PRESCRIBED GRAZING MANAGEMENT PLANNING WORKSHEET

LANDOWNERS NAME: ___________________________ DATE: ___________________________

STEP 1a. Estimate the Forage Demand:
The forage demand is the amount of forage dry matter (DM) required to feed a group of livestock for one day. It is calculated based on the rule of thumb that grazing animals require an amount of forage DM equal to about 2.5 to 3.0% of their body weight per day. For lactating animals and growing stock use 3.0% of body weight. For all other classes of livestock use 2.5%.

1. _____________ X 0.025 or 0.03 = _____________ X _____________ = _____________
   Average Weight/Animal  Lbs DM/Head/Day  # of Animals  Forage Demand

2. _____________ X 0.025 or 0.03 = _____________ X _____________ = _____________
   Unadjusted Daily Forage Demand  Lbs/DM/Day

Step 1b. Adjust Daily Forage Demand as a result of supplemental feed use by deducting the pounds of supplemental feeds from the daily forage demand.

If supplemental forages are provided, they are substituted on a pound for pound basis. If supplemental grain is fed, the substitution rate is one pound of grain equals .5 pounds of forage.

Unadjusted Daily Forage Demand _____________  Lbs of supplemental feed _____________ =
Lbs/DM/Day  Lbs/DM/Day

Adjusted Daily Forage Demand _____________
Lbs/DM/Day

STEP 2. Estimate the Forage Supply:
This is the amount of forage dry matter that is estimated to be available for grazing after a 20-day growth period in the spring and a 30-day growth period in the summer and fall.

**NOTE** These values are for planning purposes only. They reflect average growing conditions, pastures that are in good condition, soil fertility maintained to soil test recommendations and pH not less than 5.8. Unless actual measured yields are available, use estimated yields from NRCS data, New York Agricultural Land Classification data or the Cornell University Forage Species Selection Tool located on the website www.forages.org. Use the following table to convert hay yields in Tons/DM/Acre/Year to Forage Availability in Lbs/DM/Acre/rotation.

<table>
<thead>
<tr>
<th>Hay Yield Tons/DM/Acre/Year</th>
<th>5.5</th>
<th>5.0</th>
<th>4.5</th>
<th>4.0</th>
<th>3.5</th>
<th>3.0</th>
<th>2.5</th>
<th>2.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forage Availability Lbs/DM/Acre/Rotation</td>
<td>2200</td>
<td>2000</td>
<td>1800</td>
<td>1600</td>
<td>1400</td>
<td>1200</td>
<td>1000</td>
<td>800</td>
</tr>
</tbody>
</table>

Soil Map Symbol
________________________
1  2  3  4

Number of Acres
________________________
1  2  3  4

Forage Supply
________________________
1  2  3  4

Lbs/DM/Acre/Rotation

* Depending on pasture conditions and forage density:
  100-150lbs/DM/inch of forage (fair)
  200-250lbs/DM/inch of forage (av.)
  250-300lbs/DM/inch of forage (good)
  300-400lbs/DM/inch of forage (Ex)
Step 3. Select Residency Period:

Residency Period

Days

Note** One half to 1-day residency periods are recommended for lactating dairy cows. Residency periods of 2 to 7 days may be used for all other livestock. To maximize harvest efficiency, use shorter residency periods.

Step 4. Determine Paddock Size by Major Soil Type:
Paddock size is based on meeting the forage demand of the livestock for the designated residency period.

\[
\frac{\text{Forage Demand}}{\text{Forage Supply}} \times \frac{\text{Acres Required/Day}}{\text{Residency Period}} = \text{Paddock Size (Ac)}
\]

Step 5. Determine the Number of Paddocks

\[
\frac{\text{Residency Period}}{20 \text{ days rest}} + 1 = \text{Number of Paddocks}
\]

\[
\frac{\text{Residency Period}}{30 \text{ days rest}} + 1 = \text{Number of Paddocks}
\]

\[
\frac{\text{Residency Period}}{45 \text{ days rest}} + 1 = \text{Number of Paddocks}
\]

\[
\frac{\text{Residency Period}}{60 \text{ days rest}} + 1 = \text{Number of Paddocks}
\]

\[
\frac{\text{Residency Period}}{90 \text{ days rest}} + 1 = \text{Number of Paddocks}
\]

Step 6. Estimate the Total Number of Acres Needed: Use the average paddock size of the most prevalent soil types to estimate

\[
\frac{\text{Paddock Size}}{\text{Number of Paddocks}} \times \frac{\text{Acres Needed for 20 days rest}}{\text{Paddock Size \times Number of Paddocks}} = \text{Acres Needed for 20 days rest}
\]

\[
\frac{\text{Paddock Size}}{\text{Number of Paddocks}} \times \frac{\text{Acres Needed for 30 days rest}}{\text{Paddock Size \times Number of Paddocks}} = \text{Acres Needed for 30 days rest}
\]

\[
\frac{\text{Paddock Size}}{\text{Number of Paddocks}} \times \frac{\text{Acres Needed for 45 days rest}}{\text{Paddock Size \times Number of Paddocks}} = \text{Acres Needed for 45 days rest}
\]

\[
\frac{\text{Paddock Size}}{\text{Number of Paddocks}} \times \frac{\text{Acres Needed for 60 days rest}}{\text{Paddock Size \times Number of Paddocks}} = \text{Acres Needed for 60 days rest}
\]

\[
\frac{\text{Paddock Size}}{\text{Number of Paddocks}} \times \frac{\text{Acres Needed for 90 days rest}}{\text{Paddock Size \times Number of Paddocks}} = \text{Acres Needed for 90 days rest}
\]

Step 7. Determine the Number of Actual Acres Planned:

\[
\frac{\text{Pad Size/ Ac. Needed/day}}{\text{# Days available}}
\]

Note: During spring and early summer, only about 40% to 60% of planned acres will be required for grazing. The remaining grazing acres could be mechanically harvested, planned to be grazed by another class/group of livestock, clipped, deferred for wildlife habitat or stockpiled for extended grazing depending on the goals of the family.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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<td>17</td>
<td>18</td>
<td>19</td>
<td>20</td>
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Total actual Acres

Total # days rest
<table>
<thead>
<tr>
<th>Forage Animal Demand</th>
<th>Pasture/Hay Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
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</tbody>
</table>

- **Hay on Hand**
  - Tons
  - **Purchased Hay**
  - **Annuals**
  - **Hay**
  - **Pasture**

- **Divided by 2000 = 1.64**
  - (9 lb / calf/day) x 365 calves - > 300 lb (3)

- **Divided by 2000 = 3.28**
  - (18 lb / heifer/day) x 365 heifers - 600 lb (6)

- **Divided by 2000 = 5.47**
  - (30 lb/cow/day) x 365 milk cows - 1000 lb (1)

**By Cliff Havemaker**

**Date**

**Pasture T Account**
Other
Farm Art studio and photography center
Tourism opportunities
Ramifications of blending in sync with nature
Marketing advantage (Say: key to enterprises on same land base, meat sales)
Conservation Program payments, practices
Custom Grazing
Housing needs for animals
Increase grass cover and diversity (pay less materials)
Stockpiled grass value
Hunting leases
Improving land values (fallow land)
Organic Market increase (less soil moisture, more fertility, buy less emergency feed)
Inventory increase (stock density, reproduction, excess hay to sell)
Interest paid
General repair costs
Equipment costs
Crop expenses (fertilizer, bedding costs, seed, complication)
Fuel
Utilities (use them less)
Labor, Time Management
Health
Feed costs

Decrease
Stay the same
Increase

How will the income statement change with planned grazing?