Remodeling “Retired” Dairy Facilities for Raising Steers

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Remodeling Options are Endless

The Design Process

- Develop the steer management plan
- Investigate and develop alternative designs
- Evaluate alternatives and options
- Choose the “best” system design
- Troubleshoot and implement the design

Design Your Facilities to Implement Your Management Plan

Develop a Steer Management Plan

- Define management group and number in group
  - List Needs of Steer
    - Comfort
    - Environment
    - Nutrition
    - Health Care
    - Movement between groups
    - Manure Handling
  - List Needs (and wants) of the Owner
  - Determine features that meet these needs and (wants)
  - Prioritize the list of features

Farm Resources

- Land
- Feed
- Labor
- Facilities
  - Fence
  - Water
  - Shelter
  - Storage
- Space
  - Resting Space
  - Outside Lot Space
  - Feed Space
  - Water Space
  - Manure Storage
Housing Basics

- Provide animal comfort
  - Clean dry hair coat
  - Dry bedding
  - Adequate Space
    - Resting
    - Feed
    - Water
  - Excellent ventilation
- Efficient use of labor
- Effectively utilize a farm’s resources

Economics

- Minimize Capital Costs
  - Housing
- Minimize Operational Costs
  - Feed
  - Bedding
- Minimize labor costs
  - Daily feeding, bedding, observation
  - Periodic cleaning and moving

Planning Information

<p>| Table 1: Summary Design Information (ABP/PSA Beef Cattle Handbook, 1987) |
|-----------------------------|-----------------------------|</p>
<table>
<thead>
<tr>
<th>Animal</th>
<th>Housing Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cow</td>
<td>4000 ft² per animal</td>
</tr>
<tr>
<td>Post Spacing</td>
<td>7'-8' O.C.</td>
</tr>
<tr>
<td>Gutter</td>
<td>16 inches</td>
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<tr>
<td>Feeding Space</td>
<td>13.5 ft² per animal</td>
</tr>
<tr>
<td>Water Space</td>
<td>25 gallons per animal</td>
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<tr>
<td>Possible Limitations</td>
<td>Location</td>
</tr>
<tr>
<td>Structure</td>
<td></td>
</tr>
<tr>
<td>Ceiling Height</td>
<td></td>
</tr>
<tr>
<td>Concrete</td>
<td></td>
</tr>
<tr>
<td>Posts</td>
<td></td>
</tr>
<tr>
<td>Gutter</td>
<td></td>
</tr>
<tr>
<td>Water Pipes</td>
<td></td>
</tr>
<tr>
<td>Ventilation</td>
<td></td>
</tr>
</tbody>
</table>

Existing Stall Barn

- Post Spaced @ 7'-8' O.C.
- Longitudinal (King) Beam
- Foundation Wall
- Gutters
- Feed Alley
- Center Alley
- Feed Stalls
- Hay Mow Floor
- Original Barn Plan View
- Cross Section A A
- Existing Stall Barn
- Possible Limitations
Remodeled Bedded Center

Bedded Pen

Inside Feeding Platform
Bedded Pen

Calf Housing

Small Group Pens

Maternity Pen

Milk House

Feed

Water

Gate

Pen #1

Pen #2

Pen #3

Personal Alley

Post Gates

Double Water Area

Resting Bedded Fence

Fence

Pen #4

Location Water Alternate Drive By Feed Floor or J-Bunk Opening Opening Feed Alley

Roof

Floor Joists

Hay Mow Floor

New Concrete Floor

Ventilation Duct

Cap Over Old Concrete

11'-3"

11'-6"

11'-3"

35'-0"

Remove Existing Curb and Feed Alley

Bedded Pen Feed Alley

J Bunk

Open Sidewall for Feed Access

8'-0"

16'-0"

32'-0"

32'-0"

7'-0"

Grower Barn Design Plan View

Grower Barn Design Cross Section View

Pen Capacity

16'-0" x 22'-9" pen = 364 square feet

12 head @ 30 s.f. / head = 360 square feet

23'-5"

11'-7"

11'-9"

11'-8"

35'-0"

Bedded Pen Drive by Feeding
Remodeled Barn Feeding Platform

Bedded Pen Outside Lot Feeding

Remodeled Barn Resting Space

Remodeled Barn Resting Space

Remodeled Barn Yard Feeding Platform
Remodeled Barnyard Feeding Platform

Remodeled Barnyard Feeding Platform

Remodeled Barnyard Feeding Platform

Remodeled Barnyard Feeding Platform

Remodeled Barnyard Feeding Platform
Remodeled Barnyard to Drive by Feeding Platform

Feeding Platform

Feeding Platform

Self Cleaning Floor

Remodeled Machine Shed for Beef

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Remodeled Bunker Silo Walls

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Remodeled Bunker Silo Walls

Remodeled Freestall Barn with Bedded Platforms

Bedded Platforms

Inside Drive by Feeding

Bedded Platforms
Bedded Platforms

Outside Drive by Feeding

Remodeled Beef Cattle Handling Building

Cattle Chute
Recycled Guard Rail Fence

Solid Sawn Lumber Fence
Harvestore Panel Fence

Harvestore Panel Chute and Loading Ramp
Remodeled Barn for Bud Box Cattle Handling

Ventilation
- Provide air exchange
- Reduce concentration of airborne pathogens
- Remove noxious gases
- Draft protection
- Remove moisture
- Positive Pressure Tube System

Example: 80 Ft. Barn

Section View - A
Section View - B

- Insulation (optional)
- Anchor 2 x 2 to wall
- 2 x 2 framing 4" O.C., fasten to joist
- 7/8" ext. plywood 4 x 8' sheets
- 7/8" ext. plywood with 2 x 2 framing

Questions