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SPRING CANOLA POPULATION STUDIES



Precision Planting versus Drilling for Canola

- We are using a lot of canola seed to achieve an adequate stand:
 - Expect only ~50 to 60% establishment
 - Typically use 4.5-6 lbs/A
 - Final stands need to be in the 4-10 plants/ft range (13-33 plants/m)
 - Seed lots can range from 80000 to 120000+ seed/lb!
 - Transgenic seed is very expensive.

Precision Planting versus Drilling for Canola

Monosem

- Calibrated by seed number
- Seed per foot, inches between seed



Conventional Drill

- Calibrated by flow
- Weight of seed per unit time



Older equipment can grind seed...



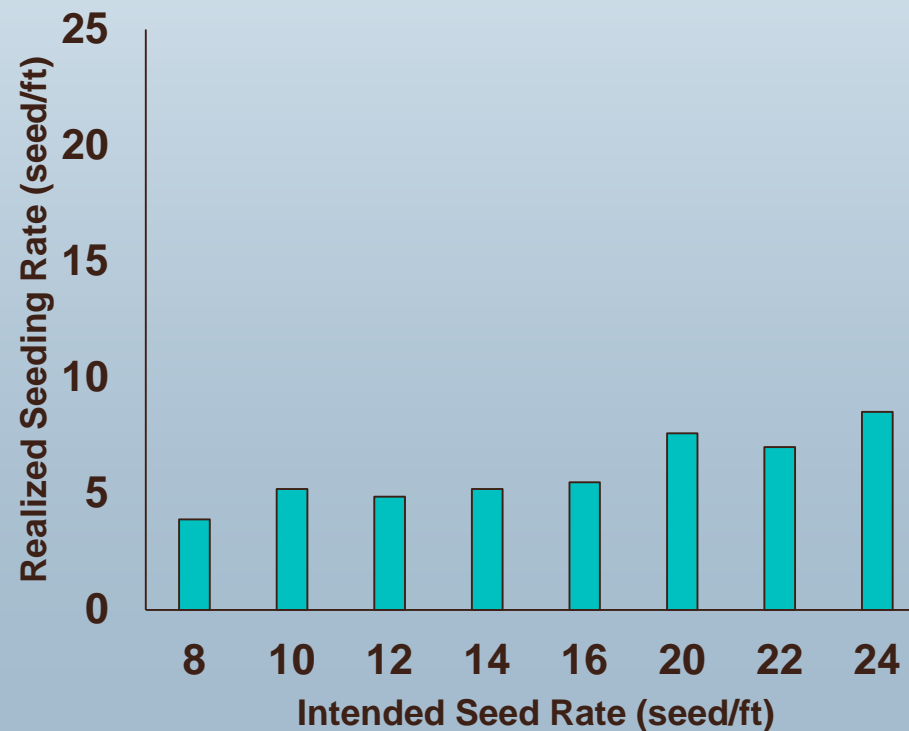
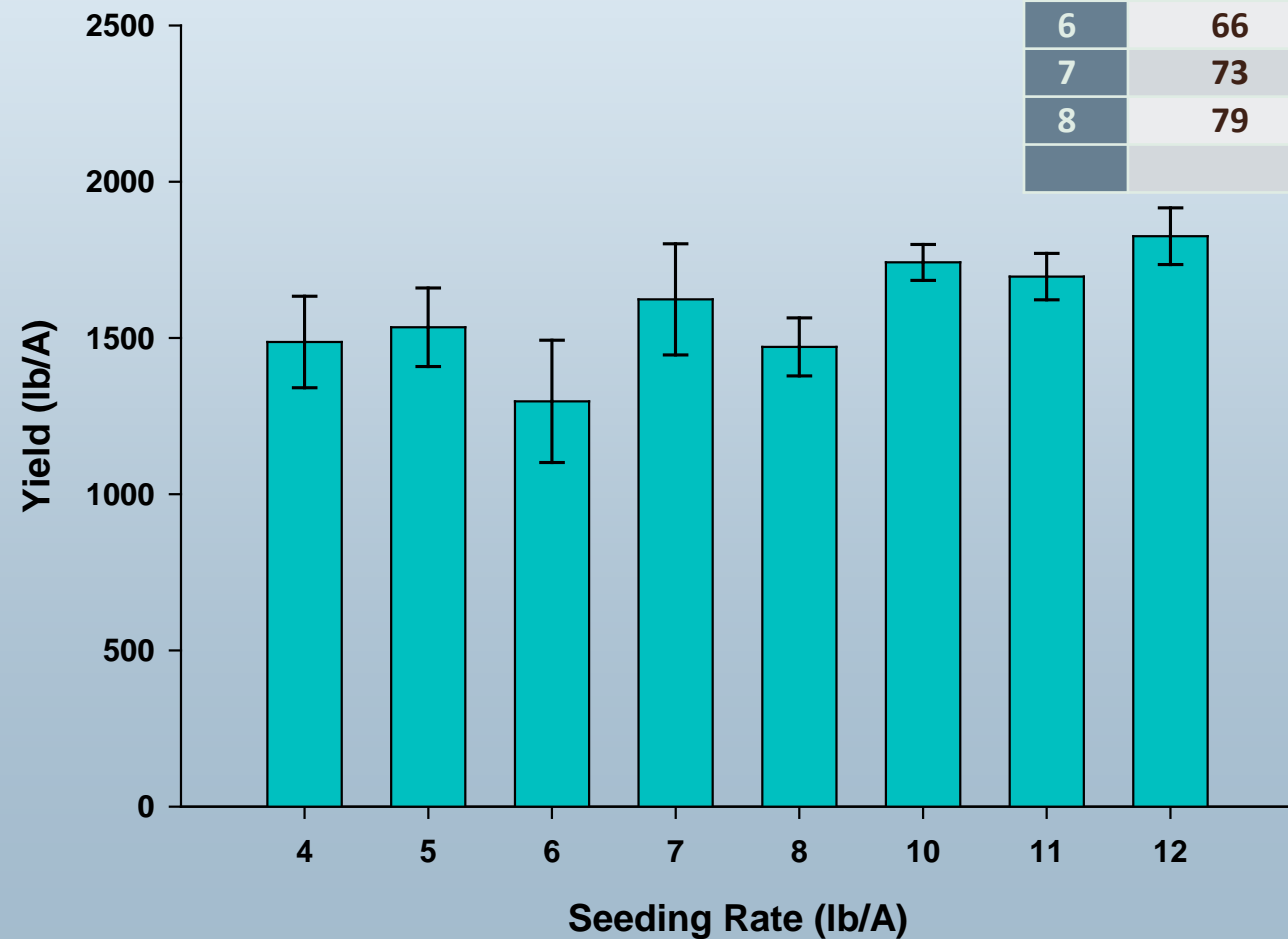
Seed from the bag



