Yield Manitoba

A planning tool for Manitoba Farmers

2003

Compliments of Manitoba Crop Insurance Corporation, Manitoba Agriculture & Food, Manitoba Rural Adaptation Council and the Manitoba Co-operator

Climate maps & Statistics

MCIC Management Plus yield data

Yield robbers

Identifying and managing for the most common causes of yield loss in your region

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INDEX

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Management Plus

Information makes profit

The Manitoba Management Plus Program (MMPP) is pleased once again to provide Manitoba producers with it's annual risk area variety performance and acreage information for wheat, barley, oats, flax, argentine canola, and field peas.

The mutually beneficial partnering of the Manitoba Crop Insurance Corporation (MCIC) variety information with the Manitoba Agriculture and Food (MAF) map information has been continued. Please note that this information is provided for information purposes only, no recommendations are provided.

Publication and distribution of this information has been made possible through the sponsorship of the Manitoba Co-operator, Manitoba Crop Insurance Corporation and Manitoba Agriculture and Food (MAF).

The variety yield information listed in the following tables is a compilation of the actual on-farm yields reported to MCIC by producers in the respective risk areas. In order for a variety's information to be listed in a table the variety must have been sown by at least three producers on a minimum of 500 acres. Also please note that the reported yields have not been adjusted for quality. The tables show up to five years of data, so users can review variety performance under weather conditions that vary from year to year. A MCIC risk area map is provided on page 6 to assist with locating risk areas of interest.

The 2002 crop year was one of extremes and presented many challenges. Most of the crop was sown by the first week of June. Cool weather during May and early June slowed early crop growth and spring frosts damaged some early sown crops. Then, for the second year in a row, eastern Manitoba experienced excess moisture problems caused by late spring rains – although the area affected was smaller. Warmer than average temperatures started at the end of June and continued into July, which caused severe stress on some fields and accelerated crop development in other fields. Eventually cool wet weather arrived in August and in turn delayed maturity of some fields. Harvest generally began at the end of August but didn't proceed smoothly as it was often slowed by frequent heavy rains. The frequent rains at harvest were the main cause of grade reductions including sprouting, mildew and green seed issues. Additionally, early September hailstorms in the southern region of the province resulted in considerable late season losses. Crop diseases and insects generally kept a low profile this year. Significant harvest progress was made during the last two weeks of September and by snowfall in late October there was very little crop left in the field. Despite the year of extremes, crops did better than expected and Manitoba producers generally fared better than producers in Alberta and Saskatchewan. For example, 2002 yields in Manitoba were roughly 10 per cent above average for wheat, canola and peas, roughly 5 per cent above average for flax, and roughly 10 per cent below average for barley and oats.

Management and environmental influences have not been standardized in the variety yield tables so caution should be exercised when doing cross-variety comparisons, particularly when there is limited years of information. Cross variety comparisons are most meaningful between varieties grown on large acreage over many years.

To make the best variety selection for your farm it is highly recommended that you use the information provided in "Yield Manitoba" in conjunction with other variety information sources such as "Seed Manitoba". If you would like to see additional crop variety information, or have any questions on the MMPP in general, please contact your local MAF Representative or Farm Business Management Specialist.

You can also visit the MMPP internet web site at http:*//www.mmpp.com* or the MAF web site at *http://www.gov.mb.ca/agriculture*.

Yield Manitoba is published annually by the Manitoba Co-operator in conjunction with the Manitoba Rural Adaptation Council (MRAC), Manitoba Crop Insurance Corporation (MCIC) and Manitoba Agriculture and Food (MAF).

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MRAC Manitoba Rural Adaptation Council Inc.

