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# ORGANIC LIVESTOCK MANAGEMENT

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## Overview

The Livestock Management module introduces students to the National Organic Program rules and regulations for organic livestock production. This includes regulations covering the topic areas of livestock origins, feed, healthcare, living conditions, and pasturing of ruminants. Additionally, students will be asked to examine these topic areas in the broader context of ecological principles, marketing, and production scale. At the end of this module, students will have the ability to navigate the Federal Register website to find information about the National Organic Program. Students will be able to calculate parameters necessary for following the pasture rule.

## Learning Objectives

### Concepts

- Organic production livestock regulations, including the topic areas of livestock origins, feed, healthcare, living conditions, and pasturing of ruminants.
- Similarities and differences between larger and smaller organic livestock operations (including scale, marketing, integrated crop and livestock systems).

### Skills

- Navigate the Federal Register website to locate the national organic program regulations.
- Calculate the amount of pasture needed for a given number of livestock in order to comply with the pasture rule.

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## Notes for Instructors

# Lesson 1: Exploring the National Organic Program Livestock Standards

## Description

This lesson explores organic livestock management through the context of the National Organic Program regulations. Students will learn how to navigate the online regulations and become familiar with some of the livestock management regulations. Included in this lesson is an online activity for students to complete and supplementary power point slides.

## Lesson Notes

The online activity can be completed by students individually as homework or in a computer lab. The activity questions could also be paired with a lecture using the slides provided. Current news articles might also be included in this lesson as part of the lecture or as a reading activity. In January 2017 the National Organic Standards Board published an Organic Livestock and Poultry Practices Proposed final rule. This rule was delayed, and as of this writing there is a new proposal to withdraw this rule that is open for public comment. Current news articles on this topic may offer students insight into the regulatory process and prompt the discussion '*Do regulations regarding animal welfare belong in the National Organic Program?*'

## Performance Expectation

Students will conduct a search of the online NOP regulations and answer questions to describe the management implications of the livestock standards.

*Skills:* Ability to Use Information Resources

*Disciplinary Ideas:* Regulations, Diverse Agricultural Systems

*Concepts:* Interdisciplinarity

## Time

Online Activity - 45 Minutes

## Materials

Computer with Internet Access

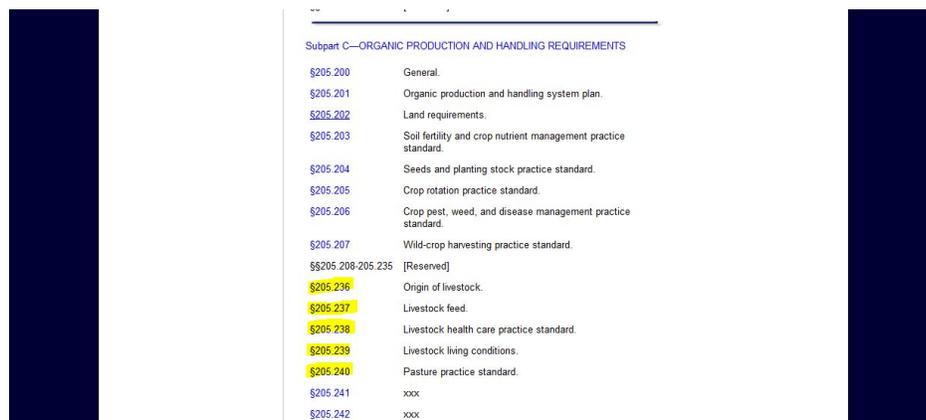
# Assignment: Navigating the Federal Register for Livestock

Finding the Regulations online:

- Navigate to the Agricultural Marketing Service Organic Regulations webpage (found here: <https://www.ams.usda.gov/rules-regulations/organic>)



- Click on the link for 'USDA organic Regulations'. This will bring you to a new website, the Electronic Code of Federal Regulations.
- Scroll down to the section titled 'Subpart C – Organic Production and Handling Requirements'. Regulations for livestock are listed in this subpart in sections 205.236 – 205.40



- When you click on the individual sections you will be able to view those regulations. Navigate through these sections to answer the following questions.

## Questions:

- 1.) What are the 5 sections (or broad topics) that are covered in the NOP regulations for livestock?
  
- 2.) In general, organic livestock products must come from animals under continuous organic management from the last third of gestation or hatching, but there are some exceptions. For poultry/poultry products, at how many days old must an animal be organically managed?  
  
For dairy animals, at what point do the animals need to be organically managed for their dairy products to meet regulations?
  
