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**Stonewall Stables**

Owner: Craig Seyfried, Chester County, PA

Owned and operated by Craig Seyfried, Stonewall Stables is a boarding facility located in Chester County. The operation is home to about 10-14 horses which have access to 19 acres of pasture. The farm has rolling fields, beautiful split rail fencing and a large indoor and outdoor riding arena.

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

Improve year round pasture canopy cover and increase the vegetation that provides nutrition for the horses.

**Reason for BMP:**

The pastures at Stonewall Stables maintained a summer canopy cover that was acceptable to prevent erosion and absorb manure nutrients.  However, a large part of the canopy consisted of plants that had no nutritional value and annual grasses such as crabgrass and foxtail that die when the growing season ends. Many of the pastures have moderate to steep slopes, posing a threat of erosion and nutrient loss in winter when vegetation is absent. Perennial grasses and clover would reduce the risk of erosion and provide better nutrition for the horses.

**Course of Action:**

* **Date Reseeded**: Early September
* **Equipment**: Tractor and No-Till Drill:  A no-till drill is a piece of equipment, pulled by a tractor, that cuts a slit in the soil, places a seed in the slit and covers the seed with a shallow layer of soil.  The existing vegetation is not disturbed, reducing the risk of soil erosion.
* **Seed Mix**: Perennial Rye, Tekapo Orchardgrass, Forage Fescue, Kentucky Bluegrass, White Clover
* **Soil Tested:** Yes
* **Fertilizer:** None recommended
* **Lime**: None recommended
* **Other:** Horses were restricted from grazing in the renovated pasture until the following spring, when grasses were fully established.

**Results:**

|  | **Before Renovating Pasture** | **After Renovating Pasture** |
| --- | --- | --- |
| Canopy Cover | 80% | 100% |
| Desirable Forage | 50% | 94% |
| Perennial Plant | 70% | 98% |

Before renovation, the canopy cover of the pasture was 80%, which is acceptable to reduce erosion.  However, only 50% of the canopy cover contained desirable forage grasses or legumes. The remaining 30% consisted of weeds.

After reseeding the pasture, conditions improved significantly. The stand established quickly in fall and provided thick, dense vegetation in spring that required frequent mowing. The vegetated cover increased from 80% to 100% with 98% of the cover consisting of perennial plants that can provide erosion protection in winter and early spring. The concentration of forage that supplies nutrition for the horses increased form 50% to 94%. The stand of tall, healthy grasses and clover competed with the weed seedlings, reducing the weed population from 30% to 6%.

**Challenges:**

Stonewall Stables housed too many horses to allow for adequate forage growth in pastures, so Craig made a management decision to reduce the number of horses on the farm.

Craig did not own equipment to reseed the pasture so he contacted a neighboring dairy farmer for help. The farmer reseeded the pasture using his tractor and no-till drill.

The no-till drill was too wide to fit through gates, so fence posts were removed to allow pasture access.

Weeds often compete with new seedlings and herbicides are frequently used to reduce weed pressure before reseeding a pasture. Most of the weeds in the pasture were summer annual weeds, which die over winter and grow from seeds the following spring.  Pastures on the farm had steep slopes, and since the weeds helped to prevent soil erosion, the decision was made to allow the weeds to remain to hold the soil until the grass was established.

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

* Rest and rotate pastures
* Control grazing hours
* Mow at recommend heights
* Soil test every 3 years, applies lime and fertilizer based on recommendations

[Farm photo](http://extension.psu.edu/animals/equine/farm-partners/stonewall/farm-photo/view)

[Tractor and No-Till Drill](http://extension.psu.edu/animals/equine/farm-partners/stonewall/tractor-and-no-till-drill/view)

[No-Tilled field](http://extension.psu.edu/animals/equine/farm-partners/stonewall/no-tilled-field/view)

[Close Up of No-Till Drilling](http://extension.psu.edu/animals/equine/farm-partners/stonewall/close-up-no-till-drilling/view)

[Grasses begin to emerge](http://extension.psu.edu/animals/equine/farm-partners/stonewall/pasture-immediately-after-seeding/view)

[Pasture after 3 months](http://extension.psu.edu/animals/equine/farm-partners/stonewall/pasture-after-3-months/view)

[New growth - closeup](http://extension.psu.edu/animals/equine/farm-partners/stonewall/new-growth-closeup/view)

[New growth- height](http://extension.psu.edu/animals/equine/farm-partners/stonewall/new-growth-depth/view)