

Composting Equipment and Case Studies

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Equipment and Equipment Costs

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- **Perhaps the main question regarding equipment is whether or not to buy a compost turner.**



Equipment and Equipment Costs



3.5 ft row height
6.5 ft row width
20-40 hp tractor with
hydrostatic

Approx. \$16,000 new

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Equipment and Equipment Costs



**4.5 to 7.5 ft row height
10 to 16 ft row width**

**80 to 180 PTO hp tractor with
creeper gear, IVT or
hydrostatic transmission**

Used: \$12,000 – 20,000

New: \$40,000 – 200,000

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Self-powered composters



**6 ft row height
16 ft row width
275 hp engine**

New: \$16,000

Used: \$65000

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Equipment and Equipment Costs



Water tanks

**New \$5000 to
12,000**

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Equipment and Equipment Costs



Screen: \$80,000



Bagger: \$50,000

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Equipment and Equipment Costs

- **“If you really want to apply compost on your farm, then you need good equipment.**

Equipment and Equipment Costs

- “If you really want to apply compost on your farm, then you need good equipment.”
- **“There is no perfect machine.”**



Case Study: Farm A – 2000 acres

- **Buys manure**
- **Corn-Soybean-Specialty Crop-Cereal Grains.**
- **Applies 8 tons compost/acre in a NT system with cover cropping**



Case Study: Farm A – 2000 acres

- Buys manure
- Corn-Soybean-Specialty Crop-Cereal Grains.
- Applies 8 tons compost/acre
- **Reduced fertilizer expenses by more than 50%**
- **Increasing soil organic matter**

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Case Study: Farm B – 2000 acres

- **Uses manure from his own herd and feedlot**
- **Corn-Soybean-wheat.**
- **Applies 15 tons compost/acre in a NT system with cover cropping**



Case Study: Farm B – 2000 acres

- Uses manure from his own herd and feedlot
- Corn-Soybean-Wheat.
- Applies 15 tons compost/acre in a NT system with cover cropping
- **Reduced transport from 200 loads to 80 loads (10 miles)**
- **Increasing soil organic matter**

Conclusion

- **“As a livestock producer, I am having to deal with manure already. Composting is an opportunity to make it go further, to make better use of my resources.”**

Conclusion

- “As a livestock producer, I am having to deal with manure already. Composting is an opportunity to make it go further, to make better use of my resources.”
- **“Regardless of whether you are applying manure or compost, there will be management challenges. Which would you rather deal with?”**

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Conclusion

- **“Regardless of whether you are applying manure or compost, there will be management challenges. Which would you rather deal with?”**



Conclusion

- “Regardless of whether you are applying manure or compost, there will be management challenges. Which would you rather deal with?”
- **“If the cost of producing and applying compost is less than the cost of an equivalent amount of chemical fertilizer, then the decision is a no brainer.”**



Conclusion

- **“Find a niche. Do something no one else is doing. This may be a way to increase income without expanding acres.”**

Conclusion

- “Find a niche. Do something no one else is doing. This may be a way to increase income without expanding acres.”
- **“Make decisions on a farm by farm basis.”**

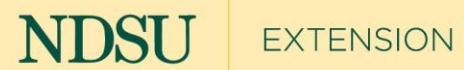
Conclusion

- **“Flexibility is required because every year is different.”**

Conclusion

- “Flexibility is required because every year is different.”
- **“Be prepared to put time into it.”**

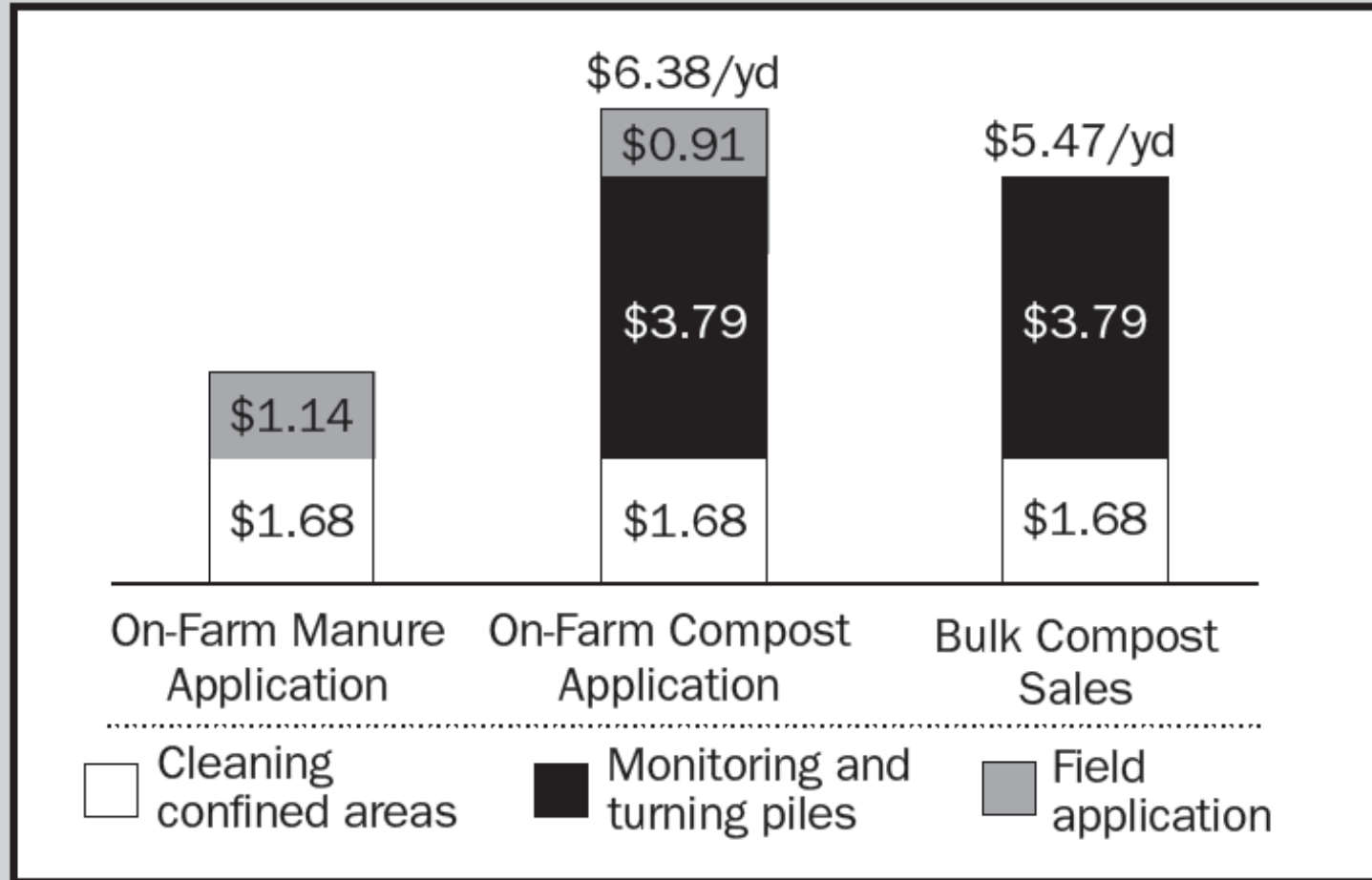
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FIGURE 4. Feed Lot Case Study: Cost of Compost



