

# 2011 CMDC

## High Yield Corn Production

### Jim Specht

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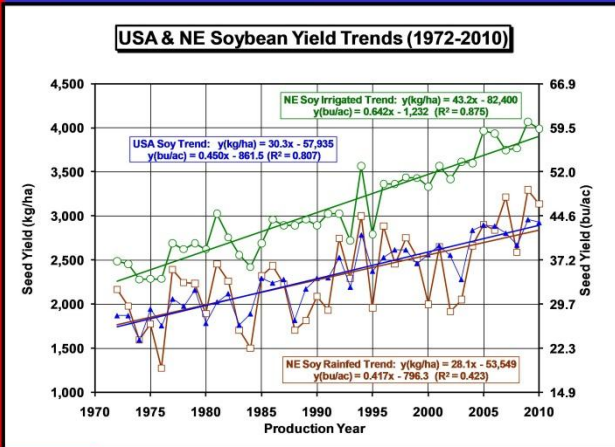
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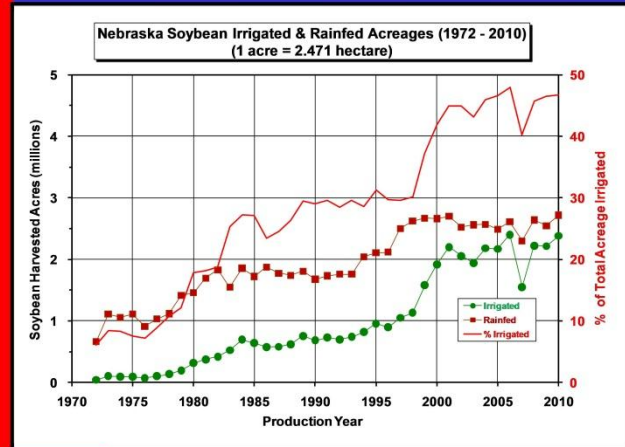
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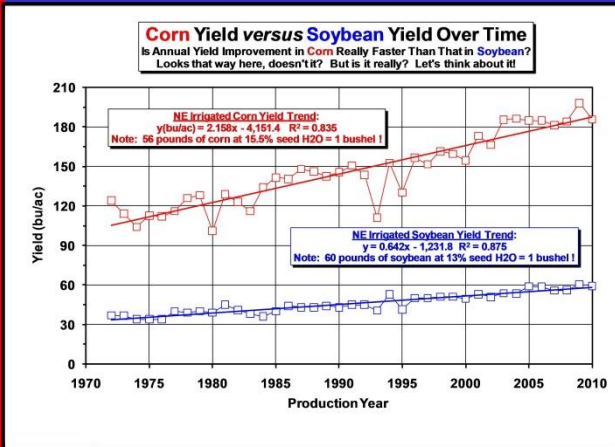
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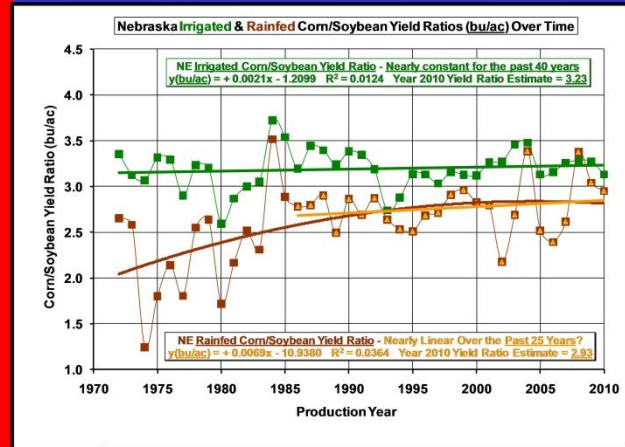
2011CMDC-Specht (1)



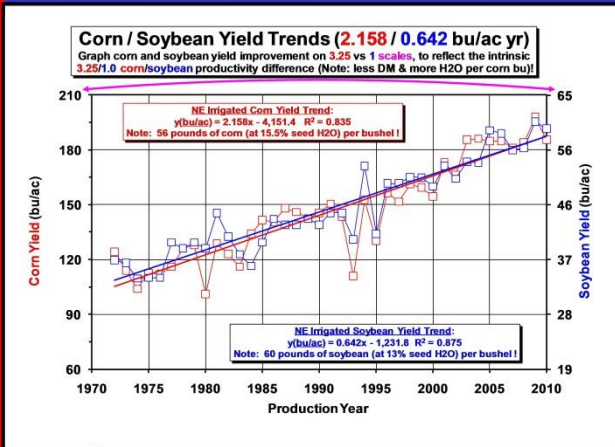
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Start Here >> Example:

Say you have a 30-inch row spacing, and you counted plants in several representative 10-ft row sections and the average plant count per 10 feet was 69 plants. Looking at the table at left, you see your 69 count translates into about 2.8 plants per sq ft or about 120,000 plants/ac.