- 3.) Can non-organic livestock be brought to an organic operation if they are being used for breeding stock?
  
- 4.) There are 8 prohibited practices for livestock feed, list 3 of them:
  
  
  
  
  
  
  
  
  
  
- 5.) True or False: Ruminant animals must be grazed throughout the grazing season and get an average minimum of 30% of their dry matter intake from pasture.
  
  
- 6.) Overall, organic standards promote preventative health care practices. The regulations list 6 ways that producers can follow this method, list 3 of them here:
  
  
  
  
  
  
  
  
  
  
- 7.) When these methods fail and animals get sick, regulations allow for use of approved synthetic medications. For sick dairy animals, it is a minimum of \_\_\_\_ days after treatment that their milk products can be labeled organic.
  
  
- 8.) What are the three things shelters should allow for?

9.) There are 8 reasons a producer can temporarily confine an animal, list 3 of them.

10.) The Pasture Practice Standard (205.240) lists a number of additional sections that organic pastures must comply with. Hit the back button on your browser and look up the titles of these sections, list them below.

- 205.202 \_\_\_\_\_
- 205.203 \_\_\_\_\_
- 205.204 \_\_\_\_\_
- 205.206 \_\_\_\_\_

11.) A pasture plan must be part of an organic producer's organic system plan. There are 8 things that a pasture plan must include, list three of them here.

## Key: Navigating the Federal Register for Livestock

Instructors can email Randa Jabbour ([rjabbour@uwyo.edu](mailto:rjabbour@uwyo.edu)) from their institutional email address to request the key.

## Notes for Instructors

# Lesson 2: Complying with the Pasture Rule

## Description

'The Pasture Rule' is a term used to describe the newer (2010) regulations that require ruminant livestock to get at least 30% of their dry matter intake from pasture during the grazing season. In this lesson, students will calculate the amount of acreage needed to comply with the pasture rule in a step-by-step activity.

## Lesson Notes

Performing calculations can be a difficult skill for students. Formulas for students to use have been included in this activity, but are optional and can be removed to encourage quantitative reasoning.

## Performance Expectation

Students will calculate the amount of acreage needed for livestock managers to meet the pasture rule within a set of parameters.

*Skills:* Quantitative Reasoning

*Disciplinary Ideas:* Regulations, Diverse Agricultural Systems (Livestock)

*Concepts:* Systems

## Time

Online Activity - 20 Minutes

## Materials

Computer with Internet Access

Calculator

## Assignment: Complying with the Pasture Rule

Watch this short video to see one method that farmers use to determine the amount of dry matter an acre of pasture can produce: <https://www.youtube.com/watch?v=bSYflqjP6Bo> (that last 'o' is a zero)

You will now calculate the amount of pasture a dairy farmer needs in order to meet the NOP standards by providing his cattle with at least 30% of their dry matter intake during the grazing season. Here is some additional information about this operation:

- There are 50 dairy cows
- Each cow requires 38 pounds (lbs) of dry matter per day (Dry Matter Demand, DMD).
- After using a pasture stick, the farmer determines that their pasture yields approximately 1200 lbs of dry matter per acre.
- In the spring with plenty of rainfall, pastures are able to regrow after 18 days of rest.

- 1) In order to meet USDA organic regulations 30% of a ruminant's DMI must come from pasture. Calculate 30% of a dairy cow's DMI for one day.

$$30\% \text{ DMI (lbs)} = \text{DMD} * 0.3$$

- 2) Now determine how many lbs of dry matter are needed for the whole herd.

$$\text{DMI for the whole herd (lbs)} = 30\% \text{ DMI} * \# \text{ in Herd}$$

- 3) Next calculate how many acres are needed to provide the DMI for the whole herd for one day.

$$\# \text{ Acres needed per day (acres)} = \frac{\text{DMI for the whole herd}}{\text{Pasture Yield}}$$

- 4) This farmer sets up paddocks that are approximately the size (in acres) that the dairy cows will eat in a day. If the farmer rotates the cows to a new pasture each day, how many acres does this farmer need so that the cows are always on fresh pasture that has been fully rested?



## Key: Complying with the Pasture Rule

Instructors can email Randa Jabbour ([rjabbour@uwyo.edu](mailto:rjabbour@uwyo.edu)) from their institutional email address to request the key.

