

Multi-species Grazing for Sustainable Farming



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Perspective of Presentation: Multi-species Producer

Reasons for Multi-species Grazing

Disclaimer: livestock preferences vary according to experience and management

- \$ Weed Control
- \$ Nutrient recycling
- \$ Hay savings
- \$ Grazing next to each others poop
- \$ Serve as vacuums for each others internal parasites
- \$ Increased stocking rate
- \$ Increased income, cash flow\$\$\$
- \$ Fun and entertaining



More Reasons for adding Small Ruminants



- Sheep and Goats gestation period is about 5 months
- Can breed at 10 mo
- Produce >1.5 babes per female
- Annually pounds of offspring produced roughly equals mothers wt
- Dollars per pound equal to or exceed cattle price

Evolution of infrastructure

1. Boundary fence- multi-strand (6 strand preferred)
2. Low wire most important, don't turn it on till you need it 4 strand or more. High grass makes bottom wire look lower
3. Low stocking rate of small ruminants free roaming
4. Hub fenced first (woven wire with offset hot wire)
5. Retrofit Cross fence: initially 3 strand poly wire or electro-net, then 4 strand HT permanent fences, radiating from the hub
6. Farm history: Cattle first, added goats, then sheep, then more sheep, now cattle
7. No hay made on farm

Current Inventory

- 300 ewes 54 AU
- 500 lambs (0.5 yr) 35 AU
- 60 nannies 10 AU
- 100 kids (0.5 yr) 6 AU
- 50 cows includes heifers 60 AU
- 20 calves 12 AU
- 1030 animals Total 177 AU

- 350 acres of upland pasture = 2 ac/ AU
- This year lost some kids and lambs to predators 2.5 ac/AU
- 16 permanent pastures divided into 45 paddocks
- Stock density 4,000 to 70,000 lb/ac

Perspective of presentation:

Goal of my operation: “A low cost, low stress, grazing operation that improves production and the environment while being consistently profitable”.

Stock low number of females

and keep offspring longer



Introducing New Species

- Place new species in woven wire paddock (hub) with offset electric fence
- Graze herd beside the hub for a minimum of 3 days
- Introduce new species after herd has been rotated to fresh grass



Animal Type and Number of Each Species

- Ratio of different species is dynamic
- Selection of top 80% of stock
- Bottom 20% of stock cost 80%
- Body type of all species
 - Deep body
 - Wide
 - Mouth
 - Wide
 - Long head



Cattle rotationally grazed with goats free ranging

Historical View

2006



- 1 to 2 goats can be grazed per cow w/o competing with cattle
- If stocking rate of sheep is too high, cattle performance will be sacrificed
- cattle are always the second grazer, due to fencing

January

Bale grazing, 42" wire to hold cows back

34" to hold back steers

3 polywire to hold back sheep and goats

wire spacing (7"-8"-12") 27" tall



Place rolls on low fertility or weedy sites, relocate every time you place a roll

Late March

Fence the long direction and leave it up longer

Single poly wire results in lower body condition of cows
and great body condition of small ruminants



Now all animals run as one herd



- Combined animals due to simplicity and body condition of cattle.
- If multiple herds are run, best as a leader follower system
- One herd, one stop to check mineral, water and forage or hay when needed.
- Much easier to manage forage and recovery period
- Disadvantage is target grazing certain plants, sometime we will leave goats a bit longer or they will seek out next field themselves.

April

Concrete blocks in water tank for escape
and high water level



May

Management of cover and manure with Multi- species Plants and Animals



- Fertilizer savings \$10,000 to 30,000/yr
- Hay savings \$5,000, hay is fertilizer
- Increased stocking rate
 - 13% overall
 - 38% home farm

Very exciting time to be in agriculture
Give a little to nature and be rewarded

July- rented farm, 225 sheep on 100 acres



Only 4 paddocks limits recovery period also mainly sheep

Early July (short dry spell) Sheep and Cattle sharing water



August Sericea and briars





Blackberry stemmed

Grazing Corn

Are we suppose to be in here?

What is this stuff?