RED SPRING WHEAT YIELDS BY VARIETY 1998—2002†							MANITOBA
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC BARRIE	40	39	42	31	1,850,229	38	1,428,512
AC DOMAIN	36	40	44	38	478,569	40	434,443
AC INTREPID	33	51	46	39	133,639	40	108,213
AC CADILLAC	38	38	42	32	157,458	34	98,042
AC MAJESTIC	41	42	43	32	135,167	38	84,752
AC CORA	35	32	41	32	117,810	35	82,489
CDC BOUNTY	—	—	—	40	6,501	38	76,944
CDC TEAL	33	37	39	35	111,656	39	66,566
MCKENZIE	47	45	43	33	61,569	39	47,790
AC SPLENDOR	41	47	49	41	55,229	39	41,650
AC SUPERB	—	—	—	39	1,492	47	27,630
ALSEN	—	—	—	—	—	46	27,015
PRODIGY	—	52	39	30	26,225	36	17,630
5600HR	—		45	35	16,055	35	16,706
AC ELSA	43	37	41	35	27,607	39	15,858
KATEPWA	35	36	33	26	11,183	29	6,345
5500HR	—	—	—	—	—	38	6,062
NO VAR	41	1	38	33	2,657	36	4,242
COLUMBUS	27	21	29	21	8,183	18	3,976
ROBLIN	29	34	31	29	5,636	32	3,859
SELKIRK	29	32	30	22	1,737	21	1,078
LAURA	31	—	—	—	—	25	1,071
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**38.3**	**2,604,451**

DURUM WHEAT YIELDS BY VARIETY 1998—2002†							MANITOBA
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
KYLE	33	32	35	27	15,666	27	14,532
AC AVONLEA	—	40	42	30	8,316	36	7,423
AC MORSE	37	37	43	37	4,975	40	6,220
AC NAPOLEON	—	—	—	—	—	38	1,069
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**32.4**	**29,821**

EXTRA STRONG WHEAT YIELDS BY VARIETY 1998—2002†							MANITOBA
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
LASER	44	48	49	46	9,574	32	5,998
GLENLEA	41	41	42	32	12,666	35	4,360
WILDCAT	40	44	48	41	2,471	29	2,168
AC GLENAVON	—	—	—	38	1,129	40	1,096
AMAZON	—	—	54	39	1,323	38	712
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**34.0**	**14,951**

PRAIRIE SPRING WHEAT YIELDS BY VARIETY 1998—2002†							MANITOBA
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC TABER	44	38	49	53	6,586	40	16,422
AC CRYSTAL	47	30	56	42	8,890	42	6,170
OSLO	55	52	54	62	1,350	48	1,642
HY644	—	—	—	—	—	58	1,341
AC VISTA	—	47	—	38	842	54	1,284
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**43.0**	**28,448**

FEED WHEAT YIELDS BY VARIETY 1998—2002†							MANITOBA
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC SNOWBIRD**	—	—	—	33	15,531	46	5,371
RUSS	49	—	—	50	2,874	50	4,218
PIONEER 2375	—	—	—	37	2,918	44	3,073
FJELD	—	39	43	29	2,906	22	1,703
FORGE	—	—	—	—	—	9	1,597
IVAN	—	—	—	—	—	55	1,511
GUNNER	—	—	—	17	986	30	1,318
GRANDIN	39	17	24	41	1,170	27	923
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**40.2**	**20,476**

WINTER WHEAT YIELDS BY VARIETY 1998—2002†							MANITOBA
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
CDC FALCON	—	—	70	61	13,514	58	80,884
CDC CLAIR	55	63	64	50	70,283	50	41,392
CDC HARRIER	—	55	66	51	48,353	46	29,603
CDC KESTRAL	47	61	60	44	36,873	47	18,861

WINTER WHEAT YIELDS BY VARIETY 1998—2002†							MANITOBA
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
CDC RAPTOR	—	—	—	—	—	56	2,950
NO VAR	—	4	53	40	1,258	22	1,119
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**52.8**	**174,824**

OAT YIELDS BY VARIETY 1998—2002†							MANITOBA
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC ASSINIBOIA	105	103	91	70	271,880	69	459,284
TRIPLE CROWN	96	92	92	62	197,830	63	199,291
AC PINNACLE	—	—	90	83	5,435	70	58,589
RIEL	86	91	83	53	44,933	60	43,770
ROBERT	71	64	65	54	29,823	41	23,506
AC RONALD	—	—	—	88	597	84	18,251
COMMON	53	54	57	47	8,901	49	14,982
DUMONT	52	38	50	45	10,750	30	11,180
AC PREAKNESS	77	68	72	60	9,506	42	10,580
JERRY	93	96	77	61	9,036	65	9,232
DERBY	66	65	80	63	6,714	46	6,727
CDC BOYER	77	71	77	58	4,510	44	6,639
AC MEDALLION	97	77	73	56	6,397	40	5,870
NO VAR	50	1	54	43	1,824	31	3,262
FORAGE	38	35	11	—	—	4	909
HARMON	50	31	42	37	527	22	884
FIDLER	61	70	62	46	549	39	557
AC BELMONT	—	—	—	—	—	27	510
ROYAL	—	—	—	—	—	33	500
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**64.7**	**878,487**

