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Planting guide for  
Colorado field crops

APR 12 1990

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**Quick Facts**

This fact sheet is intended as a guide to the planting and harvesting of many field crops raised in Colorado.

It should be used only as a guide since such things as planting rates will vary with crop variety and cultural aspects.

Dryland seeding rates for crops produced either irrigated or dryland are approximately 50 percent of irrigated rates except winter wheat.

Growers should strive toward accuracy in planting to maximize yields; over- or underplanting may reduce yields.

Factors such as machine wear, seed size, seed shape, test weight and number of seed per pound influence seeding rates.

This Service in Action sheet presents information pertaining to the planting and harvesting of many of the field crops raised in Colorado. It is intended as a guide only, since such details as planting rates will vary depending not only on crop variety but on cultural aspects (dryland vs. irrigated, for example). For simplicity, the higher seeding rates applicable to irrigated culture have been presented for those crops produced either irrigated or dryland—the reader should bear in mind that dryland rates are approximately 50 percent of irrigated rates.

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**Table 1: Summary data of a number of field crops in Colorado.**

Crop	Botanical name	Seed per pound (thousands)	Weight per bushel (pounds)	Seeding rate (lbs/acre)	Usual planting date	Seeding soil cover (inches)	Planting to harvest (days)
Alfalfa	<i>Medicago sativa</i> L.	220	60	3-12	spn 4/15-5/15 fall 8/1-8/15	.5	
Barley	<i>Hordeum vulgare</i> L.						
spring		13	48	60-90	3/15-4/30	1-2	100-120
winter		13	48	30-50	8/20-9/30	1-2	
Beans	<i>Phaseolus vulgaris</i> L.						
pinto		1.2	60	60-70	5/25-6/5	1-3	90-110
kidney		.9	60	80	5/25-6/5	1-2	90-110
small white		3.5	60	30	5/25-6/5	1-2	90-120
Clover							
(see sweetclover)							
Corn	<i>Zea mays</i> L.						
grain		1.2	56	8-18	4/15-5/20	1-3	100-140
forage		1.2	56	8-18	4/15-5/20	1-3	85-110
Millet							
proso	<i>Panicum maliaceum</i> L.	80	56	6-20	5/15-6/30	.5-.75	70-90
foxtail	<i>Setaria Italica</i> L. Beauv.	220	50	4-12	5/15-6/30	.5-.75	70-90
pearl	<i>Pennisetum glaucum</i> L.	85	56	10-20 for. 4-6 gr.	5/25-6/15	.50	

Issued in furtherance of Cooperative Extension work in agriculture and home economics, Acts of May 8 and June 30, 1914, in cooperation with the United States Department of Agriculture, Don K. Chadwick, director of Extension Service, Colorado State University, Fort Collins, Colorado 80523. The CSU Cooperative Extension Service is dedicated to serve all people on an equal and nondiscriminatory basis.

To simplify technical terminology, trade names of products and equipment occasionally will be used. No endorsement of products named is intended nor is criticism implied of products not mentioned.

Table 1: Summary data of a number of field crops in Colorado (continued).

Crop	Botanical name	Seed per pound (thousands)	Weight per bushel (pounds)	Seeding rate (lbs/acre)	Usual planting date	Seeding soil cover (inches)	Planting to harvest (days)
Oats spring fall not recommended	<i>Avena sativa</i> L.	14	32	40-70	3/15-4/30	1-2	100-120
Potatoes	<i>Solanum tuberosum</i> L.		60	1,500-2,000	4/10-6/15	4	90-120
Rye winter pasture	<i>Secale cereale</i> L.	18 18		40 80	8/30-9/30	1-2	
Safflower	<i>Carthamus tinctorius</i> L.	8-13	45	15-20	4/15-5/20	.75-1.5	120-150
Sainfoin	<i>Onobrychis viciaefolia</i> Scop.	23	55	30-35	same as alfalfa		
Sorghum grain forage	<i>Sorghum vulgare</i> Pers	15 15	56 56	2-8 5-8	5/15-6/10 5/15-6/10	.75-1 .75-1	90-130 90-100
Sudangrass	<i>Sorghum vulgare</i> sudanense	55	40	10-20	5/15-7/1	.75-1	90-110
Sunflower oil confect.	<i>Helianthus annuus</i> L.		28 28	3-7 3-6	5/10-6/20 5/10-6/20	1-2 1-2	90-120 90-120
Sweetclover	<i>Melilotus alba</i> Med <i>Melilotus officinalis</i> Lam. (yellow)	260	60	9-11	same as alfalfa		
Triticale spring winter		18 18	56 56	50-80 50-80	3/15-4/10 8/30-9/30	1-2 1-2	110-120
Wheat spring winter	<i>Triticum aestivum</i> L.	15 15*	60 60	40-60 30-45	3/15-4/15 9/10-9/25	1-2 1-2	110-120

\*tall varieties 30 lbs., semidwarf varieties 45 lbs. on dryland & irrigated

## Calibrating Planting Equipment

Growers should strive toward accuracy in planting to maximize yields. Overplanting is wasteful of seed and may reduce yields. Overplanting is wasteful of seed and may reduce yields or even ruin a crop especially if moisture is limited, whereas underplanting may reduce yield potential. Much equipment has seeding charts that indicate seeding rates for many common crops. Factors such as machine wear, size of seed, test weight, seed shape, and number of seed per pound influence seeding rates.

Since it always is a good idea to check the rate, or since some crops may not be included on seeding charts, the following information is presented so that farmers may calibrate their own equipment.

- Fasten a sack or container to one, two or three spouts.

- Put seed in the drill.

- Collect seed from the drill as follows:

- 600 feet for one spout

- 300 feet for two spouts

- 200 feet for three spouts

- Weigh collected seed in ounces or grams.

- Use Table 2 or Table 3 to determine the seeding rate per acre.

Table 2: Calibration of drills for seeding rate.

If the amount of grain collected from 600 feet of row is:

then the pounds of grain being seeded per acre is (by row width)

ounces/grams	7"	8"	9"	10"	12"	14"
4	(113)	31	27	24	22	18
5	(142)	39	34	30	27	23
6	(170)	47	41	36	33	27
7	(198)	54	48	42	38	32
8	(227)	62	54	48	44	36
9	(255)	70	61	54	49	41
10	(283)	78	68	60	54	45
11	(312)	86	75	67	60	50
12	(340)	93	82	73	65	54
13	(368)	101	88	79	71	59
14	(397)	109	95	85	76	63
15	(425)	117	102	91	82	68
16	(454)	124	109	97	87	73
17	(482)	132	116	103	92	77
18	(510)	140	122	109	98	82
19	(539)	148	129	115	103	86
20	(567)	156	136	121	109	91
21	(595)				114	95
22	(624)				120	100
23	(652)				125	104
24	(680)					109
25	(709)					113
26	(737)					118
27	(765)					122