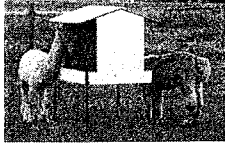


## Pasture Management

*It's more than fencing*



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## Outline

- Goals of Pasture
- Animal Density / Animal Grouping
- Soil Sample Basics
- Forage Analysis
- Pasture Plant Choices
- Pasture Maintenance
  - Grazing
  - Mowing
  - Fertilizers
  - Manure Management
- Answer your Questions

**FASTEN YOUR  
SEATBELTS**

## Benefits of Pasture

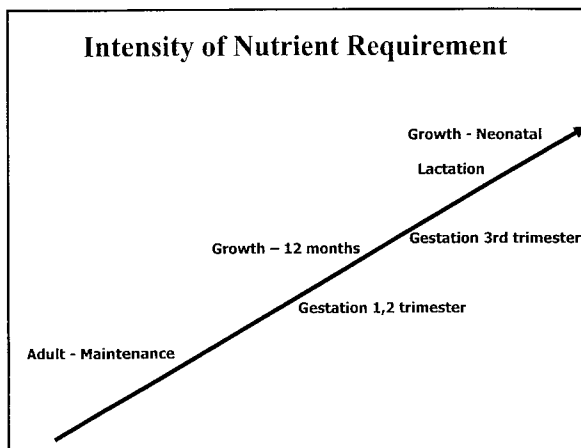
- Labor
- Cost efficient forage – feed cost
- Alpacas doing what they were designed to do
  - Exercise
  - Head down eating
- High Quality Feed – calories and protein
- Animal comfort and stability

## Risks of Pasture

- Dogs – other predators
- Parasites
- Lack of hands on alpacas – forgotten
  - Body Condition
  - Disease
  - Injury
- Overgrazed and overstocked pastures lead to disease

## Pasture – in one slide

- Understand your soil
- Choose seed wisely
- Mow – but not too short
- Fence the perimeter
- Submit Fecal samples
- Do not overgraze
- Group and stock accordingly

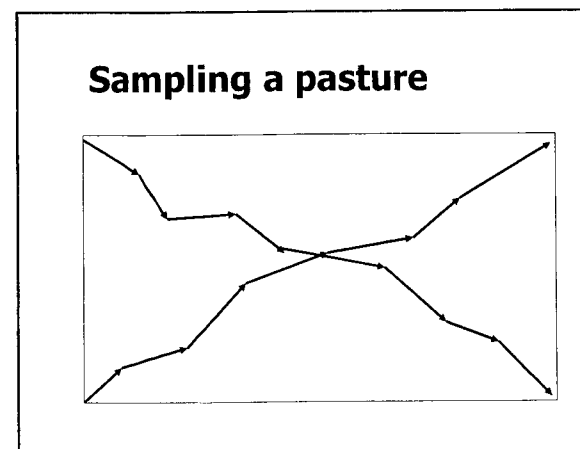


- ### Basic Nutrition Plan
- Forage Base – 83%
    - Hay: Grass Hay, Alfalfa Hay
    - Pasture: Change, High Protein
  - Concentrate: Grains
    - Provides energy
    - Carry Vitamins and Minerals
  - Vitamin Mineral Supplementation
    - Utilize stable product
    - Consistent intake
    - More ingredients = Increased Error
  - Free Choice – Clean Water

- ### Nutrition
- Is Pasture Consistent?
- Seasonal Variation
    - Amount of feed
    - Protein and Energy variation
    - Choosing plants -
      - Not plants choosing you

- ### Simple things to check
- Crude Protein – Fertilizer ?
  - NDF % - how much can they eat
  - Nitrate – PLEASE- late in the year

- ### Submitting Forage Analysis
- Pasture
    - Sample 12 to 15 times without looking
    - Acquire a large sample, then mix and retrieve a smaller sample for submission



## Reading Feed Analysis

- **Dry matter vs. As Fed**
  - Dry matter is the gold standard
  - 100% dry feed – oven
  - Affects the number for the nutrient

## Reading Feed Analysis

- CP – Crude Protein
  - Expressed as a percent (DM and/or As Fed)
  - Component of muscle, hair (fiber)
  