Collected from older drill

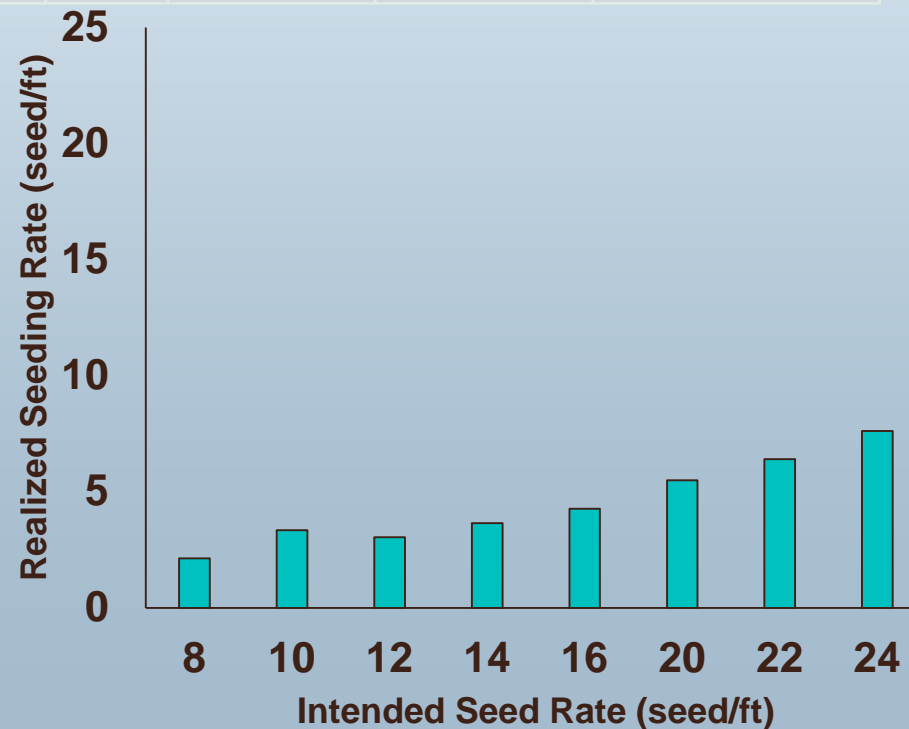
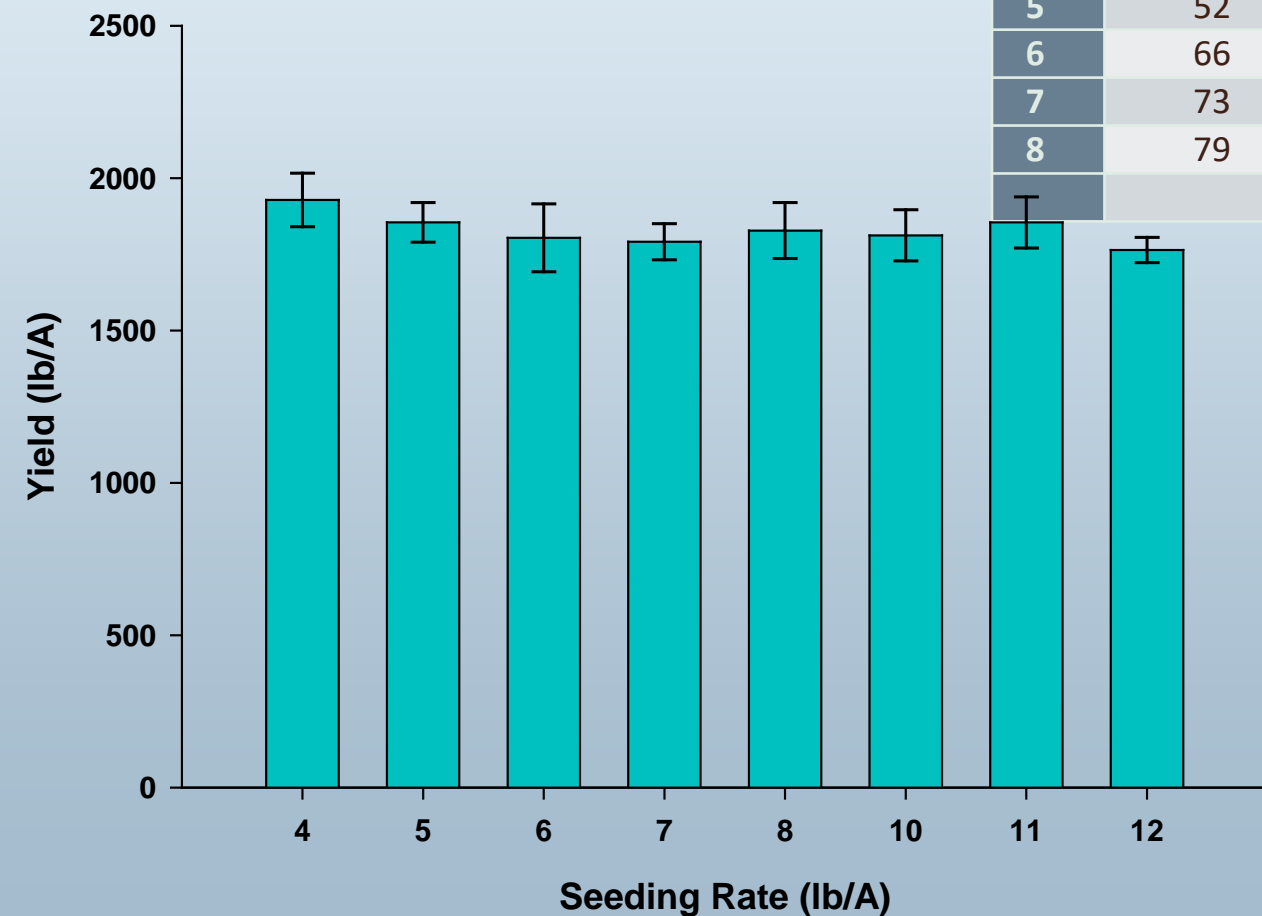
Pullman, WA

