



Housing for Newly Weaned Heifers: How and Why? - Part 2

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Part 1 : [Housing for Newly Weaned Heifers: What type of building to choose?](#)

Types of Housing

Tie Stall Housing: Although this is not the best option, stall dimensions must allow for sufficient space for the animals to move freely. The lying surface must be soft and non-abrasive, and the use of bedding is always recommended.

Free Stall Housing: The use of stalls is not recommended for heifers below 6 months old. Ensure that the stall dimensions are adapted to the largest animals in the group. Avoid having steps that are too high between the alley and the lying surface. The suggested maximum height is 15 to 20 cm (6 to 8 inches) to facilitate access to the stalls.

Bedded Pack Loose Housing: Bedded pack housing should be designed to allow animals to have enough lying space and to remain dry. It is important to ensure that there is enough space at the feed bunk according to the animal dimensions. Plan to clean the pens with the help of specialized equipment. A feed alley can be useful for maintaining hygiene in the pen and can help to isolate animals with barriers when the bedded area is being cleaned.

Grouping

From weaning to six months of age, it is preferable to make smaller groups to reduce competition. The size difference between animals should not be greater than 45 kg or two months of age. Groups of less than 10 animals are preferable.

Even after six months variation in animal size should still be minimized, especially when using stalls. A maximum difference of 100 kg between the smallest and the largest heifers should be the guide for the group or the stalls may not be adapted to the size of the animal. This is usually about a 4-month age difference.

Feed Bunk

The feed bunk should be designed to have enough space for all of the animals to eat at the same time, especially when concentrates are fed separately. When feeding a TMR, there must be enough space to discourage competition. The height of the curb is usually 1/3 of the hip height. The curb should be as slim as possible to optimize feed access. The bottom of the feed bunk should be raised by 10 to 15 cm (4-6 inches).

Water

Water must be available at all times. For group housing, there should ideally be at least two water stations to reduce competition. The suggested length should be 5 to 9 cm (2 to 3.5 inches) per head, according to the size of the animals. The height of the waterer should be adapted to the animals, around ½ of their hip height.

Ventilation

The volume of air in a livestock building has a significant impact on the respiratory health of the animals it holds. The target should be a building volume of at least 17 m³ (600 ft³) per animal. In winter, this will allow for 4 air changes per hour, or at least 15 ft³ per minute/head for good quality ventilation. In summer, you need to have 60 air changes or at least 100 ft³ per minute/head. Furthermore, providing some air movement at 4-5 km/h (250 ft/min) can help the animals to cool off during periods of heat stress.

Several types of ventilation can be installed depending on the configuration of the building but ventilation objectives remain the same regardless of the system used.

These are a few tips that can help you to set up a building so that the critical points can be controlled. Discuss it with your advisor!

Estimated Housing Measurements according to Animal Size-Holstein (metric)

Body Weight (kg)	100	150	200	300	400	500	600	700
Age- Holstein* (months)	2	4	6	10	14	18	22	24
¹ Straw Bedded Lying Surface (m ²)	3.0	3.5	3.5	4.5	5.5	6.5	7.5	11.0
² Length of Stall Lying Surface (cm)	115	125	140	155	165	170	175	180
³ Minimum Stall Width-Holstein (cm)	70	75	80	90	100	110	120	125

⁴ Minimum Space at the Feed Bunk (cm/head)	35	40	45	48	50	60	65	75
⁴ Feed Bunk Curb Height (cm)	32	35	40	42	45	47	48	50
⁴ Space at the waterer (cm/head)	5	5	6	8	9	9	9	9
⁴ Average height of waterer (cm)	48	52	58	64	68	71	73	75

*According to the 2014 Lactanet growth chart

¹Adapted from Graves, 2008, University of Pennsylvanie

²Adapted from Anderson, 2014, OMAFRA, according to the 2014 Valacta growth chart

³Adapted from CRAAQ, 2008

⁴Adapted from Dairyland Initiative, University of Wisconsin

Estimated Housing Measurements according to Animal Size-Holstein (imperial)

Body Weight (kg/lbs)	100 220	150 330	200 440	300 660	400 880	500 1100	600 1320	700 1540
Age- Holstein* (months)	2	4	6	10	14	18	22	24
¹ Straw Bedded Lying Surface (ft ²)	32	40	40	50	60	70	80	120
² Length of Stall Lying Surface (in.)	45	50	55	60	65	67	69	71

³ Minimum Stall Width- Holstein (in.)	28	30	32	36	40	43	47	49
⁴ Minimum Space at the Feed Bunk (in/head)	14	16	18	19	20	24	26	30
⁴ Feed Bunk Curb Height (in.)	12	14	16	17	18	19	19	20

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