- Nitrogen content \* 6.25 = Crude Protein
- Plant Protein is 16% nitrogen

## Fiber Terms

- **NDF – Neutral Detergent Fiber**
  - **Intake/Palatability**
  - Made up of : Cellulose, Hemicellulose, & Lignin

### Simple Take Home Message

$$\underline{120 / \%NDF = \% \text{ intake}}$$

- Thus NDF = 60% will limit intake

## NITRATE

- What is nitrate
  - NO<sub>3</sub>
  - Converted to nitrite in C1 / C2
- What does it do to the alpaca
  - Binds to RBC and decrease O<sub>2</sub> carrying capacity of blood
    - Infertility/Abortions/Stillborns
    - Death

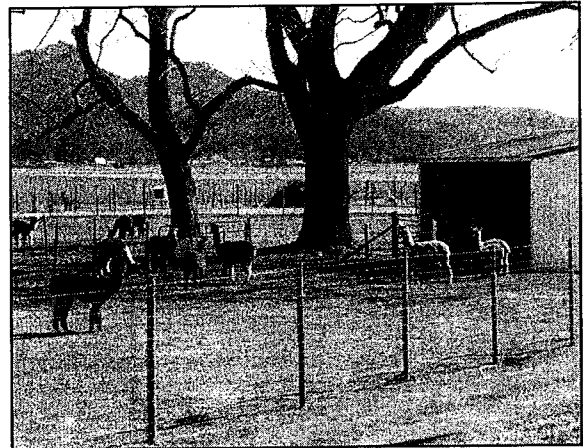
| % Nitrate Ton (DM Basis) | Comment   |
|--------------------------|---|
| Below 0.44               | Safe to feed.   |
| 0.44 - 0.66              | Safe for non-pregnant animals – Limit to 50% of ration on DM Basis for pregnant animals; animals may go off feed, have a slow drop in milk, some abortions. |
| 0.66 - 0.88              | Limit to 50% of ration on dry matter basis; Symptoms as above, some death.  |
| 0.88 - 1.54              | Limit to 35 - 40% total dry matter in ration. Do Not Feed To Pregnant Animals.  |
| 1.54 - 1.76              | Limit to 25% total dry matter in ration. Do Not Feed To Pregnant Animals.   |
| Over 1.76                | Toxic - Do Not Feed   |

## Soil Samples

- Technique
- pH 5.8 to 6.2
  - Lime too Low
  - Sulfur too high
- N – Nitrogen 75 to 120 lbs / acre
- P – Phosphorous – 12 ppm Morgan
- K – Potassium – 250 ppm to 300 ppm

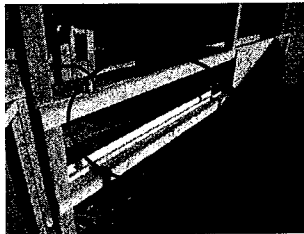
## Nutrition

- What's missing?
  - Trace Minerals
    - Se, Zn, Cu, Mn
  - Macro Minerals
    - Ca, Mg, Na, Cl ?
  - Vitamin E and D



## Feeding - Shelter

- 2.5 feet per animal
- 2 feeders per pen



## Limiting Risk

- Grouping and Density is First
- Fecal and Ground Water Exposure is second
- Do fecal examinations

## Grouping and Pen Moves

- **LIMIT ANIMAL MOVEMENT-**
  - Less than once per month?
- **Groups that make Sense**
  - "Boys"
  - Milking Maids / Cria
  - Pregnant
  - Breeding Males

## Grouping

- Farm Size ?
  - 1 to 10 animals
  - 10 to 50
  - >50



## Alpaca Density

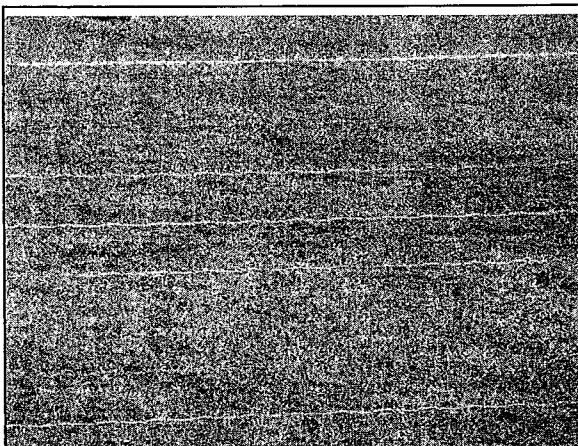
- Animals per acre
  - ❖ < 5 adult alpacas per acre
  - ❖ 6 - 10 adult alpacas per acre
  - ❖ > 10 – *The wheels come off the car*
- Social Pressure
- Soil Fertility and Structure

