

Choosing the right size mixer – Example

The dairy size:

- Twice feeding per day
- 6 pens of 200 lactating cows each (2 high, 2 low, 2 heifer groups)
- 1 pen of 140 fresh cows
- 1 far-off pen of 145 cows / 1 close up pen with 134 cows

HIGH PENS: Cows average 1450 lbs body weight / Average production of 95 lbs

LOW PENS: Cows average 1350 lbs body weight / Ave milk production of 70 lbs

DRY COWS: Average weight of 1,400 lbs

Determine batch size for each pen:

HIGH PENS: $55 \text{ lbs DMI} \times 200 / (2 \text{ batches per day}) = 5,500 \text{ lb DM / batch}$

LOW PENS: $45 \text{ lbs DMI} \times 200 / (2 \text{ batches per day}) = 4,500 \text{ lb DM / batch}$

DRY COWS (close ups): $25 \text{ lbs} \times 134 = 3,350 \text{ DM / batch (Once / . Day feeding)}$

Largest & smallest batch: 5,500 & 3,350

Mixing capacity needed for largest & smallest:

LARGEST: $5,500 @ 45\% \text{ DM} = 12,000 \text{ lbs as fed}$

$12,000 \text{ lb} @ 17 \text{ lb/cu ft} = 12,000 / 17 = 706 \text{ cu ft}$

SMALLEST: $3,350 @ 50\% \text{ DM} = 6,700 \text{ lbs as fed}$

$6,700 @ 17 \text{ lb / cu ft} = 6,700 / 17 = 394 \text{ cu ft}$