How to Calibrate Your Drill to Plant Seeds per Acre

Jerry Johnson and Sally Sauer

There are advantages to planting seeds per acre instead of pounds per acre due to the potentially large difference in seed size among seed lots. It is not uncommon to have some seed lots with 10,000 seeds per pound or 18,000 seeds per pound. A farmer planting 35 pounds per acre could be planting 350,000 seeds per acre or 630,000 seeds per acre depending on the number of seeds per pound. Another advantage of planting seeds per acre is that you know how many seeds were planted per linear foot of row so stand counts can be taken after emergence to determine what percent of planted seed actually emerged. I am surprised that actual stands often turn out to be much lower than expected – even under seemingly good planting conditions. You don't have to know how many seeds per pound of seed to be able to plant seeds per acre.

The following table will assist you in calibrating your drill to plant seeds per linear row foot (seeds per acre).

STEP 1: (see table) requires you estimate your percent emergence rate based upon your planting conditions. Emergence rate is not the germination percentage of your seed, but rather what percent of seed planted will actually emerge. I have provided a guideline to help you determine your estimated emergence rate, which ranges from very poor to excellent planting conditions.

STEP 2: (see table) determine desired plant population depending on the date of planting. For example, if planting in early September, you might want 500,000 plants per acre to avoid having too many plants and tillers the next spring that might exhaust available soil moisture.

STEP 3: (see table) is to find the row spacing for your drill and read across to the column you found in STEP 1 to find the number of seeds per linear foot. Set your drill accordingly.

Note that drills will need to be recalibrated if planting conditions improve (it rains) or become worse (hot and dry) or if your planting season is extended to a later date requiring a heavier seeding rate. We are interested in your experience. Send me and/or Sally an email message or feel free to call either of us with comments or questions.

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Planting Rate in Seeds Per Linear Foot of Row

			Step 1: **Planting Conditions and Farmer Estimated Emergence Rate**					
	Step 2:	***Step 3:***	**Very Poor**	**Poor**		**Average**	**Excellent**	
Seeding Date	**Desired Plant Population**	**Row Spacing**	**40%**	**50%**	**60%**	**70%**	**80%**	**90%**
	plants/acre	**inches**	**seeds/linear foot of row**					
Late Aug.	**300,000**	**6.0**	9	7	6	5	4	4
	300,000	**7.5**	11	9	7	6	5	5
	300,000	**10.0**	14	11	10	8	7	6
	300,000	**12.0**	17	14	11	10	9	8
Early Sept.	**500,000**	**6.0**	14	11	10	8	7	6
	500,000	**7.5**	18	14	12	10	9	8
	500,000	**10.0**	24	19	16	14	12	11
	500,000	**12.0**	29	23	19	16	14	13
Mid-Sept.	**700,000**	**6.0**	20	16	13	11	10	9
	700,000	**7.5**	25	20	17	14	13	11
	700,000	**10.0**	33	27	22	19	17	15
	700,000	**12.0**	40	32	27	23	20	18
Late Sept./Early Oct.	**900,000**	**6.0**	26	21	17	15	13	11
	900,000	**7.5**	32	26	22	18	16	14
	900,000	**10.0**	43	34	29	25	22	19
	900,000	**12.0**	52	41	34	30	26	23
Mid/Late Oct.	**1,100,000**	**6.0**	32	25	21	18	16	14
	1,100,000	**7.5**	39	32	26	23	20	18
	1,100,000	**10.0**	53	42	35	30	26	23
	1,100,000	**12.0**	63	51	42	36	32	28