Suggested dimensions for post and rail feed barriers for dairy heifers and cows (assumes 8" maximum curb width)

<table>
<thead>
<tr>
<th>Weight (lbs)</th>
<th>Maximum throat height above animal standing surface ($H_T$)* (in)</th>
<th>Height of feed barrier rail above animal standing surface ($H_{FB}$) (in)</th>
<th>Width of minimum space for standing animal ($W_H$) (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>500 - 700</td>
<td>15½</td>
<td>30</td>
<td>17</td>
</tr>
<tr>
<td>700 - 900</td>
<td>17</td>
<td>34</td>
<td>19</td>
</tr>
<tr>
<td>900 - 1100</td>
<td>19</td>
<td>41</td>
<td>22</td>
</tr>
<tr>
<td>1100 - 1300</td>
<td>21</td>
<td>48</td>
<td>24</td>
</tr>
<tr>
<td>1300 - 1500</td>
<td>21</td>
<td>48</td>
<td>26</td>
</tr>
<tr>
<td>1500 - 1700</td>
<td>21</td>
<td>48</td>
<td>28</td>
</tr>
</tbody>
</table>

* Maximum recommended throat height. If fence line lockups are to be installed later, lower concrete curb 3" to allow room for bottom rail of lockup panel and space between the bottom rail and curb to prevent feed buildup.
Support post length flush with standoff bracket or high enough to prevent neck chain entanglement.

Animal's backbone height or greater.

Feed alley animal standing location.

Throat height ($H_T$) or less, as per manufacturer's specifications.

Minimum 2" concrete cover on all sides of post (See sheet #5).

3' feed table with smooth, acid resistant, crevice free surface-tile, plastic, epoxy or high strength concrete with additives.

Self locking mechanism as per manufacturer.

Open space for animal's head clearance.

Stanchion feed barrier panel.

Movable stanchion bar.

Feed table.

Stanchion Feed Barrier
Cross Section View

Self locking mechanism
as per manufacturer

Open space for animal's
head clearance

Stanchion feed barrier
panel

Movable stanchion bar

Feed table

Stanchion Feed Barrier
Feed Table View

Notes:
- Follow stanchion manufacturer's installation instructions regarding pivot point height and maximum front slope to assure optimum stanchion operation.
- Size all fixed opening clearances to prevent head entrapment of animal.
Support post length flush with standoff bracket or high enough to prevent neck chain entanglement.

Animal's backbone height or greater.

Feed alley animal standing location.

Support post 8 - 12' O.C. typical.

Slant bar feed barrier.

Minimum 2" concrete cover on all sides of post (See sheet #5).

Feed driveway.

3' feed table with smooth, acid resistant, crevice free surface-tile, plastic, epoxy or high strength concrete with additives.

Support post 3 2

Slant Bar Feed Barrier Cross Section View 3 1

Slant bar feed barrier.

Support post 12 6

Feed table.

Slant Bar Feed Barrier Feed Table View 3 2

FENCELINE FEED BARRIERS
Graves, McFarland, Tyson, Wilson
Date: 06/23/10 Sheet #3 of 5
## Suggested feed barrier dimensions for dairy heifers and cows

<table>
<thead>
<tr>
<th>Weight (lbs)</th>
<th>Maximum throat height above animal standing surface (H_T) (in)</th>
<th>Height of pivot above animal standing surface (H_PV) (in)</th>
<th>Height of animal head opening (H_O) (in)</th>
<th>Width of head access opening at H_O (W_O) (in)</th>
<th>Width of headlock clearance when closed (W_C) (in)</th>
<th>Width of minimum space for standing animal or headlock spacing (W_{sh}) (in)</th>
<th>Horizontal slant bar spacing (S_{B}) (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 - 300</td>
<td>12</td>
<td>NR</td>
<td>NR</td>
<td>NR</td>
<td>NR</td>
<td>13</td>
<td>5(\frac{1}{4})</td>
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<tr>
<td>300 - 500</td>
<td>14</td>
<td>26 - 29</td>
<td>9 - 10</td>
<td>8 - 9</td>
<td>5</td>
<td>15</td>
<td>7</td>
</tr>
<tr>
<td>500 - 700</td>
<td>15(\frac{1}{2})</td>
<td>28 - 32</td>
<td>12</td>
<td>11</td>
<td>6</td>
<td>17</td>
<td>8(\frac{1}{2})</td>
</tr>
<tr>
<td>700 - 900</td>
<td>17</td>
<td>33 - 36</td>
<td>13</td>
<td>12</td>
<td>7</td>
<td>19</td>
<td>9(\frac{1}{2})</td>
</tr>
<tr>
<td>900 - 1100</td>
<td>19</td>
<td>36 - 39</td>
<td>14</td>
<td>13</td>
<td>7(\frac{1}{2})</td>
<td>22</td>
<td>10(\frac{1}{4})</td>
</tr>
<tr>
<td>1100 - 1300</td>
<td>21</td>
<td>36 - 40</td>
<td>14</td>
<td>13</td>
<td>7(\frac{1}{2})</td>
<td>24</td>
<td>12</td>
</tr>
<tr>
<td>1300 - 1500</td>
<td>21</td>
<td>38 - 42</td>
<td>15</td>
<td>14</td>
<td>8</td>
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<td>12</td>
</tr>
</tbody>
</table>

Pre- and Post Fresh Cows 30

NR - Not recommended for this weight dairy cattle

The suggested dimensions on this detail sheet and sheet #1 are based on values found in the literature and field experiences. The American Society of Agricultural and Biological Engineering (ASABE), Natural Resource, Agriculture and Engineering Service (NRAES), Midwest Plan Service (MWPS), Dairy Practices Council (DPC) as well as various dairy and veterinary publications and manufacturers' literature are also sources of information. Check Terminology and Recommendations for Freestall Dairy Housing, Freestalls Feed Bunks and Feeding Fences ASABE EP444.1 www.asabe.org for current information.

Final adjustments of the components will require careful observation of the animals and their use of the feed barrier such as:

- Do animals readily and easily consume feed through the feed barrier?
- Are there injuries, punctures, abrasions or swelling due to rubbing, banging or other contact with the curb, feed barrier or other components?
- Do animals have to push, bang or bump against feed barrier components to reach feed or insert and withdraw their head? Pivot point location is especially critical with animals trying to learn how to use self closing stanchions and the most effective height can vary among manufacturers and styles.
Notes on building support posts in feed barriers
Placing large building support posts in a feed barrier line requires care and creativity. Larger posts require wider concrete curbs for protection and to accommodate reinforcing bars. Wider curbs make feed access more difficult for animals so throat height must be reduced and feed storage capacity in the feed area is reduced.