Cost of corn \$7/ac, 150,000 ppa, drilled

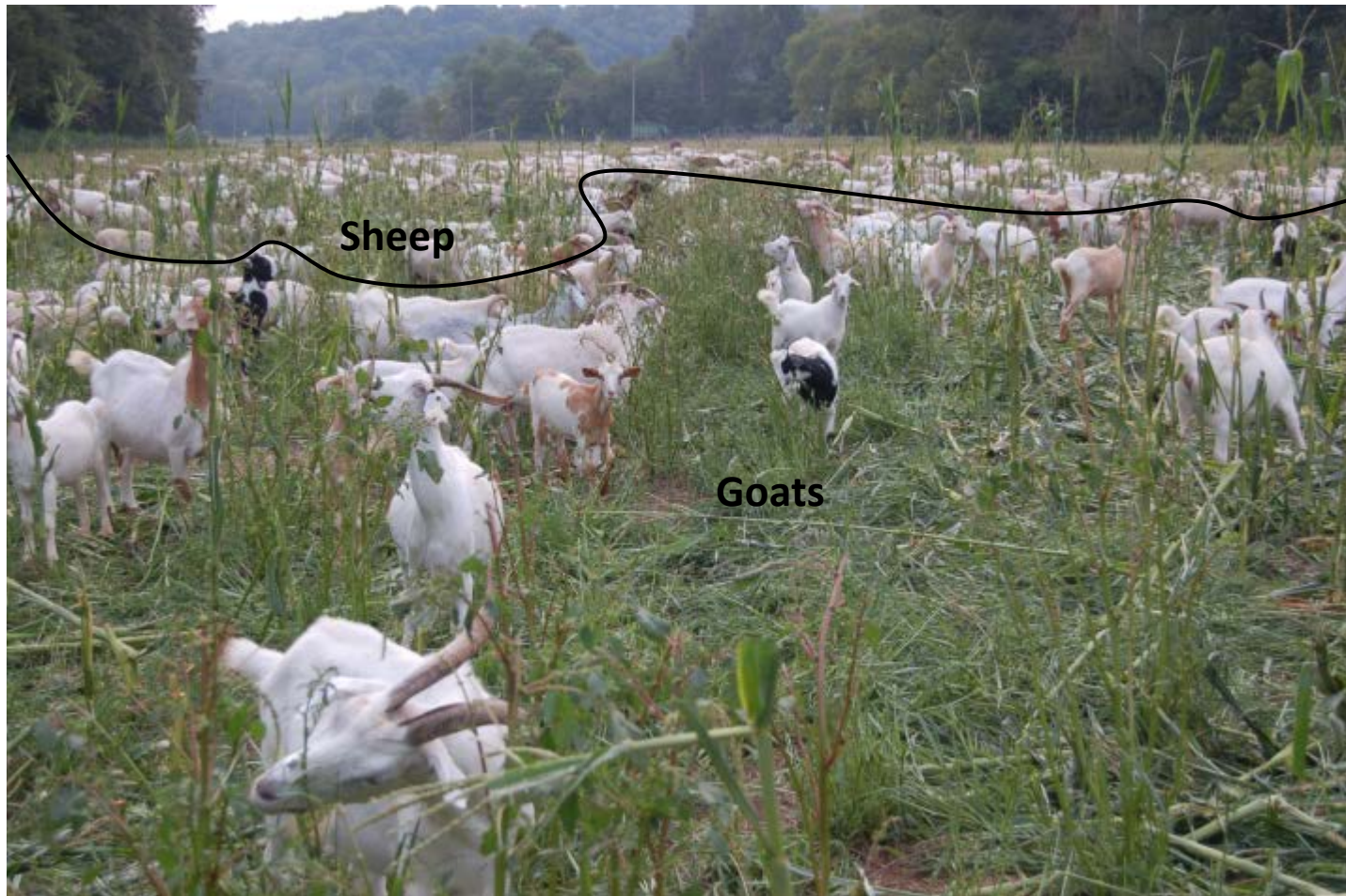
Later Day 1, 8/10/2012



Path for fence
knocked down with truck,
3 wire poly fence



6 days grazing,
Note: Goat heads high,
Sheep heads low, Cattle in tall corn



August 18, Day 8, of strip grazing Too much can be eaten



Not good residue (litter) management should have back fenced

High Choice steer harvested after grazing corn 18 days, 36 mo. old



Late October- top grazing tall fescue
typically self segregation



Cattle

Sheep

Goats

Early November
red tag notation to sale

mark ear tags with pig ear notcher for bad feet, bad
famacha, messy tail, not shedding or sale.



November-
in growing season only graze top 1/3 of plant
growth stops then take ½ leave ½.



