

# COMPOST BEDDED PACK BARN SITUATION



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## COMPOST BEDDED PACK BARN CONCEPT

- Loose-housing with large, open resting area
- Not your grandfather's bedded pack barn!
- Intensively managed compost process keeps cows dry and clean
- Risks for mismanagement higher than stall barns
- More management/less labor than stall barns

## COMPOST BARNS AROUND THE WORLD

- Minnesota: Foundation work, growth limited by bedding cost
- Kentucky: 80 to 90
- Israel: predominant system
- Brazil and Argentina: starting movement
- Netherlands, Denmark, Italy: active research and user groups



## COMMON DESIGN





- Increased milk yield
- Decreased SCC
- Decreased lameness
- Fewer culls

**NEW UK COMPOST  
BEDDED PACK BARN**

## REST CHOICES?







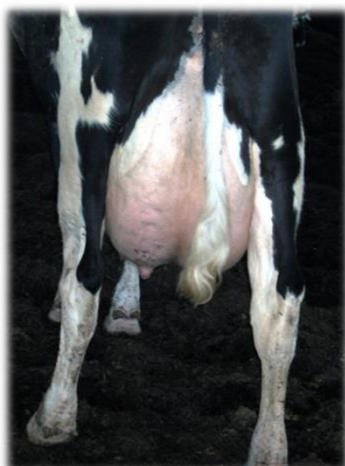
**EASY TO LAY DOWN OR RISE FROM RESTING WITHOUT RESTRICTIONS ASSOCIATED WITH FREESTALL LOOPS**



## **ESTRUS DETECTION**



## **MULTIPLE BREEDS**



**WHEN MANAGED PROPERLY, COMPOST BEDDED PACK BARNs PROVIDE A DRY RESTING SURFACE FOR COWS RESULTING IN CLEAN COWS AND UDDERS**



# COMPOST BEDDED PACK BARNS



## Advantages

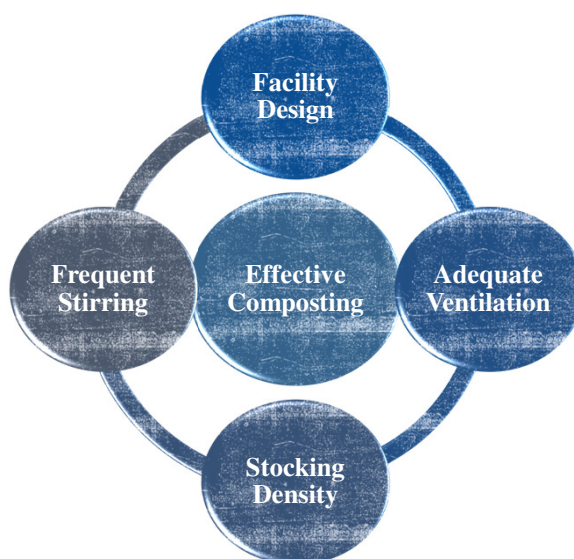
- Excellent cow comfort
- Low investment
- Good milk quality
- Manure handling

## Disadvantages

- Sawdust availability
- Sawdust availability
- Higher variable costs
- Management ability
- Does not work well in retrofits
- Building footprint



