Determining the Tons of Silage in Upright Silos for CFAP

Kevin Jarek, Liz Binversie, Bill Halfman, Paul Mitchell

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This tool helps a farmer calculate the tons of silage in an upright silo and convert it to its grain equivalent for including in 2019 production for determining CFAP payments.


Step 1: In the yellow cells, enter the silo diameter, the filled height, and the height of feed left on January 15 (other values can be left at default levels).
Step 2: Scroll down to the bottom of the sheet where it gives the estimated tons of silage remaining as tons of dry matter (DM) for either a top loading or bottom loading silo.
Step 3: Divide by 0.35 to convert silage tons of dry matter to standard 65% moisture.
Step 4: Multiply by the FSA conversion factor. Corn silage is 7.94 bu/ton (at 65% moisture) and 4.08 bu/ton (at 65% moisture) for oatlage.

Example: Determine the tons of wet silage for a 20 ft X 60 ft silo filled to a settled depth of 55’. On January 15, 2020, the top 20 ft had been removed, so the silo had 35 ft remaining.
1. Enter 20 ft diameter, a filled height of 55 ft and a height of feed left in silo of 35 ft.
2. Scroll down, the tool reports 137 tons dry matter (DM) for the filled silo and 33 tons DM removed for a top unloading silo, leaving 137 – 33 = 104 tons DM inventory on January 15, 2020.
3. Convert tons DM to 65% moisture by dividing by 0.35 = 104/0.35 = 297 tons of wet silage.
4. Convert to grain equivalents using FSA conversion factors:
   - Corn Silage: 297 x 7.94 bu/ton = 2,358 bu of Corn
   - Oatlage: 297 x 4.08 bu/ton = 1,212 bu of Oats
   - Soybean Silage: 297 x 5.00 bu/ton = 1,485 bu of Soybeans
   - Sorghum Silage 297 x 5.56 bu/ton = 1,651 bu of Sorghum

See the demonstration video explaining these calculations, starting at minute 3:55: [https://youtu.be/0xusEej5JnI](https://youtu.be/0xusEej5JnI).

Silos that have been filled, fed from, but not emptied, and then filled again, can use: [https://fyi.extension.wisc.edu/forage/files/2014/02/TowerSiloCapacity_wRefills_10-19-12PROTECTED.xlsx](https://fyi.extension.wisc.edu/forage/files/2014/02/TowerSiloCapacity_wRefills_10-19-12PROTECTED.xlsx). For these calculations, see the demonstration video starting at minute 7:58: [https://youtu.be/0xusEej5JnI](https://youtu.be/0xusEej5JnI).