



# Storage / Drying Guidelines

Aeration, Dry Down and Holding Time

# Moisture Equalization - Corn

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EQUILIBRIUM PERCENT MOISTURE CONTENT OF  
SHELLED CORN AT VARIOUS AIR TEMPERATURES  
AND RELATIVE HUMIDITIES

Air temp. (°F.)	Relative humidity (percent)								
	50	55	60	65	70	75	80	85	90
30	13.0	13.5	14.5	15.5	16.5	17.4	18.7	20.3	22.5
40	12.5	13.0	13.8	14.7	15.5	16.5	17.6	19.4	21.5
50	12.0	12.5	13.3	14.0	14.8	15.8	16.9	18.6	20.5
60	11.4	12.0	12.6	13.4	14.0	15.0	16.0	17.7	19.5
80	10.4	11.0	11.6	12.2	13.0	14.0	15.0	16.2	17.9
100	9.3	10.2	11.0	11.8	12.3	13.2	14.2	15.3	16.7
140	7.9	8.4	8.8	9.6	10.3	11.1	12.1	13.3	14.6

# Moisture Equalization - Beans

Equilibrium Percent Moisture Content of Soybeans at Various Air Temperatures and Relative Humidities									
Air Temp.	Relative Humidity (percent)								
	50%	55%	60%	65%	70%	75%	80%	85%	90%
30	8.9%	9.8%	10.8%	12.1%	13.6%	15.1%	17.1%	20.1%	22.9%
40	8.7%	9.6%	10.5%	11.8%	13.4%	14.9%	16.8%	19.7%	22.5%
50	8.5%	9.4%	10.2%	11.5%	13.2%	14.7%	16.5%	19.3%	22.1%
60	8.3%	9.2%	10.0%	11.3%	13.0%	14.5%	16.3%	19.0%	21.7%
70	8.1%	9.0%	9.8%	11.1%	12.8%	14.3%	16.1%	18.7%	21.3%
75	8.0%	8.9%	9.7%	11.0%	12.7%	14.2%	16.0%	18.6%	21.2%

This table illustrates the air temperature and relative humidity at which soybean moisture will not change. For example: Constant aeration at 70% humidity and 60 degree temp will maintain 13% moisture. Constant aeration at 60% humidity and 60 degree temp will dry and hold beans at 10% moisture. Constant aeration at 75% humidity and 40 degree temp will add moisture up to 14.9%. Aeration fan operations should be managed to achieve 13% moisture. Over aeration in red zone conditions will over dry beans and result in excessive shrink.

# Corn Storage Guideline

Maximum Allowable Shelled Corn Storage Time for 0.5% Dry Matter Loss, Days.<sup>(a)</sup> (ASABE Standards 2005)

°F	Corn moisture, % wet basis							
	16	18	20	22	24	26	28	30
35	1144	437	216	128	86	63	50	41
40	763	291	144	85	57	42	33	27
45	509	194	96	57	38	28	22	18
50	339	130	64	38	26	19	15	12
55	226	86	43	25	17	13	10	8
60	151	58	29	17	11	8	7	5
65	113	43	22	13	9	7	5	4
70	85	32	16	10	7	5	4	4
75	63	24	12	8	5	4	3	3

<sup>(a)</sup>  $D = 30\%$ ,  $M_D = M_H = M_F = 1$ , Times calculated using °F temperature values.