# KEYS TO MANAGING A CBP BARN

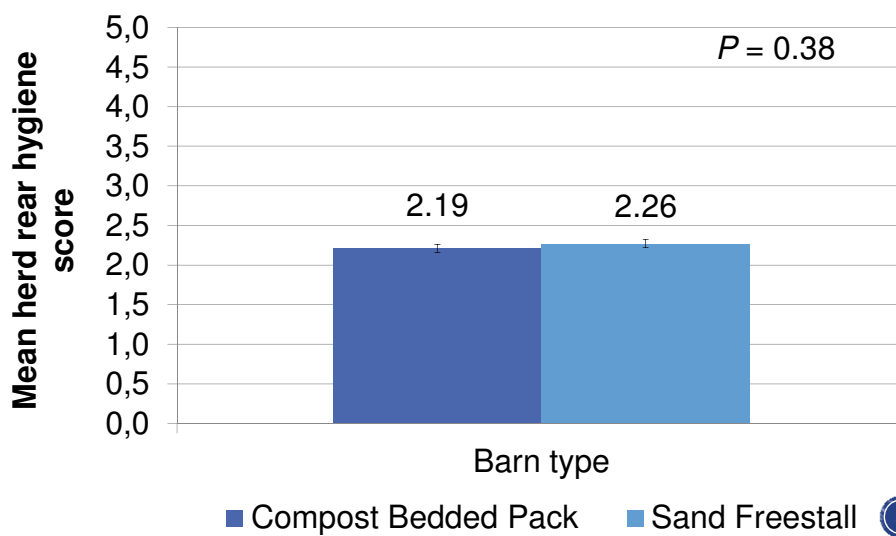


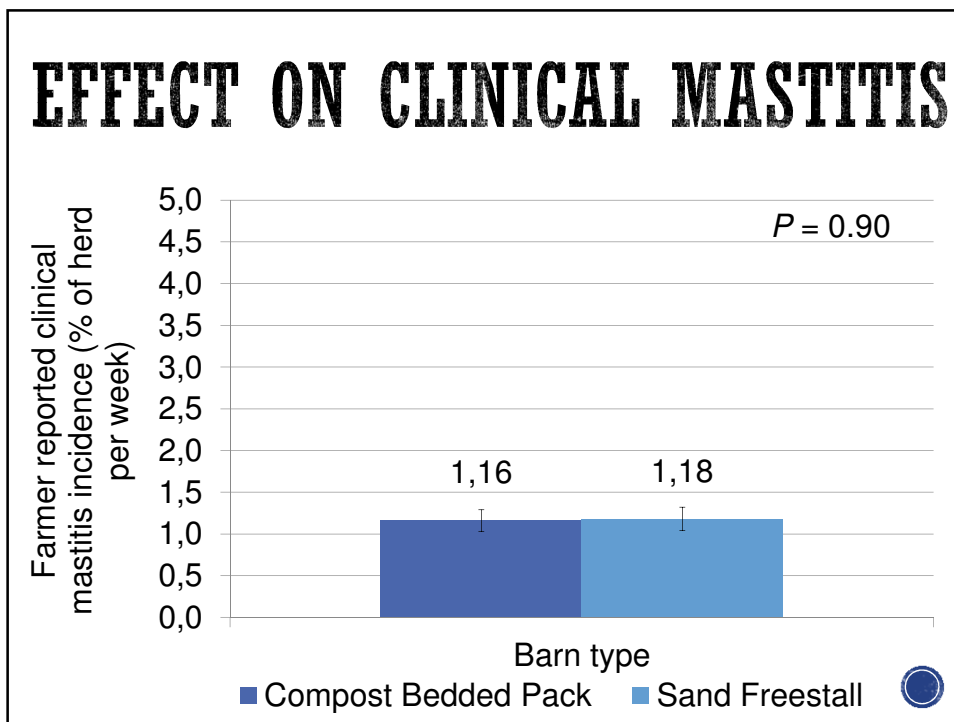
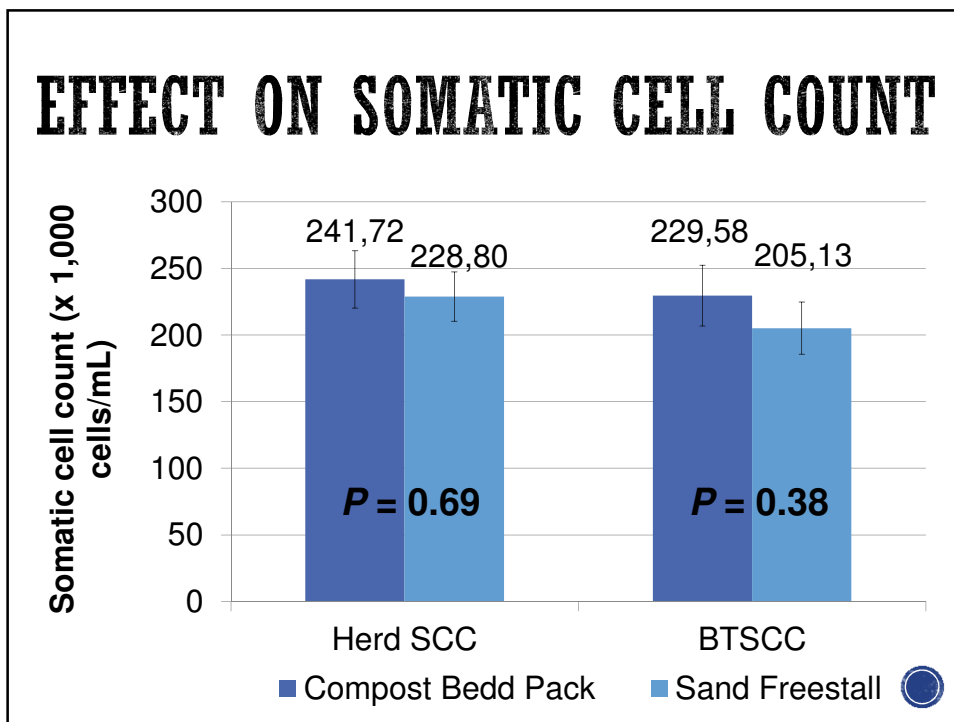
# COMPOST VS SAND COMPARISON STUDY

- 15 Kentucky farms
  - 8 compost bedded pack
  - 7 sand freestall
- On DHIA test
  - Low SCC herds (yearly mean < 300,000 cells/mL)

