Managed Grazing Course

Sample Final Exam

Part 1. What is managed grazing. Background & terminology

1. List 2 other or alternate names for managed grazing found in your book.

Rotational grazing, Management intensive rotational grazing (MIRG), Intensive Grazing Management, Voison Grazing, short duration grazing, Savory systems, strip grazing, controlled grazing.

2. What is the new 'technology' imported from New Zealand that allowed managed grazing to become a reality? Portable fencing

3. List four reasons why farmers might choose to go grazing.

Economics, health, quality of life, time/labor savings, environmental benefits, desire to be 'closer' to the animals and land, less machinery needed, less capital needed, wildlife benefits, animal health & welfare, increased pasture productivity, aesthetics.

4. Approximately how many Wisconsin farmers are using MG in 1999? 21.8% or 4,700 farms

5. What is the trend for adoption of MG through 2021?

Growing a little, but adopted by smaller farms – not much in CAFOs

6. Speculate on why a farmer might <u>not</u> use managed grazing.

Pa never did it this way, they've invested too much capital in large barns, not enough land, don't know how, looks too hard, afraid cows might get out, afraid milk production will fall

7. Describe an advantage of managed grazing in terms of consumer health.

More CLA and Omega =-3s, lower fat

8. Describe two environmental or sustainability benefits of managed grazing.

Covers the earth with perennial plants all year round, uses less energy

9. Describe how managed grazing is beneficial to the animals doing the grazing.

Feet and legs are healthier, overall fewer veterinary bills, breeding is better when cows have sod underfoot, usually a higher nutritional plane – less acidosis.

10. Give two reasons why grazing might be beneficial for the farmer who adopts this practice.

Simpler than running machinery to feed cows, less capital investment in barns & machines, less stress, more net income, get to be on the land more

11. Speculate on what institutional barriers are in place that discourage farmers from trying grazing.

No subsidies available

12. What government agency has some programs that might be helpful for graziers? USDA-NRCS

13. What are some of the program names? EQIP, CSP

14. How can these programs help the farmer? There is cost sharing for practices.

15. Name 4 cost sharing practices. installing fences, seeding pastures, using cover crops, putting in wildlife habitat, putting in lanes, barnyards, rain gutters on barns, etc

16. Why is the government interested in helping farmers graze? Conserves and improves land and soil health

Summary: Draw and describe managed grazing for a friend (include as many components as you need to in order to 'define' managed grazing – yet keep the explanation simple)

Animal, fencing, time limits, plants, rest, movement of animals, water source

NORTH CENTRAL SARE Sustainable Agriculture Research & Education

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NORTHEAST WI Technical College

Part 2. Plant Biology

1. What is the relationship between a pasture plant's quantity, and its quality?

is pretty much inverse. As quantity rises, quality goes down.

2. Draw that relationship.

3. Name at least 3 of the 5 growth stages of pasture plant:

Vegetative, internode elongation, stem elongation, early heading, seed forming

Or: leafing, stem elongation, tillering, jointing, boot stage, early heading, flowering

4. When is in the plant's growth cycle is typically the best time to graze or harvest?

Point where you get a good compromise between volume and quality – where they cross on the curve.

5. At which point in the growth cycle does a plant have the greatest carbohydrate reserves?

Seed forming

6. Why don't we graze when the plant has its greatest carbohydrate reserves?

The animals will find it unpalatable and not very nutritious

7. What component of a plant makes it unpalatable and not very nutritious when it gets older?

Lignin, fiber

8. In terms of plant growth, why must graziers exclude animals from a paddock for a month or so after a grazing event?

Plants need recovery time and have to put down some new carbs and growth.

9. How is it possible, biologically, that the same acreage can produce double the forage for grazing simply by using managed grazing. Continuous grazing knock out production, holds the plant back.

10. Draw a graph of the growth curve of a pasture over the growing season from April to Novemeber

(see page 8 in the book)

11. On the same graph you just drew, now draw in a line showing how much pasture a mature milking animal needs.

12. Draw a second line showing how much a growing, young animal needs over the season.

11. What do farmers do with the excess pasture growth that occurs in the springtime

Make hay or baleage

12 Describe continuous grazing by comparing it to managed grazing

With set stocking, there is no rest time for the plants, a time when animals are not on a paddock.

