**Ryerss Farm for Aged Equines**

Barn Manager: Lisa Shotzberger, Chester County

Lisa Shotzberger is the barn manager at Ryerss, a non–profit operation for retired and aged horses that is the oldest equine sanctuary in the country.  Ryerss is home to 70 horses, which graze 160 acres of pasture. The farm also maintains an additional 160 acres for hay and field crops. Lisa was introduced to the on-farm Sustainable Agriculture Research and Education (SARE) Project by attending a Penn State Environmental Stewardship short course.

**Best Management Practice (BMP) Identified:**

Increase vegetation in winter pastures to provide nutrition for horses, reduce bare spots that contribute to erosion, and suppress weed populations.

**Reason for BMP:**

During the winter months, all horses at Ryerss are removed from pastures, and turned our to a designated winter pasture. This management practice saves pasture grasses from being destroyed and turning to mud. Additionally, moving horses to one, closer pasture in the winter is easier and safer on the handlers and older horses. Horses are returned to grazing pastures as the growing season begins. Most forages from the winter pasture have been eliminated, and the potential risk of sediment and nutrient loss increases. As the temperatures increase, summer annual weeds and grasses begin to fill in bare spots through out the winter pasture. Due to the close proximity of the barn, reseeding the area with more permanent vegetation would be more aesthetically pleasing and reduce the threat of sediment and nutrient loss.  Lisa is currently working with the Extension Equine Team to evaluate seed varieties and mixes that will establish quickly and remain viable under heavy grazing conditions.

**Course of Action:**

* **Date Reseeded**:  Spring
* **Equipment Used**: No-Till Drill
* **Seed Mix:** Perennial Rye Grass, Ladino Clover, Tekapo Orchard Grass, Kentucky Bluegrass
* **Soil Tested:** Yes (above optimum in P & K)
* **Fertilizer:** No (none recommended)
* **Lime:** No (2000 lbs per acre recommended)
* **Other:** Horses are kept off pasture until fall, when they are no longer turned out to graze.

**Results:**

|  | **2012 Seed Mixture: Orchardgrass, etc.** | **Planned 2013 Seed Mixture:  Tall Fescue, Turf type Bluegrass, Perennial Ryegrass** |
| --- | --- | --- |
| Canopy Cover | 92% |  |
| Desirable Forage | 24% |  |
| Perennial Plant | 56% |  |

After reseeding the winter pasture in the spring, the vegetative cover increased significantly. However, spring planting poses a challenge with weed control. Young grass seedlings often compete with quick growing annual weeds, which explains why a large percent of the reseeded pasture's canopy cover consisted of annual weeds. Fall is a preferred time for reseeding pastures. Little competition from summer annual weeds and fall rain give grass seedlings an opportunity to establish themselves and suppress emerging spring weeds. However, since the winter pasture needs to be used in the fall, spring planting is the only option. In order to determine the success of the spring seeding, the winter pasture was evaluated in the summer. 24% of the plants were desirable forages such as bluegrass and orchardgrass, with the majority of the pasture consisting of weeds. Only 56% of the pasture consisted of perennial plants, while the remaining 36% consisted of annuals.  Summer annuals are false indicators of year round vegetation since their life cycle dies at the end of the season, leaving exposed soil, susceptible to erosion.

**Challenges:**

Find varieties that establish quickly, compete with the summer annual weeds, and are resistant to grazing pressure.

**On – Going Management and Additional Best Management Practices (BMPs):**

 Lisa plans on continuing to manage pastures by:

* Applying an herbicide, when necessary, to control weed populations.
* Reseeding winter pasture in spring using a mixture of Perennial Ryegrass for rapid germination, Turf-Type Kentucky Bluegrass (to handle heavy hoof traffic), and Kentucky-31, Tall Fescue for heavy grazing tolerance.
* Maximizing vegetative cover.
* Practicing rotational grazing on summer pastures, allowing pastures to rest by moving horses weekly and sometimes daily.
* Keeping horses fenced out of streams, except for crossing areas, where banks are stabilized to prevent erosion.

[Tape fencing used for rotational grazing](http://extension.psu.edu/animals/equine/farm-partners/ryerss-farm-for-aged-equines/Tape%20fencing%20used%20for%20rotational%20grazing.jpg/view)

[Pasture weeds](http://extension.psu.edu/animals/equine/farm-partners/ryerss-farm-for-aged-equines/Milkweed-%20a%20perennial%20weed-%20commonly%20found%20in%20overgrazed%20pastures..JPG/view)

[Stream Crossing](http://extension.psu.edu/animals/equine/farm-partners/ryerss-farm-for-aged-equines/Stream%20Crossing.JPG/view)

[Lisa presented with](http://extension.psu.edu/animals/equine/farm-partners/ryerss-farm-for-aged-equines/Lisa%20presented%20with%20partnership%20sign.JPG/view)