## Fencing - Protection

- Goals of fencing
  - Perimeter
    - Keep things OUT
    - Keep critters in
  - Cross
    - Permanent ??

## Fencing

- Types
  - 'No Climb'
    - 5 foot
  - Hog Wire
    - Neck Fracture
  - Smooth Wire
    - Limb amputation
    - Electrocutation
  - Barb Wire



## What to plant??

- Nutrient Value – smooth out the seasons
- Price
- Growth
- Sustainability
- Risk
- Palatability

## How to manage Pasture

### *What Grass do I Plant?*

- Fescue –
  - endophyte risk
  - dries easy to make hay
  - good with environmental stress
- Ryegrass –
  - endophyte risk
  - Poor drying – poor hay choice
  - good with environmental stress
  - Lawn grass – PNW – DO NOT FEED LAWN CLIP
  - Poor NDF levels

## *What Grass do I Plant ?*

- Orchard
  - No endophyte risk
  - Poor heat tolerance
  - Good drying for hay production
  - Lower NDF
  - General overall great nutrient profile

## What do I plant ?

- Bluegrass –
  - Cool season grass
  - no endophyte risk
  - slow growing
  - Likes the wet
- Oats
  - annual
  - Fast starter
  - nitrate accumulator
  - silage?

## What do I plant?

- Bentgrass
  - No endophyte risk
  - Expensive seed
  - Slow growth
  - Good on dry, rocky, low moisture

## Pasture Maintenance

- Mowing
  - Grass reduced to less than 6 inches
    - Not shorter than 3 inches
  - Every 30 days – in the growing season
  - Grass is competitive
  - Choke out weeds
  - Ensure water/irrigation is adequate

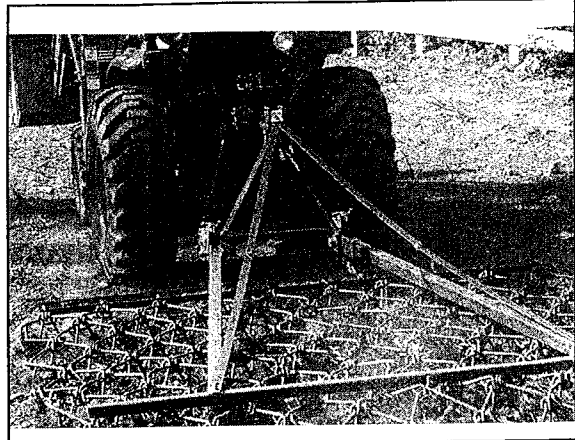
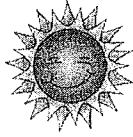
## Pasture Maintenance

- Fertilizers
- Organic v. Inorganic
  - pH – Lime
  - Soil Sample
  - Routine Application

## Pasture Maintenance

### ■ Manure Management

- Pooper Scooper patrol
- Harrowing
- Sun is your friend



## Grazing

### ■ ROTATIONAL

- Remove Animals
- Mow
- Replace animals in 14 to 30 days

### ■ CONTINUOUS

- < 5 adults per acre
- Variable production with season
- Mow every 30 days or mow 1/2 every 2 weeks

## Weed Control

- Mow routinely
- Fertilize according to soil needs
- Prevent overgrazing
  
- Chemical Control – Herbicides
  - Round Up
  - 2-4 D

## Moss Control

- Prevention is key
  
- Iron Sulfate
  - 20% liquid or powder
  - 32% granular
- Lime – with an acid soil

## Take Home Thoughts

- Understand your soil
- Choose seed wisely
- Mow – but not too short
- Fence the perimeter
- Submit Fecal samples
- Prevent overgrazing
- Group and stock accordingly

**Thank You !**

**Questions??**

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