Trt	Seeding Rate			June 22, 17	July 20, 17	
				44 DAP	72 DAP	
	seed/m	seed/ft	lb/A	LAI	LAI	Stand Counts
				744 GDD	1462 GDD	plants/m
1	26	8	4	1.23	2.87	13
2	32	10	5	1.21	2.79	17
3	39	12	6	1.28	2.56	16
4	46	14	7	1.65	2.37	17
5	52	16	8	1.22	3.00	18
6	66	20	10	1.66	3.21	25
7	73	22	11	1.43	2.65	23
8	79	24	12	2.02	3.27	28
			LSD	NS	NS	NS



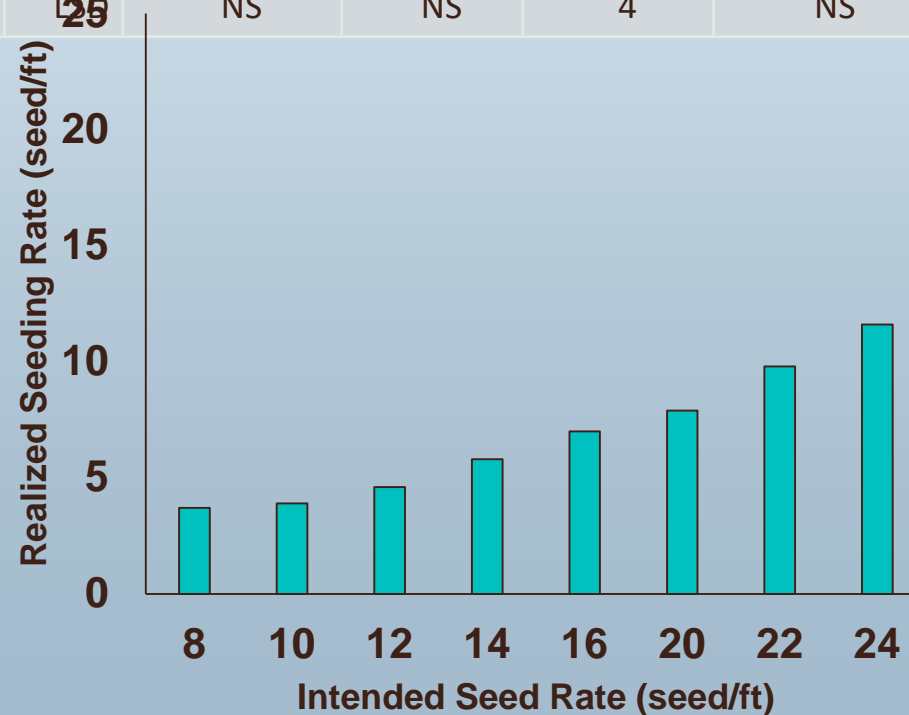
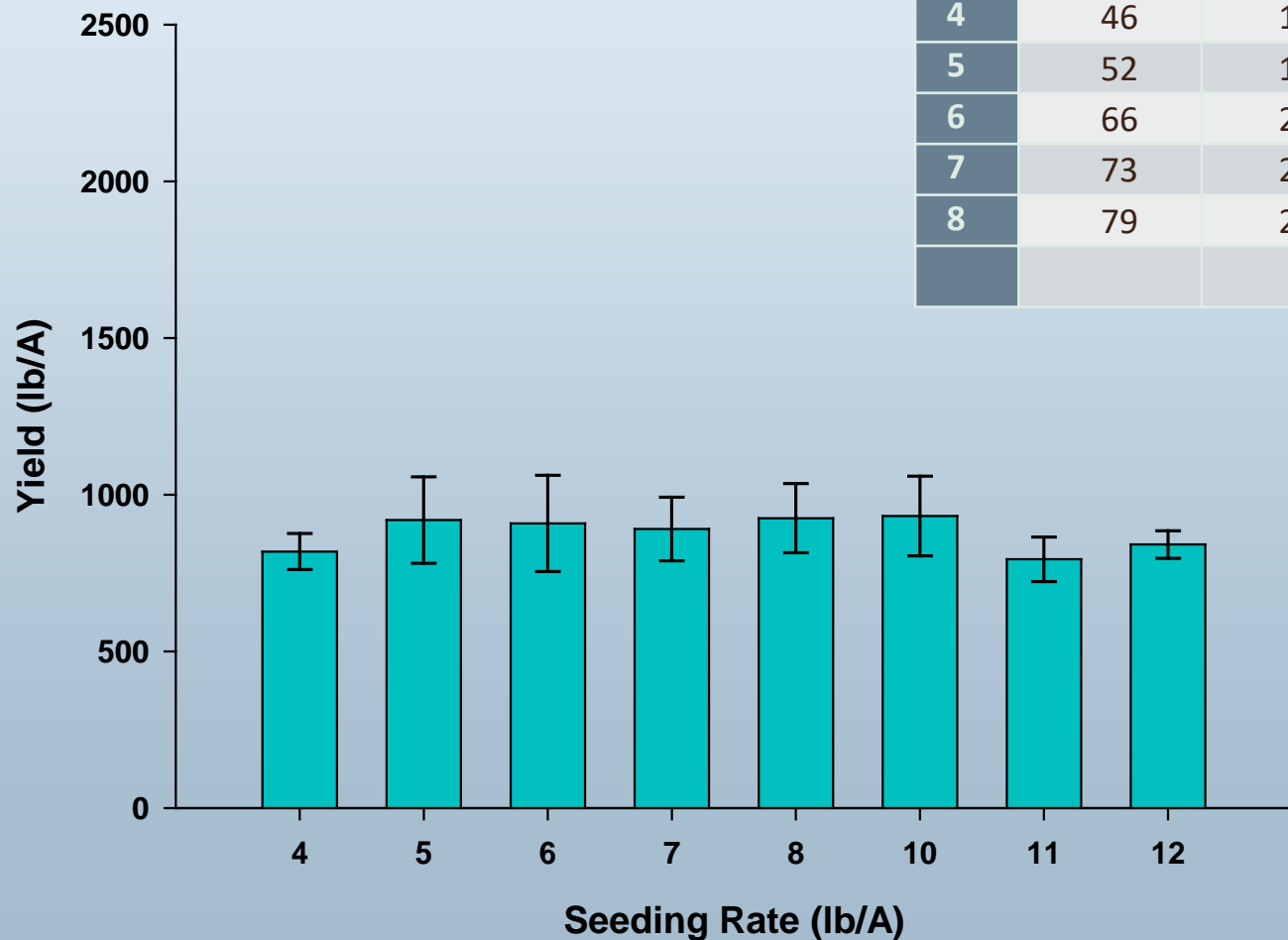
Walla Walla, WA