## Lesson 3: Livestock Video Case Studies

### Description

Organic livestock operations can be just as diverse as their crop counterparts. In this lesson students will watch video interviews of two organic livestock producers from the same region (Intermountain West) with different size operations, business models, and management styles. The producers featured in these case studies are a family owned and operated grass fed beef operation and a large organic dairy with multiple locations. After watching these videos students will answer questions to help them to compare and contrast these operations.

### Lesson Notes

There is a question bank to support students exploring different dimensions of these case studies, however a subset of questions may be appropriate (or none at all) depending on your teaching goals and whether you treat this as an assignment outside of the classroom (i.e. as homework) vs. a launching point for in class discussion.

### Performance Expectation

Students will compare and Contrast the scale, management, and marketing techniques of livestock operations case study videos.

*Skills:* Critical Thinking

*Disciplinary Ideas:* Social & Economic Dimensions, Diverse Agricultural Systems (Livestock)

*Concepts:* Scale and Place

### Time

40 minutes

### Materials

Computer/Device for viewing videos

## Notes for Instructors

### Video Companion Notes

*Portions of these notes are included in the video descriptions on YouTube.*

#### Organic Beef Production

*Youtube Link:* [https://youtu.be/gl\\_qYW-e1xw](https://youtu.be/gl_qYW-e1xw)

*Run Time:* 9 minutes

*Organic Producers:* Keith and Wendi Lankister

The Lankisters operate an organic ranch in Glenrock Wyoming, producing grass fed beef for their brand Bar Double L Beef. Glenrock is located just east of Casper in central Wyoming. The Duncan ranch is owned by the State, but the Lankister's operation is part of a long term agricultural lease. On their 7,815 acre ranch the Lankisters focus on grass farming as the foundation for their beef business. This includes intensive rotational grazing and pasture management to keep their cattle on pasture year round.

#### Organic Dairy Production

*Youtube Link:* <https://youtu.be/9CtC7YQMCDg>

*Run Time:* 11 minutes

*Organic Producers:* Emily Prisco & Brian England from Aurora Organic Dairy

Aurora Organic Dairy is one of the largest organic dairy producers in the United States, supplying the in-house brands for retailers such as Walmart and Costco. The majority of their milk production comes from their 7 dairy farms located in Colorado and Texas. Additional dairy, forages, and feed crop production comes from more than 100 independent farmers who supply to Aurora Organic Dairy. In spring 2017 a report by The Washington Post called into question the integrity of Aurora's organic certification and specifically whether the company was meeting the pasturing requirements (Whoriskey 2017, Peperzak 2017; see resources). This prompted an investigation by the USDA, which eventually closed finding no violations of organic regulations. This video was filmed in the summer of 2017 at two farm locations in Northern Colorado.

This case could be used as a launching point to discuss ideas like 'big organic' or integrity in the organic program.

# Assignment: Compare and Contrast Organic Livestock Operations

Watch the videos about organic dairy production at Aurora Organic Farms in Northern Colorado and organic beef production at the Ranch of Wendi and Keith Lankister in Central Wyoming. Both of these operations raise livestock, are certified organic, and are located in the Intermountain West. Answer the following questions to compare and contrast what these two organic livestock producers do similarly and differently.

Video Links:

- Organic Dairy Production: <https://youtu.be/gCtC7YQMCDg>
- Organic Beef Production: [https://youtu.be/gl\\_qYW-e1xw](https://youtu.be/gl_qYW-e1xw)

## Scale & Marketing

1. In what states are Aurora Organic Dairy and the Lankister Ranch located?
2. How many animals does Aurora Organic Dairy and the Lankister Ranch have?
3. What are the two different ways that the Lankisters market their beef?

## Organic Certification

4. At what stage of life must an animal for organic beef be raised organically?
5. How does this differ for an animal raised for organic dairy production?
6. Why did the Lankisters decide to get organically certified?

## Grazing & The Pasture Rule

7. According to Organic regulations, animals must get \_\_\_\_\_% of the their dry matter intake from pasture during the growing season. The growing season must be a minimum of \_\_\_\_\_ days long.
8. Describe in 2-3 sentences how the Lankisters manage grazing on their ranch.

9. Describe in 2-3 sentences how grazing is managed at Aurora Organic Farms.

### **Animal Health**

10. Are vaccines allowed in organic livestock production?
11. Both Aurora Organic Dairy and the Lankisters say that prevention is the key to managing the health of their animals. List 3 ways that these different operations prevent disease.
12. Do either of these livestock operations use antibiotics? What is the outcome of those treated animals at each of the operations?

