

# Healthy Claws

## Start with Healthy Heifers



- The health of the claw is dependent on the health and physiology of the bones in the claw.
- Bone development is continuous up to 24 months of age. Reducing pressure on the claw during this period is essential.
- Nutrition, environment and health significantly impact bone quality and physiology.
- Diseases can damage claw structures, leading to irreversible conformational changes.

## Five Key Recommendations to Protect the Hooves of Heifers

### 1. Feed Bunk:

- Provide appropriate feed bunk design for heifers
- Avoid feed bunk competition
- Avoid headlocks where possible
- Keep feed pushed up in front of the heifers to reduce reaching in the bunk

### 2. Laying Area:

- Heifers up to 6-8 months:
  - Provide adequate space - overcrowding increases the risk of disease and pressure on the claw

Weight, kg	45	180	270	360	450
Bedded resting area per animal, sq meters	3.3	3.7	4.7	5.6	6.5

Source: The Wisconsin Blueprint for The Dairyland Initiative

### • Free Stalls:

- Heifers should be introduced to Free stalls from 180 kg
- Avoid sand bedding where possible
- Compost, manure solids or straw to optimise resting time

### 3. Avoid Extended Confinement:

- Exercise is crucial for bone development and strength:
  - Running 426m over a 6-week period increases bone strength by 20% (Logan *et al.* 2019)
  - Avoid extended periods in individual pens and hutches.
  - Creating small groups of around 5 calves before 21 days improves health and growth



### 4. Nutrition:

- Energy and trace minerals are essential for healthy bone development, especially in early life!

Zinpro recommended trace mineral level for dairy replacements (heifers) in EU (supplied by Zinpro® Performance Minerals®)

Trace Mineral	Supplemental	Assumed Zinpro
	ppm DM	ppm DM
Zn	60 to 70	40
Mn	50 to 60	20
Cu - Holsteins	8 to 10	3.5 to 5
Cu - Jerseys <sup>a</sup>	6 to 10	3.5 to 5
Co	0.5 to 1	
I	0.7 to 0.9	
Fe	10 to 20	
Se	0.3	max 0.2

<sup>a</sup> Data from Du *et al.*, 1996 (J. Dairy Sci. 79:1873-1880) and Morales *et al.*, 2000 (J. Dairy Sci. 83:2112-2119) indicate liver Cu stores in Jersey cattle are approximately 15 to 20% greater than Holstein cattle fed the same Cu level.

\* For challenging environments with high DD incidence, reach out for our specific recommendations.

### 5. Pregnant Heifers:

- Introduce heifers to concrete 8-10 weeks before calving
- Only do pre-calving trim on heifers if lameness is a problem in the first 60 days of lactation
- Use Zinpro® Performance Minerals® from 10-12 months to reduce the risk of digital dermatitis

For more information visit [zinpro.com](https://zinpro.com)