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COLLEGE OF AGRICULTURE & BIOLOGICAL SCIENCES / SOUTH DAKOTA STATE UNIVERSITY / USDA

Characteristics and Seeding Rates

of some Crops Grown in South Dakota

by Robert G. Hall, Extension Agronomist-Crops

Certain seed characteristics relate to seeding rates for various crops you might be planning to plant as alternative crops this year.

Information on growth type, bushel weight, seed count, and days to germination information was obtained from Principles of field crop production, 3rd. ed. Macmillan Co., NY. Small grain and flax seed count data and all seeding rate (pure-live-seed) information was obtained from either Cooperative Extension Service publications or from the Plant Science Department staff at SDSU.

Keep in mind that the seed count or number of seeds per pound for each crop is an average.

There are, for example, variations in wheat seed size depending on variety and year grown. In crops like sorghum or sorghum-sudan there may be large variations in seed size among hybrids. In large-seeded crops like soybean, hybrid corn, and sunflower, many seed companies report the number

of seeds per pound or seeds per unit on seed bags.

In the absence of actual seed counts, the table on the back of this sheet will prove useful for caluclating the amount of seed needed for planting.

The seeding rates are reported as a range of values. In some cases soil types, temperature, precipitation, and intended use of the crop can affect the seeding rate from one region to another.

The days to germination data were obtained under laboratory conditions. Therefore, these figures really indicate relative differences in germination under <u>ideal</u> conditions. Under field conditions the number of days to germination will likely be longer than indicated.

Type of growth indicates whether the crop is an annual (A), winter annual (W), biennial (B), or perennial (P).

CHARACTERISTICS AND SEEDING RATES OF

SOME CROPS GROWN IN SOUTH DAKOTA.

CROP-TYPE OF GROWTH	BUSHEL WEIGHT (LBS.)	SEED COUNT (NO./LB.)	DRILL SEEDING RATE (LBS./ACRE)	ROW SEEDING RATE (LBS./ACRE)	DAYS GERMI TION
ALFALFA-P* BARLEY-A BEAN, DRY(SMALL SEED)-A BEAN, DRY(LARGE SEED)-A BIRDSFOOT TREFOIL-P BLUEGRASS, KENTUCKY-P BROMEGRASS, SMOOTH-P BUCKWHEAT, COMMON-A BUCKWHEAT, TARTARY-A CHICKPEA-A	60 48 60 60 60 14 14 48 48	227,000 13,620 2,500 1,300 363,200 218,000 136,200 21,000 27,000 910	10-15 48-96 8-12 15-25 15-20 36-60 24	1-3 40 60-80	7 7 8 8 7 28 14 6 7
CLOVER, ALSIKE-P CLOVER, LADINO-P CLOVER, RED-P CLOVER, SWEET(WHITE)-A,B CLOVER, SWEET(YELLOW)-B CLOVER, WHITE-B CORN, FIELD-A CORN, POP-A CORN, SWEET-A CROWNVETCH-P	60 60 60 60 60 60 56 56 50	681,000 863,000 272,000 259,000 259,000 681,000 1,360 3,200 1,820 136,200	6-8 5-7 8-12 12-15 30-45 5-7	11-17 4-7 12-18	- 7 1C 7 7 1C 7 7 7
FESCUE, RED-P FIELD PEA (SMALL SEED)-A FIELD PEA (LARGE SEED)-A FLAX-A LUPIN, WHITE-A MANGEL-A MILLET, FOXTAIL-A MILLET, PEARL-A MILLET, PROSO-A MUSTARD, YELLOW-A	14-30 60 60 56 60 50 56 56 56	409,000 5,000 3,600 82,500 1,500 21,800 213,400 86,260 81,720 90,000	15-40 40-56 150 15 16-20 20 12	90-120 120-180 150 6-8 4-6	21 8 8 7 7 10 10 7 7
MUSTARD, BROWN, ORIENTA OATS, COMMON-A ORCHARDGRASS-P RAPE, OILSEED-A RAPE, TURNIP-B REED CANARYGRASS-P RYE, COMMON-WA RYEGRASS, PERENNIAL-P SAFFLOWER-A SORGHUM, GRAIN (MILO)-A	50 32 14 50 44-48 56 24 45 56	180,000 13,620 654,000 156,630 243,000 544,800 18,160 227,000 10,000 15,000	6 60-80 6-10 3-4 8-12 90-160 25-30 20-25	4-8 3-6	7 10 18 7 7 21 7 14 14
SORGHUM, SORGO-A SORGHUM-SUDAN, HYBRID-A SOYBEAN, SMALL SEED-A SOYBEAN, MEDIUM SEED-A SUDANGRASS-A SUNFLOWER-A SWITCHGRASS-P TIMOTHY-P TURNIP-B VETCH, COMMON-A	50 50 60 60 40 24 45 55 60	22,700 17,500 3,800 2,500 54,500 5,900 370,000 1,135,000 243,000 8,630	15-20 52-54 78-80 15-25 6-8 8-12 1-2 40-80	4-8 8-15 40-46 60-70 12-15 3-4	10 10 8 8 10 7 28 10 7
VETCH, HAIRY-A, WA WHEAT, COMMON-A, WA WHEAT, DURUM-A WHEATGRASS, CR. (FAIRWAY)-P WHEATGRASS, CR. (STANDARD)-P WHEATGRASS, INTERMEDIATE-P WHEATGRASS, WESTERN-P WILDRYE, CANADA-P WILDRYE, RUSSIAN-P	60 60 20-24 20-24 16-20 20-24 20-24	16,340 16,000 11,800 324,160 193,000 73,600 147,500 106,700 118,500 157,000	20-40 60-120 60-90 10-12 10-12 10-12 10-12 12-20 10-12 8-10		14 7 10 14 14 28 14 35 21

^{*}A=annual, B=biennial, P=perennial, and WA=winter annual plants

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