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Bass, Dafoe, and Schumacher. 2017. Manure Composting for Livestock & Poultry Production. Montana State University Extension Publication MT201206AG



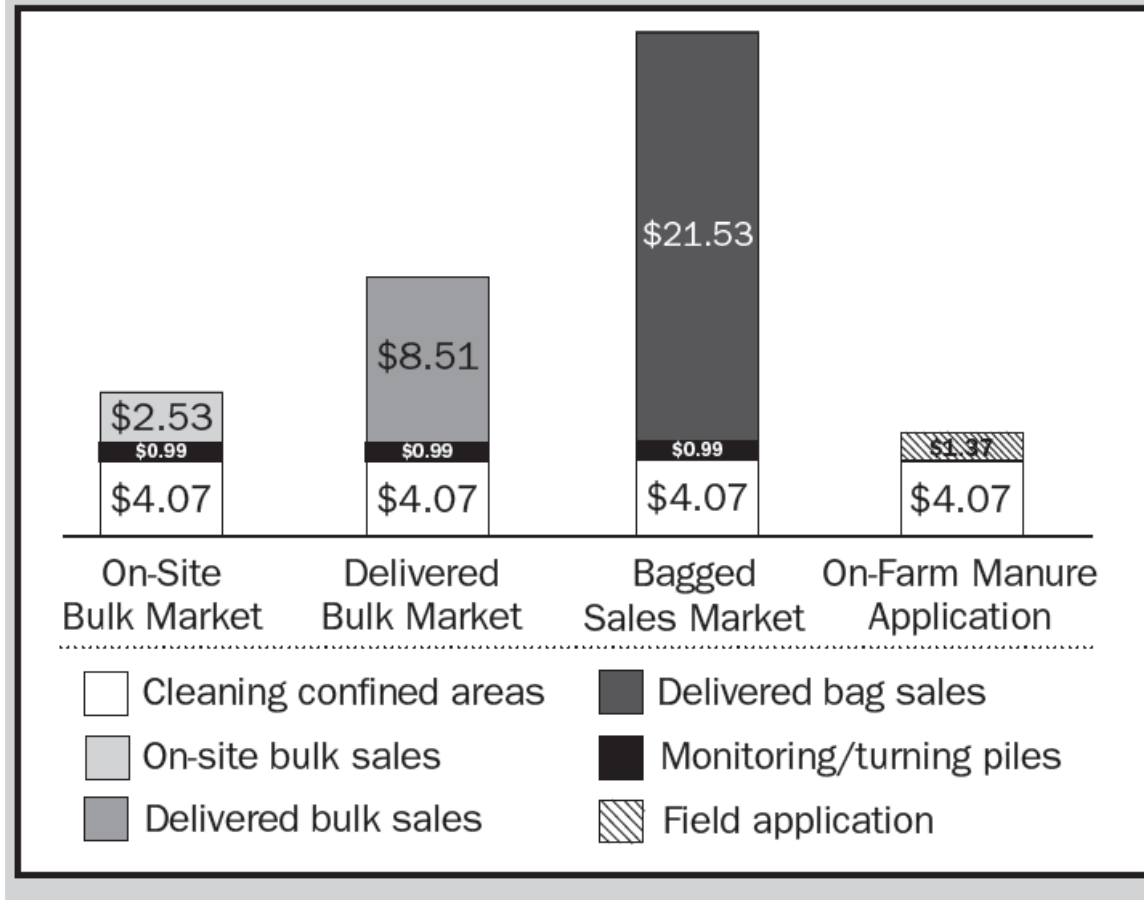
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FIGURE 3. Small Dairy Case Study: Cost of Compost



Bass, Dafoe, and Schumacher. 2017. Manure Composting for Livestock & Poultry Production. Montana State University Extension Publication MT201206AG

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Thank you!