Now, take the 69 plants you found in a 10-ft row section, and remove all of the pods from those plants. Next, count the number of seed you see in the filled cavities of all of those pods. This is an estimate of the number of seed produced per 10-ft row section. As an example, say you counted 6750 seeds in a 10-ft row section that contained the 69 plants. Obviously, this implies 98 seeds / plant (i.e., 6750 / 69 = 98).

Looking at top left table, note that 6750 seeds per 10-ft translates into 270 seeds produced per one square ft of ground area. Depending upon the weight of an "average" seed when it is harvested, which can be lighter than average (about 3250 seeds/lb), or heavier than average, (about 2750 seeds/lb), your soybean field could yield as low as 60 bu/ac or as high as 71 bu/ac. (The calculations assume 13% seed moisture.)

Then Go to this Table First!

Plants/10-foot of row in this row spacing	Plants per sq ft	Plants per acre		
7.5-in	15-in	30-in		
8.6	17.2	34.4	1.38	60,000
10.0	20.1	40.2	1.61	70,000
11.5	23.0	45.9	1.84	80,000
12.9	25.8	51.7	2.07	90,000
14.3	28.7	57.4	2.30	100,000
15.8	31.6	63.1	2.63	110,000
17.2	34.4	68.9	2.75	120,000
18.7	37.3	74.6	2.98	130,000
20.1	40.2	80.3	3.21	140,000
21.5	43.0	86.1	3.44	150,000
23.0	45.9	91.8	3.67	160,000
24.4	48.8	97.6	3.90	170,000
25.8	51.7	103.3	4.13	180,000
27.3	54.5	109.0	4.36	190,000
28.7	57.4	114.8	4.69	200,000
31.6	63.1	126.3	5.05	220,000
34.4	68.9	137.7	5.51	240,000

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Table 1. Soybean seed yield ( bu/ac @ 13% seed H2O) for various combinations seed PRODUCED per square foot of field area and the SIZE of THOSE seed (number per ounce, pound, or gram).

Note: below numbers apply when the seed moisture content is at 13%

0.625	1.25	2.5	oz/seed: 0.0040 0.0043 0.0046 0.0049 0.0053 0.0058 0.0064 0.0071 0.0080														
Seeds produced per 10-foot section of:	Seeds per sq ft	seeds/oz:	250	234	219	203	188	172	156	141	125						
7.5-in	15-in	30-in	4000	3750	3500	3250	3000	2750	2500	2250	2000						
			g/seed:	0.113	0.121	0.130	0.140	0.151	0.165	0.181	0.202	0.227					
----- Yield (bu/ac) -----																	
875	1750	3500	140	25.4	27.1	29.0	31.3	33.9	37.0	40.7	45.2	50.8					
938	1875	3750	150	27.2	29.0	31.1	33.5	36.3	39.6	43.6	48.4	54.5					
1000	2000	4000	160	29.0	31.0	33.2	35.7	38.7	42.2	46.5	51.6	58.1					
1063	2125	4250	170	30.9	32.9	35.3	38.0	41.1	44.9	49.4	54.9	61.7					
1125	2250	4500	180	32.7	34.8	37.3	40.2	43.6	47.5	52.3	58.1	65.3					
1188	2375	4750	190	34.5	36.8	39.4	42.4	46.0	50.2	55.2	61.3	69.0					
1250	2500	5000	200	36.3	38.7	41.5	44.7	48.4	52.8	58.1	64.5	72.6					
1313	2625	5250	210	38.1	40.7	43.6	46.9	50.8	55.4	61.0	67.8	76.2					
1375	2750	5500	220	39.9	42.6	45.6	49.1	53.2	58.1	63.9	71.0	79.9					
1438	2875	5750	230	41.7	44.5	47.7	51.4	55.7	60.7	66.8	74.2	83.5					
1500	3000	6000	240	43.6	46.5	49.8	53.6	58.1	63.4	69.7	77.4	87.1					
1563	3125	6250	250	45.4	48.4	51.9	55.8	60.5	66.0	72.6	80.7	90.8					
1625	3250	6500	260	47.2	50.3	53.9	58.1	62.9	68.6	75.5	83.9	94.4					
1688	3375	6750	270	49.0	52.3	56.0	60.3	65.3	71.3	78.4	87.1	98.0					
1750	3500	7000	280	50.8	54.2	58.1	62.5	67.8	73.9	81.3	90.3	101.6					
1813	3625	7250	290	52.6	56.1	60.2	64.8	70.2	76.6	84.2	93.6	105.3					
1875	3750	7500	300	54.5	58.1	62.2	67.0	72.6	79.2	87.1	96.8	108.9					
3000	6000	12000	480									155.1					

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