

Corn Growing Contest Procedure for Estimating Corn Yields

Corn yields can be fairly estimated by using the factors in the tables (see back of page) and by following this procedure.

1. Locate 5 sample rows at random over the area to be estimated. Using a steel tape or measured length of heavy string, measure off the 5 samples, each 50 feet long.
Note: It is most important that the samples be located at random to avoid any tendency to select the better spots of corn. Make a diagram that shows the location of the areas to be sampled before entering the field.
2. Predetermine a starting point at which sampling will begin, and follow a definite plan that will result in a representative sample from the field. Pull and shuck from each of the five 50-foot sample rows, keeping samples from each row in a different pile or bag.
3. Weigh each sample separately, and record the weight on the entry form. Milk scales may be used for weighing.
4. Determine the average weight for the samples by dividing their total weight by 5.
5. Select 5 ears from each sample for moisture determination. (Select every fifth ear.) Remove two rows of kernels from each ear selected or enough to make the sample at least 1 pound (1 pint). Place the shelled corn in a polyethylene bag or other moisture-proof container.
6. Attach a card identifying the sample to the container. The card should show the name of the farmer, the name and address of the local association, and any other local information that may be needed.
7. Take the sample to any local grain inspection station for a moisture check. If there is no grain inspection station in the locality, mail samples by October 15 to the Executive Secretary of the Young Farmers of Virginia, P.O. Box 2120, Richmond, Virginia 23218-2120. Moisture determination will be made; one copy of the grain sampler's ticket will be returned to the local advisor, and the duplicate copy will be forwarded to the area office.
8. Determine the average row width, and record on entry form.
9. Complete entry form, and mail to Virginia Young Farmer Executive Secretary.

Factors for Converting the Weight in Pounds of Ear Corn Harvested from 50 Feet of Row Space to Bushels Per Acre

To determine the yield in bushels per acre, multiply the average weight of corn per 50 feet of row length by the factor listed in the table below for the specific row width and corn moisture content.

Row Width In Inches	Moisture Percentage of the Harvested Sample											
	12	13	14	15	16	17	18	19	20	21	22	23
20				7.67	7.56	7.41	7.31	7.20	7.04	6.88	6.78	6.68
22				7.00	6.92	6.76	6.66	6.57	6.42	6.28	6.19	6.10
24				6.40	6.32	6.18	6.10	6.01	5.88	5.75	5.66	5.58
26				5.90	5.82	5.70	5.62	5.54	5.42	5.30	5.22	5.14
28				5.50	5.42	5.31	5.24	5.16	5.05	4.94	4.86	4.78
30				5.12	5.06	4.95	4.88	4.81	4.70	4.60	4.53	4.46
32				4.82	4.73	4.64	4.57	4.50	4.40	4.30	4.24	4.18
34	4.73	4.73	4.60	4.53	4.46	4.39	4.31	4.24	4.16	4.08	4.00	3.93
36	4.47	4.47	4.35	4.28	4.22	4.15	4.06	4.00	3.93	3.86	3.79	3.71
38	4.23	4.23	4.11	4.05	3.99	3.93	3.86	3.79	3.72	3.65	3.58	3.52
40	4.01	4.0	3.90	3.85	3.79	3.73	3.66	3.60	3.53	3.47	3.40	3.34
42	3.82	3.82	3.72	3.67	3.61	3.55	3.49	3.43	3.37	3.31	3.24	3.18
44	3.65	3.65	3.55	3.50	3.45	3.29	3.33	3.27	3.21	3.15	3.10	3.04
46	3.50	3.50	3.41	3.36	3.31	3.25	3.19	3.21	3.09	3.02	3.00	2.91
48	3.35	3.35	3.26	3.21	3.16	3.11	3.05	3.09	2.95	2.89	2.84	2.78

Row Width In Inches	Moisture Percentage of the Harvested Sample											
	24	25	26	27	28	29	30	31	32	33	34	35
20	6.58	6.47	6.36	6.26	6.16	6.05	6.00	5.90	5.79	5.68	5.64	5.53
22	6.00	5.90	5.81	5.72	5.62	5.52	5.48	5.38	5.28	5.19	5.14	5.04
24	5.49	5.40	5.32	5.22	5.14	5.06	5.01	4.92	4.84	4.75	4.70	4.62
26	5.06	4.98	4.90	4.82	4.74	4.66	4.62	4.54	4.46	4.38	4.34	4.26
28	4.71	4.64	4.56	4.48	4.41	4.34	4.30	4.22	4.15	4.08	4.04	3.96
30	4.39	4.32	4.25	4.18	4.11	4.04	4.01	3.94	3.87	3.80	3.76	3.70
32	4.11	4.04	3.98	3.92	3.85	3.78	3.75	3.68	3.62	3.56	3.52	3.46
34	3.86	3.79	3.72	3.65	3.59	3.54	3.48	3.42	3.36	3.32	3.26	3.22
36	3.65	3.58	3.51	3.45	3.40	3.34	3.29	3.23	3.18	3.13	3.08	3.04
38	3.45	3.39	3.32	3.27	3.21	3.16	3.10	3.06	3.00	2.96	2.92	2.88
40	3.27	3.21	3.15	3.10	3.05	3.00	2.95	2.90	2.85	2.81	2.77	2.73
42	3.12	3.06	3.00	2.95	2.91	2.86	2.81	2.77	2.72	2.68	2.64	2.60
44	2.98	2.93	2.87	2.82	2.78	2.73	2.69	2.64	2.60	2.56	2.52	2.48
46	2.86	2.81	2.75	2.71	2.66	2.62	2.58	2.53	2.49	2.46	2.42	2.38
48	2.73	2.68	2.63	2.59	2.54	2.50	2.46	2.42	2.38	2.35	2.31	2.28

Table is based on dry matter weights at 47.32 pound for grain and 9.94 pounds for cobs per bushel; or 56 pounds of grain at 15.5% moisture in kernel and 12.40 pounds of cob at 19.8% moisture in cob, making a total of 68.4 pound of ear corn per bushel at 15.5% in kernel.