Late November-



Mineral -in general 100 ppm Cu (**caution**) for all species,
3000 ppm Cu in hanging barrel for cattle, sometimes 34"
wire separates cattle from expensive sheep mineral and kelp

Prairie Bromegrass adapted to shade and heavy manure areas



Same site as previous slide in August Pigs with Cattle, Goats, Dogs and Sheep





Mulch



No Mulch

December

Sericea hay, slick bottom,
34" electric wire to keep cattle away



Watch rumen fill



Quick coupler for water



Favorite water tank for Multi-species
Rotate water point for nutrient mgmt.





Chlorine in a bottle

- Gatorade or like container
- Cut holes in middle of container
- Insert 1" chlorine pool tablet
- Throw in trough, spring box or other water source

Happy as a pig in _____, Oh, Water Quality!



They roll in manure more than rooting in it

When acorns start dropping check fence



Manure an overlooked asset

85-57-190/cow/yr (.23-.15-.52/day)

e.g. Nutrients needed (120-30-30)/ .23-.15-.52 x herd
number = days to graze to fertilize

120 N needed/ 23 (0.23x100) = 5 to 10 days due to N loss

Fertilize any crop with 100 cows, 11 days/ac=

256-156-572/ac,

Alchemy?



Extend your roots with fungus!



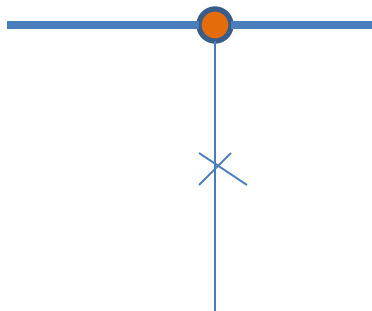
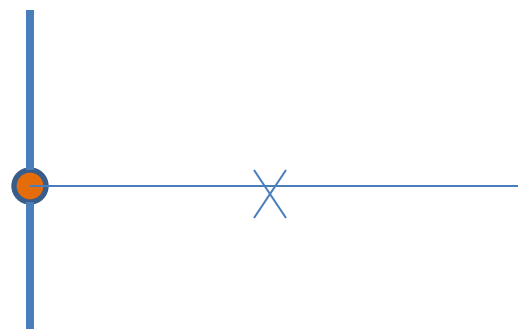
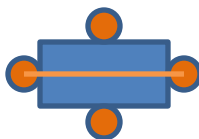
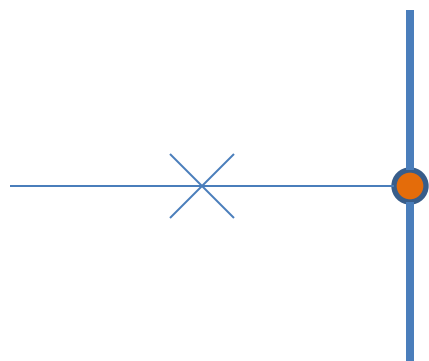
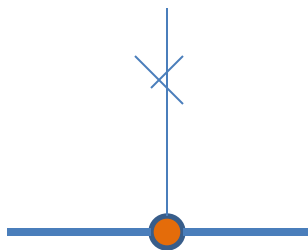
Raise grazing height and maintain cover: improve infiltration, moisture holding, increase biology

