

Determination of air flow (cfm) per bushel

Grain Storage Management Education for the Hudson Valley

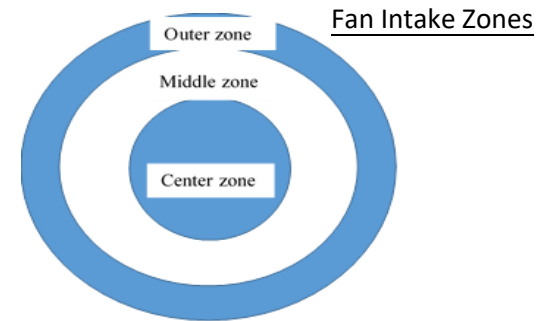
Instructions:

- Measure the fan intake diameter and enter it into the spreadsheet
- The center, middle, and outer intakes zones are calculated and listed in the spreadsheet under "Intake Zones". Use those distances from the center to determine where to take air flow measurements within the concentric intake zone.
- Using an air flow meter (anemometer) set to measure the air flow in feet per second, take three measurements in each of the three zones and enter them into the spreadsheet.
- If you are using the spreadsheet calculator, the cfm/bu is calculated automatically. If you are using a printed table, hand calculate the values in the unshaded cells.

this calculator is available at <https://blogs.cornell.edu/capitalareaagandhortprogram/2021/09/21/determining-cfm-bu-with-an-airflow-meter-anemometer/>

Fan Intake Diameter:	<input type="text"/>	inches	cfm:	<input type="text"/>	(overall air flow average (ft/sec)*fan intake area (ft)*60)
Fan Intake Radius:	<input type="text"/>	inches	cfm/bu:	<input type="text"/>	(cfm/bushels stored)
Fan Intake Area:	<input type="text"/>	sq. ft			
Bushels in Storage:	<input type="text"/>				

Intake Zones	distance from center of fan intake (outer diameter of zone)				
center zone	0.0	to	0.0	inches	(center zone = radius * 0.577)
middle zone	0.0	to	0.0	inches	(middle zone = radius * 0.816)
outer zone	0.0	to	0.0	inches	(outer zone = radius)



Air Flow In Each Zone	center zone	Average ft/sec air flow of each air intake zone
air flow in ft/sec	<input type="text"/>	<input type="text"/>
	<input type="text"/>	<input type="text"/>
	<input type="text"/>	<input type="text"/>
	<input type="text"/>	<input type="text"/>
		<input type="text"/> Overall air flow average ft/sec