### **Shelter**

13. What are the three types of shelters that Aurora Organic Farms uses at their different facilities?
14. What do the cattle at the Lankister Ranch use for shelter?

### **Biodiversity**

15. List two ways that Aurora Organic dairy promotes biodiversity.

**Other**

16. In 2-3 sentences, describe one big difference you noticed between these two operations.

# Key: Compare and Contrast Organic Livestock Operations

Instructors can email Randa Jabbour ([rjabbour@uwyo.edu](mailto:rjabbour@uwyo.edu)) from their institutional email address to request the key.

## Notes for Instructors

# Discussion: Organic Livestock

### Notes

By now students should have some understanding of the organic regulations and have seen some examples of organic livestock operations. Here are some discussion questions to help students relate the case studies they have watched to organic regulations.

### Discussion Questions

- As far as you could tell, were producers following organic regulations? Are there any aspects of their operation that you need more information about?
- What was the biggest difference you noticed between these two operations?
- Do you think the size of an operation affects its ability to be certified organic? How?
- Does organic certification influence animal welfare?
- Would/do you purchase organic meat or dairy products? Why?

# Resources

## Print

Entz, M.H., Martens, J.R. Thiessen. 2009. "Organic Crop-Livestock Systems." Organic Farming: The Ecological System, edited by Charles Francis, American Society of Agronomy, 69-84.

*This chapter focuses mostly on integrated crop and livestock systems, but touches on other topics such as animal health, welfare, and adapted breeds. Discussion questions and a list of references are also included at the end of the chapter.*

Hansen, Anne Larkin. 2010. "Livestock 101 Basic Organic Husbandry." The Organic Farming Manual: A comprehensive guide to starting and running a certified organic farm. Storey Publishing, 232-265.

*This resource is a guide for running a certified farm, and therefore provides practical information such as animal identification, types of fencing, and designing shelters.*

Coffey, Linda and Ann H. Baier. 2012. Guide for Organic Livestock Producers. National Center for Appropriate Technology (NACT).

*PDF available online at:*  
<https://www.ams.usda.gov/sites/default/files/media/GuideForOrganicLivestockProducers.pdf>

*Geared towards farmers, this guide is divided in 4 sections covering production, pastures and hay, livestock, and handling. Includes*

## Web

NCAT ATTRA Organic Livestock Production  
<https://attra.ncat.org/attra-pub/livestock/production.html>  
*Provides a list of resources and tipsheets downloadable as PDF's. Topics cover a range of*

*organic livestock subjects including pest control, pasture management, animal health, and information on specific species.*

eOrganic Video: Calculating Dry Matter Intake in Organic Pastures Using Pasture Stick  
<https://www.youtube.com/watch?v=bSYflqjP6Bo>

*In this video, calculating dry matter intake using a pasture stick is demonstrated.*

eOrganic Video: Calculating Paddock Size  
<https://www.youtube.com/watch?v=Nhpvxv0Hwy8A&index=5&list=PLEA60EoF4202CCDA8>

*This video walks the viewer through calculations for determining how much pasture is needed to meet livestock dry matter intake needs from grazing.*

Whoriskey, Peter. 2017. Why your 'organic' milk may not be organic. The Washington Post.  
[https://www.washingtonpost.com/business/coneco/why-your-organic-milk-may-not-be-organic/2017/05/01/708ce5bc-ed76-11e6-9662-6eedf1627882\\_story.html?utm\\_term=.cb911be3c67c](https://www.washingtonpost.com/business/coneco/why-your-organic-milk-may-not-be-organic/2017/05/01/708ce5bc-ed76-11e6-9662-6eedf1627882_story.html?utm_term=.cb911be3c67c)

*In spring 2017 the Washington Post did an expose on Aurora Organic Dairy, questioning if the dairy is meeting organic grazing regulations. Below is a link to Aurora Organic Dairy's response.*

Peperzak, Marc. 2017. Aurora Organic Dairy earns the 'Organic in its name. The Washington Post.  
[https://www.washingtonpost.com/opinions/aurora-organic-dairy-earns-the-organic-in-its-name/2017/05/21/f4cc136a-3bd8-11e7-a59b-26e0451a96fd\\_story.html?utm\\_term=.e50743770b5f](https://www.washingtonpost.com/opinions/aurora-organic-dairy-earns-the-organic-in-its-name/2017/05/21/f4cc136a-3bd8-11e7-a59b-26e0451a96fd_story.html?utm_term=.e50743770b5f)

*A response from the founder and chief executive of Aurora Organic Dairy in response to the original Washington Post article*

