the combined 2018 and 2019 yield (dry matter basis) from both the Idaho County and Lewis County test plots and the crude protein from each variety. Also, there is a table that shows the yield and % CP of the Triticale plots from 2018.

**2018 – 2019 Spring Forage Test Plot Results (3 Site Years)**

| Variety | Combined Avg Yield | * | Crude Protein % |
|---|---|---|---|
| Haybet Barley | 2.92 | A | 8.1 |
| Stockford Barley | 2.38 | B | 9.7 |
| Stockford Bar+Flex Peas | 2.35 | B | 10.0 |
| Otanas Oats | 2.24 | BC | 10.5 |
| Proleaf 234 Oats | 2.21 | BC | 10.2 |
| Everleaf 126 Oats** | 2.00 | CD | 10.2 |
| Everleaf 114 Oats** | 1.88 | D | 10.6 |
| NZA 4.14 Oats** | 1.87 | DE | 10.8 |
| Proso Millet | 1.60 | E | 9.9 |
| German Millet | 1.27 | F | 10.2 |
| LSD (0.05) | 0.27 | | 1.0 |
| CV (%) | 15 | | 12.1 |

*Entries with different letters significantly differ in yield at (0.05).
**Yields depressed due to selective wildlife grazing pressure.

*July 2019, Joe Chicane Farm Forage Test Plots, Grangeville*

**2018 Forage Test Plot Results—Triticale**

| Variety | Combined Avg. Yield | Crude Protein % |
|---|---|---|
| Tricale 141 Triticale | 2.04 | 10.8 |
| Tricale 141 Triticale + Flex Peas | 1.78 | 10.9 |

## *Summary:*

As I mentioned earlier, the forage produced from the test trials was good. As you can see the barley varieties out yielded the rest of the entries and all the oats were slightly higher is crude protein. I was hoping for higher CP content but again, these figures are higher than most typical grass hays produced in the region.

This trial is being repeated in 2020 so that we will have three years worth of data. In fact, the Idaho County plot was seeded last week and the Lewis County plot will be seeded soon.

## *Special Thanks!!*

I would like to thank my colleagues, UI Extension Educators **Doug Finkelnburg and Ken Hart,** for partnering with me on this trial. Also, thanks to our farmer cooperators **Joe Chicane, Mart Thompson and Drew Leitch**.

*Doug Finkelnburg, UI Area Extension Educator, cutting forage plots*.

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