

Name _____

APSC4434, Sheep Production
Final Exam
December 10, 1999

1. Your neighbor is about to start a sheep dairy to produce high-value sheep cheese. He realizes that you know nothing about milking sheep and making cheese, but he also knows that you know something about raising and caring for sheep, so he has come to you to help him out. He is establishing an intensive dairy operation. He has purchased some East Friesian rams and will be crossing them with U.S. breeds to eventually grade up to a purebred East Friesian flock, but it will take several years to get to a significant number of East Friesian ewes. In the meantime, he will be milking crossbreds. Once his flock is established, the purebred East Friesian ewe will produce 4 to 8 times more milk than common U.S. breeds

a. His first step is to buy some readily available ewes of standard U.S. breeds to start the crossbreeding program. Which of the following breeds would be satisfactory (S) or unsatisfactory (U) as foundation animals to start his dairy flock?

Suffolk _____

Rambouillet _____

Dorset _____

b. The two of you have another neighbor who is interested in buying some of the 1/2-East Friesian rams to use to produce 1/4-East Friesian ewes to be used in her meat sheep flock. She would use these 1/4-East Friesian ewes to increase the milk production and lamb weights in her flock under a normal Virginia sheep management system. Which of the following might become more of a health concern than normal when East Friesian crossbred ewes are used as suckler ewes? Mark as likely (L) to be more of a problem, possibly (P) more of a problem, or not (N) likely to be a problem.

Overeating disease _____

Ketosis _____

Mastitis _____

Foot rot _____

Starvation in baby lambs _____

c. In the dairy operation, baby lambs are either 1) weaned shortly after birth and reared artificially, or 2) are suckled on a restricted basis while the ewes are being milked and weaned as soon as they can consume adequate dry feed.

i. If you choose to wean the lambs shortly after birth, what practices should you follow to implement an efficient, effective artificial lamb rearing program?

Feed warm milk replacer twice a day _____

Remove lambs immediately after birth to save as much milk as you can _____

Inject baby lambs with selenium at birth _____

Provide free-choice access to cold milk replacer _____

Make sure lambs get to nurse immediately after birth _____

ii. If you choose to let the lambs nurse the ewes until they can be weaned (perhaps at 5 weeks of age), which of these practices should you use at weaning?

Feed a 14% protein diet at weaning _____

Vaccinate for clostridial diseases at weaning _____

Dock baby lambs at 4-10 d of age _____

Feed a whole grain diet at weaning _____

2. Answer the following questions about developing ewe lambs for their first breeding.

a. It is August 1 in the Shenandoah Valley of Virginia. You have a group of 1/2-Suffolk ewe lambs that were born in February and that you want to get bred starting September 1. They have been on native pasture for the summer. It has been dry, and the lambs got a little wormy in mid-summer, so you get them in and weigh them to see how they are doing.

i. Are these lambs old enough to be bred in early September? _____

ii. How much do they need to weigh to be bred in early September?

b. You have a set of ewe lambs that were born in September. You want to get them bred to lamb as close to one year of age as possible.

i. Rank the breeds from best to worst in terms of the likelihood of getting September-born ewe lamb bred in the next April (there could be a tie or two!):

Rambouillet _____

Hampshire _____

Dorset _____

Finnsheep _____

ii. Regardless of breed, what is the earliest date you would expect a majority of September-born ewe lambs to get bred?

3. You are a Texas Rambouillet producer who is about to go out of business because of the collapse of the wool market. You must adjust your flock to place more emphasis on meat production and less on wool, but with a long history of wool production, you still want to produce an acceptable wool clip.

a. You are currently crossing some of your Rambouillet ewes to Suffolk rams to produce market lambs. One option is to keep some of these lambs as replacement ewes. In addition to reducing the fineness of the fleece, what other problem with wool quality is associated with Suffolk and Suffolk crossbred ewes?

b . If you have 1,200 ewes and want to set up a nucleus flock to produce replacement ewes:

i. about how many ewes will have to be in the nucleus to produce replacement ewes for the whole flock?

ii. Assume that you have put a group of your better Rambouillet ewes in the nucleus. Let the average prolificacy of these adult Rambouillet ewes be 1.6 lambs born per ewe lambing. If these Rambouillet ewes are mated to Finnsheep rams, how many lambs per ewe lambing do you expect them to have?

iii. If the ewe lambs from the matings in the previous question are kept and bred to Suffolk rams, how many offspring do you expect them to have (as adult ewes)?

a. If you want to use laparoscopic AI with frozen semen in the flock, what products will you likely be using? Check all that apply. If two products have the same purpose, check only the BEST choice for that purpose.