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Section 3. Stocking rates

1. What is the recommended number of cattle per acre for summertime grazing?

One animal per acre

2. What is the recommended number of acres per cow if you also plan to meet the animals winter feed needs?

2 acres per animal with the 2nd acre being 'put up' as stored feed.

3. Define Stocking rate:

The number of animals or animal live weight assigned to a grazing unit on a seasonal basis

4. If there are 20 cows using a 10 acre field over a growing season, what is the stocking rate?

2 cows/acre

5. If a cow weighs 1100 lbs… and there are two cows/acre what is the stocking rate in terms of lbs/acre?

2200lbs/acre

6. Define carrying capacity.

The stocking rate that provides a target level of performance while maintaining the integrity of the resource base

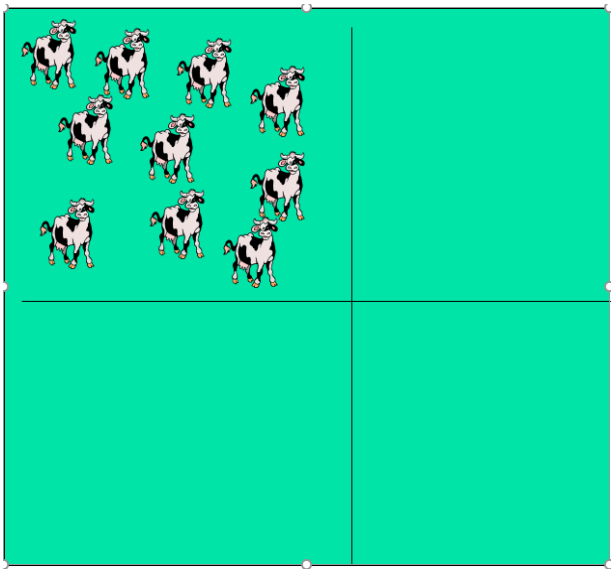
7. What happens when carrying capacity is exceeded?

Animal weight gain or milk production goes down, the pasture/land is eaten too close to the ground and the soil/plants are damaged.

8. Define stocking density.

The number of animals or animal live weight assigned to a specific pasture area for a specific time period.

9. What is the stocking rate of this farm if the total land area is 40 acres?

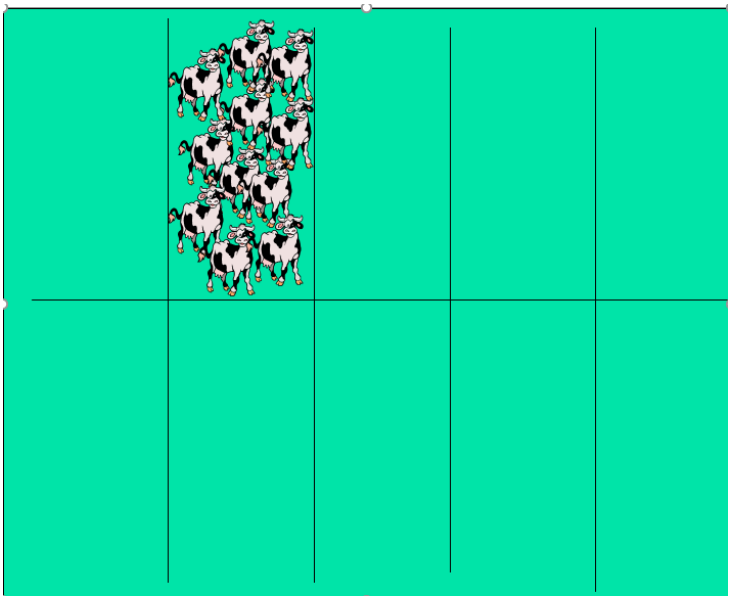


Stocking rate is 10 cows/40 acres = .25 cows/acre

10. What is the stocking density of paddock 1 if the paddock is 5 acres?

10cows/5 acres = 2 cows/acre

11. On this farm assume there are 10 cows (11 are shown) on a 1 acre parcel and this is all the land the farm owns.



What is the stocking rate?

10 cows/10 acres = 1 cow/acre

What is the stocking density?

10 cows/1 acre

15. Which of the farms that we visited had the highest stocking density?

Oneida – they had 200 animals on 10 acres, or 2 animals per acre on a paddock for a few days

16. If a farm has 5,000 cows and has 1000 acres of land, what is the stocking rate?

5 animals/acre

17. At what number does a farm exceed its carrying capacity for providing feed and space for manure?

About 1-2 animals per acre

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