Gated Water Point

Overhead wire

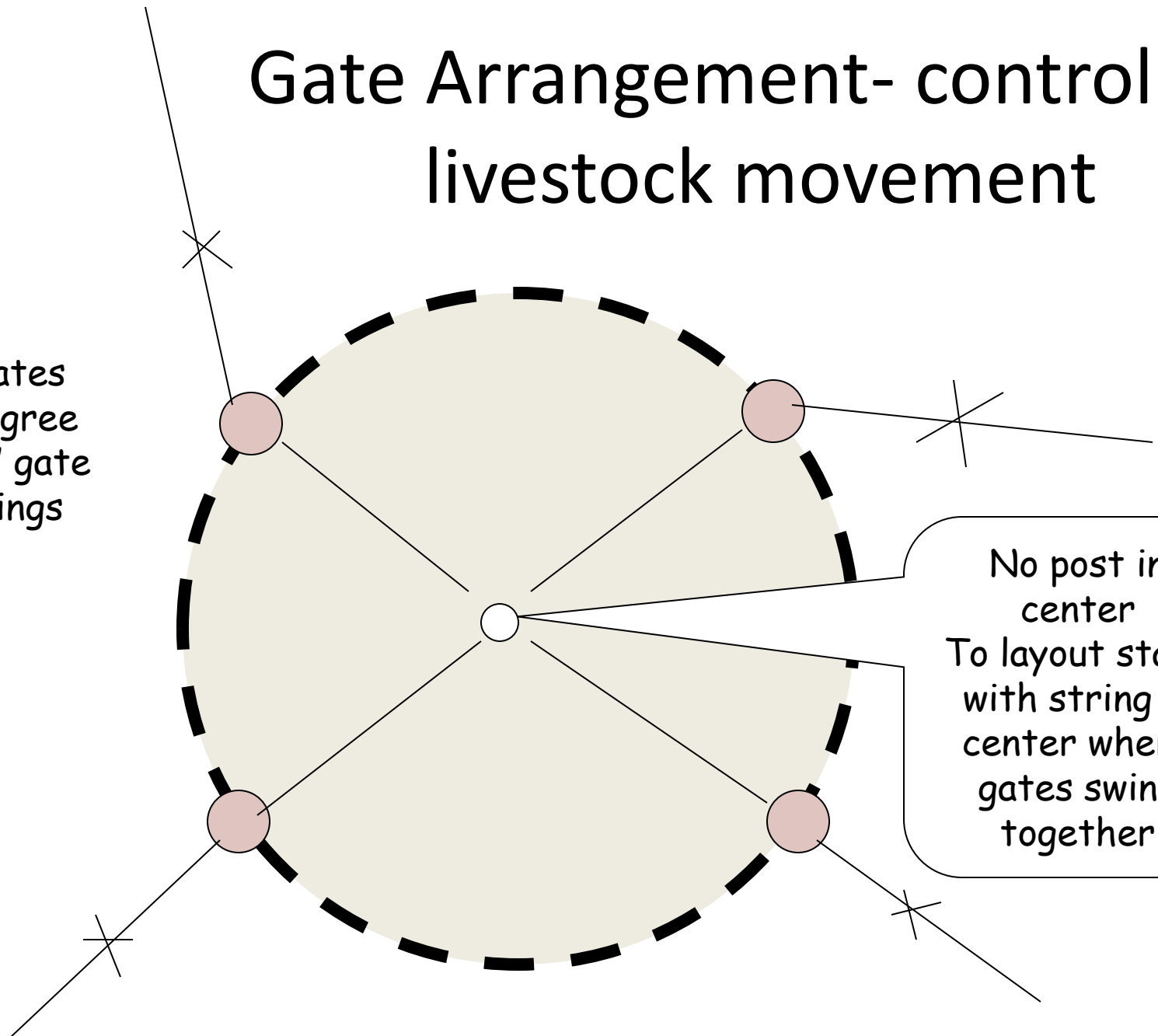
Floating braces





Gate Arrangement- controlling livestock movement

16' gates
90 degree
= 22.5' gate
openings



No post in center
To layout stake with string in center where gates swing together

Predator control- may be the biggest hurdle

if no to little predator problem don't shoot
if it's a problem declare war!

- 2 dogs minimum,
 - 1 per ~50 animals
 - Feed dogs with self feeder under shade cloth
- 1 donkey per flock (no ionophore)
- 1 llama per flock (no ionophore)
- Best to introduce fresh weaned guardian
- Cattle serve a roll in predator control
- Home farm: 6 dogs, 1 donkey and 1 llama
- Rented farm: 4 dogs, 6 donkeys, and 1 llama





Grazing Woods



**Need to fence woods separate,
not much forage in woods
needs a long recovery**

Hay can cave and kill goats



Targeted Grazing

- Sheep: buttercup, other herbaceous weeds
- Goats: woody plants like briars, multiflora rose, corral berry and ironweed
- Cattle: best at treading impact, wingstem weed is not readily consumed but eaten better by cattle than other species



Timing and Marketing

- October breeding of ewes and nannies.
- May 9 breeding of cows
- Lambs and kids born in March, no shelter, S. aspect
- Calves born February 15 – April 15
- Grass fed kids and lambs not weaned sold in December or January.
- Long yearling grass fed cattle sold in July or August
- I contact direct marketers and offer previous weeks auction mkt price, then sell at auction

Comments- Questions Ruminations?