Trt	Seeding Rate			June 29, 2017 69 DAP		
				LAI	Stand Counts	Branch Counts
	seed/m	seed/ft	lb/A	1463 GDD	plants/m	branches/plant
1	26	8	4	3.62	7 a	3.3 a
2	32	10	5	3.49	11 ab	2.5 abc
3	39	12	6	3.21	10 ab	3.0 ab
4	46	14	7	3.39	12 ab	2.6 abc
5	52	16	8	3.05	14 bc	2.2 abc
6	66	20	10	3.25	18 cd	1.6 bc
7	73	22	11	3.18	21 de	1.5 bc
8	79	24	12	3.68	25 e	1.4 c
			LSD	NS	4	1



Davenport, WA

Trt	Seeding Rate			June 20, 17	June 27, 2017		July 18, 17
				33 DAP	40 DAP		61 DPP
	seed/m	seed/ft	lb/A	LAI	LAI	Stand Counts	LAI
				635 GDD	804 GDD	plants/m	1403 GDD
1	26	8	4	1.21	1.31	12 a	1.12
2	32	10	5	1.02	1.65	13 a	1.46
3	39	12	6	1.37	1.88	15 ab	1.66
4	46	14	7	1.43	1.55	19 bc	1.21
5	52	16	8	1.54	2.03	23 cd	1.33
6	66	20	10	1.55	1.87	26 d	2.09
7	73	22	11	1.35	2.14	32 e	1.18
8	79	24	12	1.74	1.76	38 f	1.42
9	95	29	15	NS	NS	4	NS



Conclusions

- Lower 'seeding rates' are likely best achieved by buying canola seed with greater seed per pound, increased germination, or both
- The optimum seeding rate is likely in the range of 4.5 to 6 lbs using a drill
- Using a singulator changes the calculation to seed per foot,
 - need 4 to 6 plants per foot
 - and would need to drop 8 to 12 to get that!

Questions?