- Synchromate-B _____
- PG-600 _____
- Prostaglandin F_{2α} _____
- PMSG _____
- Oxytocin _____
- Melatonin _____

b. If you are going to use melatonin to attempt to get ewes to cycle during the anestrus period:

i. when would you expect it to be most effective:

- March breeding _____
- April breeding _____
- May breeding _____
- June breeding _____

ii. how long before you want to breed would you start feeding it?

iii. at what time of day would you feed it?

a. which lamb management procedures would be strongly recommended (R), optional (O), or not recommended (N) in this system:

- docking _____
- castration of males _____
- regular deworming _____
- selenium supplementation _____
- artificial rearing of triplets _____

b. which ewe management procedures would be strongly recommended (R), optional (O), or not recommended (N) in this system:

- | | |
|----------------------------|-------|
| crutching before lambing | _____ |
| vaccination for EAE | _____ |
| flushing | _____ |
| estrus synchronization | _____ |
| deworming prior to lambing | _____ |

c. choose a combinations of feeds would be satisfactory for lactating ewes in this system; there may be more than one acceptable combination:

d.

A lamb feeder is located in central Ohio. This is an area that grows a large amount of grain, and is close to lamb packers in Detroit. He buys feeder lambs where they are available and feeds them to market weight. His packer buyer wants a lamb that finishes at 120 to 140 pounds, and pays more for that kind of lamb than all others. This feeder buys and sells lambs all months of the year, and feeds a high grain ration in confinement.

Consider the following health problems. Indicate which ones are of No Concern at all (N), handled by putting something in the Feed (F), or by directly administering a product to the animal (A). Write the letter in the space provided.

- | | |
|-----------------------------|-----------------------|
| _____ Coccidiosis | _____ Tetanus |
| _____ Enterotoxemia | _____ Urinary Calculi |
| _____ Polioencephalomalacia | _____ Toxoplasmosis |
| _____ Roundworm parasitism | _____ Scours |
| _____ Ketosis | _____ Epididymitis |

For this lamb feeder, identify the 4 traits that are most important to the profitability of his operation.

- | | |
|----------------------------------|-------------------------------------|
| _____ Growth Rate | _____ Feed Conversion |
| _____ Fiber diameter of the wool | _____ Ability to lamb out-of-season |
| _____ Degree of Muscling | _____ Health and Vigor of the lamb |

_____ Born as a Twin or a Single

_____ Balance, Eye Appeal, and
Structural correctness

You are operating a ewe flock and your market is the ethnic trade that desires a 40-80 pound live lamb for special holiday celebrations. Holidays occur in April, September, and December. Consequently, you lamb several times each year.

Identify the 4 practices you are most likely to do.

_____ Creep Feed

_____ Use Pasture for Lactating Ewes

_____ Flush ewes

_____ Castrate Male Lamb

_____ Artificially Rearing of Lambs

_____ Crutch Ewes before Lambing

_____ Deworm Ewes prior to Lambing

Identify the concentrate to be used with the forage shown for a diet for lactating ewes. You may use more than one, if needed. Any forage not used should be indicated so with an 'X'.

Forages

Concentrates

_____ Corn Silage

A. Shelled Corn

_____ Alfalfa Hay

B. Soybean Meal

_____ Orchardgrass Hay, Mid-Bloom

_____ Orchardgrass Hay, 2nd cutting

Your neighbor works in town at a job with regular hours (8-4:30, Monday – Friday) and no weekends. He has a 50-ewe flock of purebred Suffolks. His primary market is rams for the commercial ewe flock operator. He also sells lambs (wethers & ewes) to 4H members for their market lamb projects. Additional ewe lambs are sold as well as they can be and replacement females are raised from within the flock.

If he lambs during a short, concentrated time period, during which 2 months is he most likely to be lambing?

_____ January

_____ March

_____ May

_____ August

_____ November

Which 4 practices is he most likely to do with the lambs?

_____ Creep Feed

_____ Graze the lambs during the summer
with no grain supplementation

_____ Wean at 60 to 80 days of age

- _____ Put the lambs on a finishing diet that is 90% grain when they reach 80 pounds
- _____ Shear the lambs in mid-summer
- _____ Vaccinate 2X prior to weaning with a CD-T product