BARLEY* YIELDS BY VARIETY 1998—2002†							MANITOBA
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
ROBUST	60	56	62	51	316,205	50	264,205
AC METCALFE	64	51	64	50	113,523	51	156,569
CDC STRATUS	60	61	63	47	107,818	54	132,980
EXCEL	65	59	64	57	96,880	53	79,325
STANDER	62	70	58	46	22,075	51	23,855
CDC DOLLY	—	59	69	52	23,069	52	22,719
BEDFORD	59	60	62	50	27,757	56	22,686
AC LACOMBE	54	47	55	48	17,641	49	16,238
AC ROSSER	—	76	66	53	15,084	53	16,068
CDC BOLD	—	—	57	54	9,925	54	10,614
CONLON	—	—	—	—	—	62	8,780
STANDARD	58	73	52	36	5,290	53	8,437
B1602	57	60	62	57	10,517	64	7,126
AC OXBOW	50	45	49	49	9,561	40	6,958
CDC KENDALL	—	—	70	59	6,791	51	6,907
XENA	—	—	—	56	1,123	50	6,522
CDC SISLER	64	45	67	46	6,034	45	5,886
CDC MCGWIRE	—	—	—	—	—	48	4,987
HARRINGTON	50	44	53	53	5,775	56	4,627
CDC THOMPSON	—	—	60	40	9,612	57	3,703
VIRDEN	62	60	53	40	4,385	10	3,647
AC BACON	—	57	66	51	7,350	52	3,535
COMMON	42	47	42	37	2,948	34	3,419
CHAPAIS	—	—	—	70	1,040	42	3,407
CDC GAINER	—	56	59	38	11,549	45	3,337
VIVAR	—	—	—	—	—	66	2,717
FALCON	55	57	61	36	2,557	39	2,338
MERIT	—	—	75	74	1,830	40	2,150
CDC FREEDOM	—	—	59	35	9,295	25	2,026
NO VAR	10	1	51	40	1,507	26	2,007
MANLEY	43	34	50	23	1,224	50	1,670
SOMERVILLE	—	—	47	50	883	14	1,604
AC HARPER	—	—	—	59	1,443	60	1,441
AC RANGER	—	—	—	—	—	58	1,415
BRONCO	56	45	47	37	3,090	32	1,193
LACEY	—	—	—	—	—	61	950
ARGYLE	45	54	50	48	1,531	40	879
DUKE	64	59	—	—	—	44	703
WESTFORD	—	—	—	—	—	20	672
ELLICE	—	—	—	38	600	27	637
TANKARD	50	39	44	53	1,645	51	616
FOSTER	69	48	79	70	959	40	571

† Yields only for those varieties grown on more than 500 acres and by more than 2 growers

§ Weighted Average Yield and Total Acreage include acres not reported in the table

‡ On system as of January 10, 2002

** AC Snowbird is considered feed wheat for CI insurance purposes only

* Assuming 48 lbs./bu.

Management Plus

BARLEY* YIELDS BY VARIETY 1998—2002†							MANITOBA
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
BONANZA	37	47	39	—	—	15	511
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**51.1**	**855,746**

