

# CAO CALCULATIONS

# Have you “herd”?

The following is an example of an AEU per acre calculation.  
(a.w.e. = average weight each)

## Farm Data

**Animal Inventory** 110 holstein cows @ 1,450-lb a.w.e.  
35 heifers @ 1,000-lb a.w.e.  
20 calves @ 420-lb a.w.e.  
15,000 large broilers @ 3.55-lb a.w.e.

**Production Period** Cows = 365 days per year  
Broilers = 5 flocks for 57 days each, or  
285 days per year

**Land Inventory** Farmstead = 5 acres  
Woodland = 3 acres  
Pasture = 4 acres  
Cropland, home farm = 60 acres  
Cropland, rented farm = 36 acres



The calculation of animal density (AEUs per acre) for this farm would be as follows:

ANIMAL TYPE	NO. ANIMALS	x ANIMAL WEIGHT (LB)	x PROD. DAY	÷ FACTOR	=AEU
Holsteins	110	x 1,450	x 365	÷ 365,000	= 159.5
Heifers	35	x 1,000	x 365	÷ 365,000	= 35.0
Calves	20	x 420	x 365	÷ 365,000	= 8.4
Broilers	15,000	x 3.55	x 285	÷ 365,000	= 41.6
Total* = 244.5					
Acres available for manure** ÷ 100					
AEUs/acre = 2.45					

\*If this figure is less than 8, then the farm would not be a CAO, regardless of the AEU/acre figure calculated below.

\*\* Includes only cropland, hayland, and pastures; for this example there are 96 acres of cropland/hayland and 4 acres of pasture.

## Changes to PA Livestock and Poultry Standard Animal Weights



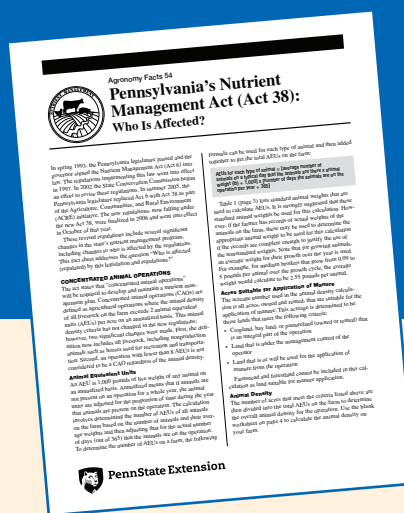


In 1997, when Pennsylvania's Nutrient Management Program (NMP) took effect, the regulations included a list of Standard Animal Weights which must be used when calculating if an animal operation is a Concentrated Animal Operation (CAO). Those average weights reflected trends in animal agriculture at that time. The weights have been adjusted 4 times since 1997, to reflect current livestock and poultry industry trends.



Effective October 1, 2019, the NEW standard WEIGHTS must be used by an animal operation to determine Animal Equivalent Units (AEU's) on the agricultural operation. The operator must follow several steps included in the regulations to calculate the number of AEU's. More details can be found in the PSU Agronomy Facts 54 factsheet (2017) <https://extension.psu.edu/pennsylvania-s-nutrient-management-act-act-38-who-is-affected-1>, or by contacting your local County Conservation District, or a private consultant.

Farmers have the option to use other average animal weights instead of those in the Standard Animal Weights chart IF there is sufficient documentation to support their use.



Please refer to Agronomy Facts 54 for exact details, but highlights of changes include:

- Dairy – Additional groupings and weights changed

- Beef – additional groupings added
- Swine – weight changed
- Poultry (egg) – grouping and weight changed
- Poultry (meat) – grouping and weight changed
- Poultry (Turkey) – grouping changes
- Poultry (duck) – grouping changes
- Sheep and Goat - grouping and weight changed
- Veal – weight changed
- Bison - grouping and weight changed
- Alpaca and Llama - grouping and weight changed
- Horses, Donkeys, Mules – no changes
- Deer – no changes



Farmers have the option to use other average animal weights IF there is sufficient documentation to support their use.