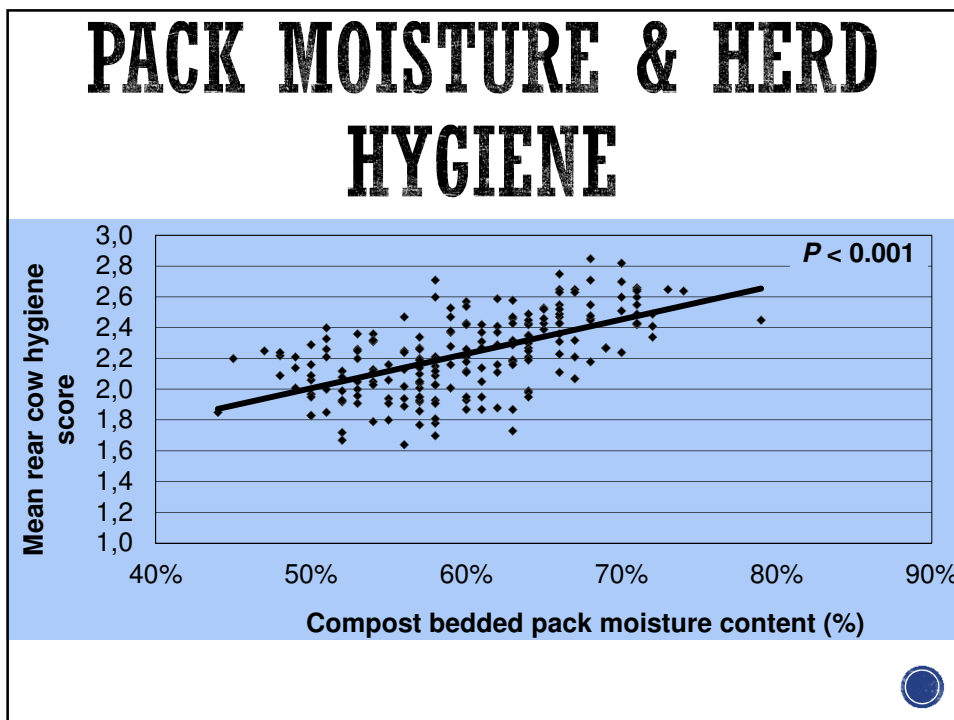
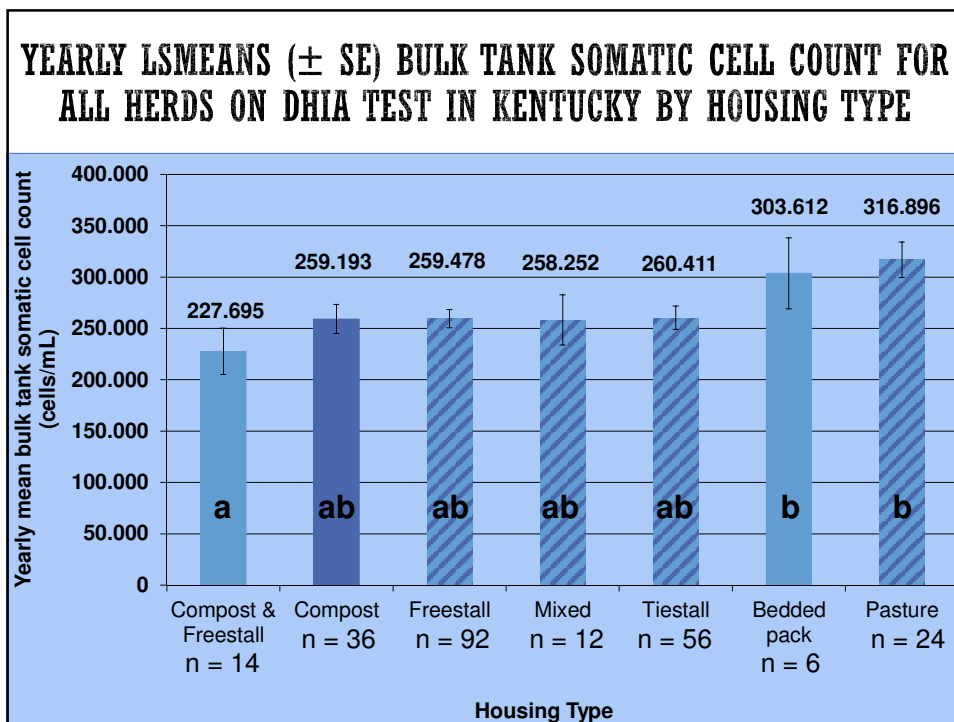


## EFFECT ON HYGIENE SCORE









# COMPOST COW KEYS

- Manage barn for optimal composting
- Proper milking procedures
- Coliform mastitis vaccines
- Cooling at feedline
- Frequent alley scraping



## UK Compost Resources

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ID-206



### Compost Bedded Pack Barn Design Features and Management Considerations

*Jeffrey Bewley, Animal and Food Sciences, Joe Yanaba and George Day, Biosystems and Agricultural Engineering, Randall Black, Animal and Food Sciences and Diane Christensen, Biosystems and Agricultural Engineering*



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### Compost-Bedded Pack Barns in Kentucky

*Jeffrey M. Bewley, Animal and Food Sciences, and Joseph L. Yanaba, Biosystems and Agricultural Engineering*

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ID-313

### Kentucky Compost-Bedded Pack Barn Project

*Randall Black and Jeffrey Bewley, Animal and Food Sciences, Joe Yanaba and George Day, Biosystems and Agricultural Engineering, and Hanso A. Damasceno, Agricultural Engineering, Federal University of Viçosa, Brazil*



# QUESTIONS

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