FLAX YIELDS BY VARIETY 1998—2002†							MANITOBA
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
CDC BETHUNE	—	—	21	18	85,605	22	139,897
TAURUS	—	—	21	20		20	51,023
AC EMERSON	21	22	16	16	43,725	20	36,844
1084	—	—	—	—	—	17	34,665
NORLIN	19	19	17	15	—	19	28,496
CDC NORMANDY	21	21	19	18	35,414	18	20,231
FLANDERS	21	19	19	19	28,562	18	18,279
AC MCDUFF	22	22	20	18	29,466	20	16,788
AC CARNDUFF	—	24	19	17	23,429	21	16,455
AC WATSON	22	21	18	18	12,715	21	12,010
2047	—	—	—	—	—	20	8,990
AC LINORA	21	24	19	16	12,777	18	8,688
SOMME	16	14	17	17	—	15	7,746
NORMAN	20	21	18	15	—	20	6,134
LINOTT	19	10	17	15	3,265	17	2,242
HALA	—	—	—	—	—	18	2,001
M5791	—	—	—	—	—	24	1,944
989	—	—	—	—	—	21	1,821
MCGREGOR	21	21	15	14	1,894	21	1,661
NO VAR	19	1	17	18	1,624	20	1,378
CDC VALOUR	—	—	—	15	887	17	1,334
OMEGA 18	22	19	—	—	—	18	985
VIMY	10		16	14	—	18	606
947	—	13	13	20	991	20	554
NO VAR (Yellow Seeded/Linola)	—	—	—	—	—	24	512
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**20.2**	**422,254**

ARGENTINE CANOLA YIELDS BY VARIETY 1998—2002†							MANITOBA
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
INVIGOR 2663 LT	—	—	—	31	123,865	35	214,309
45A77 ST	—	—	—	34	3,329	32	203,167
46A76 (ST)	—	45	32	29	282,090	31	200,735
45A55 (RT)	—	—	37	27	30,668	29	196,138
34-55 RT	—	—	29	29	203,638	31	189,860
INVIGOR 2573 LT	—	—	33	30	119,131	34	189,552
INVIGOR 2733 LT	—	—	—	24	3,206	34	129,531
INVIGOR 2273 (LT)	—	37	30	28	63,050	31	65,164
46A65	33	36	29	27	86,471	31	56,837
45H21 (RT)	—	—	—	—	—	33	46,929
HYOLA 401	34	37	28	27	37,681	30	44,883
NEX 720	—	—	—	23	3,525	31	43,664
INVIGOR 2153 (LT)	32	33	29	28	19,515	28	38,290
NEX 705	—	—	33	25	33,239	31	33,534
SW RAZOR (RT)	—	—	32	27	7,218	28	21,185
HYLITE 243CL (ST)	—	—	—	27	16,948	28	19,601
EBONY	32	35	31	28	21,504	34	17,330
CONQUEST (RT)	—	33	30	26	151,229	27	15,855
HYLITE 225RR RT	—	—	29	28	15,595	28	15,234
MILLENNIUM 03	—	—	26	23	25,914	26	14,964
5-25 RT	—	—	33	28	30,743	30	12,796
HYOLA 454RR (RT)	—	—	31	27	4,963	28	12,014
NEX 715	—	—	—	29	1,543	27	10,989
DKL 35-85 (RT)	—	—	—	—	—	34	10,062
3235 (RT)	—	—	—	—	—	28	9,603
799RR RT	—	—	—	28	1,782	31	8,673
45A51 (RT)	30	33	29	—	—	29	8,618
561RR RT	—	—	31	—	—	28	8,332
SW RIDER (RT)	—	35	25	30	9,053	30	7,962
45A71 (ST)	26	29	27	22	11,106	23	6,801
23-38 RT	—	—	—	—	—	29	6,728
3640 (LT)	—	39	—	29	1,265	31	5,815
811RR (RT)	—	—	—	—	—	28	5,465
SW ARROW (RT)	26	29	25	23	14,959	25	5,362
PGS 3640 (LT)	—	34	—	25	1,823	33	5,324
SW WARRIOR (RT)	—	—	—	—	—	28	5,122
SW GLADIATORR RT	—	—	—	—	—	31	4,569
NO VAR	27	0	24	28	5,925	23	4,449
SP ADMIRABLE RR RT	—	—	—	—	—	28	4,422

