Pasture Forage Species:  
**Annuals**

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Pasture Species Production

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### Annual Forages

- **Brassicas and small grains planted to extend the grazing season**
- **Annual grasses are used to fill in during the “summer slump” and the ends of the grazing season**
- **Fit into a crop rotation following corn silage harvest**
- **Reduce feed costs**

### Brassicas

- **Establish on well-drained soils**
- **Can be seeded by broadcast, conventional tillage, or no-till**
- **Should be planted in 6-8 in rows**
- **Strip grazing is the most effective way to graze**
- **Allow 6-10 inches of stubble for regrowth**

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### Turnip

- Early fall grazing
- Edible root, stockpile
- Graze tops first, allow regrowth then graze tops and root

### Kale

- 'Premier' stemless variety grows fast, will regrow
- Stubble 3-4
- Good quality forage

### Rape

- Graze before plant reaches maturity
- 4 week regrowth period
- [http://pasturedairy.kbs.msu.edu/past_workshops/](http://pasturedairy.kbs.msu.edu/past_workshops/)

### Swede

- Late fall grazing
- Large edible root
- Slower growing
- Ideal for stockpiling

### Turnip
Sorghum-Sudangrass
- Summer annual grass that is easier to establish than WSG
- Follows the same growth pattern as WSG
- Seed at 50-75 lbs/ac
- Graze between 18-30 inches in height
- Stock animals to graze grass down in less than 10 days
- Prussic acid can be a problem
  - Don’t graze during drought or frosts
  - Always graze at 18” or higher

Pearl Millet
- Graze in at 18-24 inches, out at 8 inches
- Clip to discourage seed head production and encourage regrowth
- More widely grown in the South
- High drought tolerance
- Doesn’t produce prussic acid
- Seed can be broadcast or drilled, in narrow or wide rows. Plant at a soil depth of ½ to 1 inch

Corn
- Grazing varieties
- Graze summer and early fall
- Strip graze to reduce trampling
Other Options

- Small Grains
- Stockpiling
- Crop Residue

Small Grains:
- wheat, barley, rye, triticale
- October to December and March to April
- Graze at 8” – remove at 3-4”
- Late August seeding (3bu/acre + 40lbs N/acre)
- Forage is high in protein and low in fiber
- In the spring, if harvesting for grain, stop grazing when plants start to grow erect, right before jointing

Small Grains
- Triticale
- Wheat
- Barley
- Rye

Stockpiling Species

Stockpiling is accomplished by removing grazing animals from a pasture at some time during the growing season (late July) and allowing forage to accumulate for grazing later in the season (late fall, early winter)

Tall Fescue/Orchardgrass

- Deep rooted bunch-type perennials
- Tall Fescue varieties with endophyte have reduced palatability during summer months
- To stockpile: don’t graze from late August to mid-October
- Stockpiling warning: large quantities of herbage for winter grazing will delay plant recovery in the spring
Crop Residues

- Extend grazing season into winter
- Average to good quality forage
- Best when using rotational grazing methods
- May need to supplement protein to pregnant animals
- Maintains forage quality up to 60 days
- Always include minerals and vitamins

Soybean Residue

- Excellent source of winter forage
- Stubble has higher protein values than corn stover, but is less digestible and requires more acres per animal

Small Grain Residue

- When establishing small grains, plant orchardgrass or timothy and clover
- After small grains are harvested, livestock can graze residue, plus grasses and clover

Crop Planting Date Seeding Rate Graze

<table>
<thead>
<tr>
<th>Crop</th>
<th>Planting Date</th>
<th>Seeding Rate</th>
<th>Graze</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brassicas</td>
<td>July to September</td>
<td>4 lbs. + Rape 3 lbs. + Turnips</td>
<td>Mature</td>
</tr>
<tr>
<td>Corn</td>
<td>April 15 to June (later)</td>
<td>3 bu. +</td>
<td>pre-tassel</td>
</tr>
<tr>
<td>Sorghum-Sudangrass</td>
<td>May to July 15</td>
<td>30 lbs. +</td>
<td>30&quot;</td>
</tr>
<tr>
<td>Rye, Barley, &amp; Wheat</td>
<td>August 15 to October 15</td>
<td>2 bu. +</td>
<td>6-10&quot;</td>
</tr>
<tr>
<td>Spring Oats</td>
<td>August</td>
<td>3 bu. +</td>
<td>6 – 8&quot;</td>
</tr>
</tbody>
</table>

Species Tons DM per Acre

<table>
<thead>
<tr>
<th>Species</th>
<th>Tons DM per Acre</th>
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</thead>
<tbody>
<tr>
<td>Brassicas</td>
<td>1-5</td>
</tr>
<tr>
<td>Corn</td>
<td>3-4</td>
</tr>
<tr>
<td>Corn Stalks</td>
<td>3-6</td>
</tr>
<tr>
<td>Oats</td>
<td>2-4</td>
</tr>
<tr>
<td>Rye</td>
<td>2-3</td>
</tr>
<tr>
<td>Sorghum-Sudangrass</td>
<td>3-8</td>
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</tbody>
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Questions?

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Pasture Walk

- Grazing winter cereal grains and how they fit into a rotation with other annual forages, compliment perennial pastures, and extend the grazing season.  
- April 9th at 10AM  
- Matt Bomgardner's Farm  
  -- 970 North Route 934, Annville, PA 17003.  
- For more information call 717-222-0059.