

Integrating Livestock with Organic Cropping Systems

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Overview

- What are YOUR goals for incorporating livestock?
- What species of livestock might fit your goals?
- Managing livestock impacts
- Renting vs owning
- Soil health considerations
- Food safety considerations
- Questions (and hopefully answers!)



Existing Examples in California



What are YOUR goals for incorporating livestock into your organic cropping system?

- Pest management
- Weed management
- Cover crop management
 - Termination vs. utilization
- Soil health
- Crop residue management
- Risk management (crop failure)
- Diversification
- Other?



What species of livestock?



- Dietary preferences differ by species
- Ruminants
 - Cattle
 - Sheep
 - Goats
- Monogastrics
 - Pigs
 - Poultry

Organic Livestock?



- Livestock used for vegetation management in organic crop production do not need to be certified organic (according to federal regulations).

Managing Livestock Impacts

- All animals have three impacts:
 - Consumption
 - Trampling
 - Excretion/Deposition
- Do livestock add nutrients to the system?



Livestock Management

- We can control:
 - Timing (when are they there?)
 - Duration (how long are they there?)
 - Frequency (how often do they come back?)
 - Intensity (how many mouths/feet in given area?)
- Who will manage livestock in your operation?
 - Rent vs. own
 - Most livestock need some attention every day (some more than others)
 - Do you have enough extra labor to add an additional enterprise?
 - Skilled labor is critical!

Controlling/Managing Livestock



- Fencing systems
 - Permanent
 - Temporary
- Stock water
- Supplemental feeding
 - Minerals
 - Protein and/or energy
 - Roughage
- Predators
- Assessing soil and forage conditions

Cover Crops, Soil Health, and Livestock

Research at UC Davis Russell Ranch suggests:

- Grazing cover crops can:
 - Increase N cycling and plant availability
 - Increase microbial activity
 - Decrease weed pressure
 - Reduce reliance on fossil fuels and herbicides

• Risks/Concerns:

- Soil compaction
- Nitrate leaching
- Food safety risk
- Time horizons – grazing may be a long-term investment in soil health
- Logistical complexity

For more information on this research go to:

<https://gaudin.ucdavis.edu/sites/g/files/dgvnsk10651/files/media/documents/Grazing%20Soil%20Health%20Factsheet%202023.pdf>

Food Safety Risks

- Risks are primarily associated with pathogens
- Risks tend to increase with higher rainfall and lower soil temperatures
- Crop management (especially harvest and post-harvest management) are critical control points
- How is the end product processed and consumed?
 - Fresh vs. processed
 - Pasteurization?
- FSMA implications
- What do buyers and consumers say?
- **Most producers follow the USDA-NOP rules regarding raw manure applications:**
 - 120 days for fresh-market crops
 - 90 days for processed crops



Questions?