ARGENTINE CANOLA YIELDS BY VARIETY 1998—2002†							MANITOBA
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
45A54 RT	—	—	—	26	50,982	24	4,328
1812 RT	—	—	—	—	—	28	4,088
RR CHAMPION RT	—	—	—	21	5,793	28	3,938
46A55	15	35	29	28	2,459	30	3,937
CANTERRA 1867 RT	—	—	30	29	10,251	25	3,868
DS ROUGHRIDER RT	—	—	—	23	5,955	20	3,803
SW FLARE LL (LT)	—	—	—	30	1,869	25	3,610
AC EXCEL	22	22	20	16	6,478	16	3,422
DKL 3311	—	—	25	26	6,934	28	3,333
IMC 302	—	—	—	—	—	26	3,331
46A73 (ST)	35	34	28	28	7,745	25	3,260
SKYHAWK	—	—	31	26	2,941	27	3,035
NEX 500	—	36	29	24	5,86	24	2,589
EAGLE	27	29	26	25	2,606	30	2,578
Q 2	35	—	—	23	7,903	22	2,548
SP BANNER (RT)	—	—	—	—	—	34	2,545
3345 (RT)	—	—	—	—	—	36	2,475
45H20 RT	—	—	—	27	2,232	32	2,215
LG 3445	—	—	—	—	—	29	1,962
449RR RT	—	—	26	25	4,863	18	1,953
MILLENIUM 01	—	28	28	25	2,967	27	1,888
LBD 612RR (RT)	—	—	—	—	—	31	1,884
46A74 (ST)	35	31	31	24	4,298	17	1,870
KELSEY RT	—	—	—	25	10,320	26	1,813
INVIGOR 2763 (LT)	—	—	—	—	—	32	1,791
TRAILBLAZER	29	27	22	16	552	15	1,767
INVIGOR 2673 LT	—	—	30	29	4,578	37	1,740
2631LL (LT)	—	27	27	20	3,625	27	1,686
INNOVATOR (LT)	26	—	26	24	3,341	26	1,666
44A89	—	—	24	19	1,955	27	1,564
QUANTUM	27	31	—	22	5,034	23	1,384
EXCEED (LT)	28	27	22	21	3,241	30	1,280
INDEPENDENCE (LT)	25	26	27	21	3,149	23	1,240
SP BUCKY (RT)	—	—	—	—	—	24	1,196
499RR RT	—	—	—	—	—	35	1,181
1604 (ST)	—	—	—	—	—	33	1,041
279	—	—	—	24	690	31	1,035
1492	—	33	—	—	—	25	1,012
SP BOBCAT CL (ST)	—	—	—	—	—	22	1,001
INVIGOR 2163 (LT)	33	35	30	23	2,732	28	976
NEX 700	—	—	25	24	2,647	28	972
FOREMOST	—	—	22	13	507	31	948
THUNDER	—	—	—	—	—	9	935
HYOLA 440	—	—	—	—	—	32	854
QUEST (RT)	29	33		26	3,050	21	792
OAC DYNAMITE	30	30	25	19	3,989	25	784
INVIGOR 2473 (LT)	—	38	29	25	1,067	33	783
DKL 30-55 (RT)	—	—	—	—	—	32	757
IMC106RR RT	—	—	—	—	—	24	745
44A53 (RT)	—	—	—	22	1,776	23	727
BEACON	21	18	16	16	896	13	699
HYB XING BLCK FEMALE	—	—	—	—	—	23	673
JEWEL	29	26	29	21	2,875	32	666
HYLITE 215CL (ST)	—	—	—	24	851	23	660
CANTERRA 1849 RR (RT)	—	—	—	—	—	23	620
LG 3295 (RT)	—	30	—	22	1,062	23	590
289CL (ST)	—	—	—	—	—	40	580
NEX 710	—	—	33	25	11,232	19	566
HUDSON	—	—	25	22	2,051	26	501
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**31.2**	**2,017,602**

POLISH CANOLA YIELDS BY VARIETY 1998—2002†							MANITOBA
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
HYSYN 110	19	—	—	—	—	21	1,151
FAIRVIEW	19	14	—	—	—	20	578
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**52.8**	**174,824**

FIELD PEAS YIELDS BY VARIETY 1998—2002†							MANITOBA
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
ALFETTA	38	40	47	45	24,664	32	29,367
CROMA	36	42	38	36	12,683	26	26,789
DELTA	41	38	47	37	25,514	33	25,985
SWING	—	35	49	39	10,465	38	18,185

† Yields only for those varieties grown on more than 500 acres and by more than 2 growers

‡ On system as of January 10, 2002

* Assuming 48 lbs./bu.

§ Weighted Average Yield and Total Acreage include acres not reported in the table

** AC Snowbird is considered feed wheat for CI insurance purposes only

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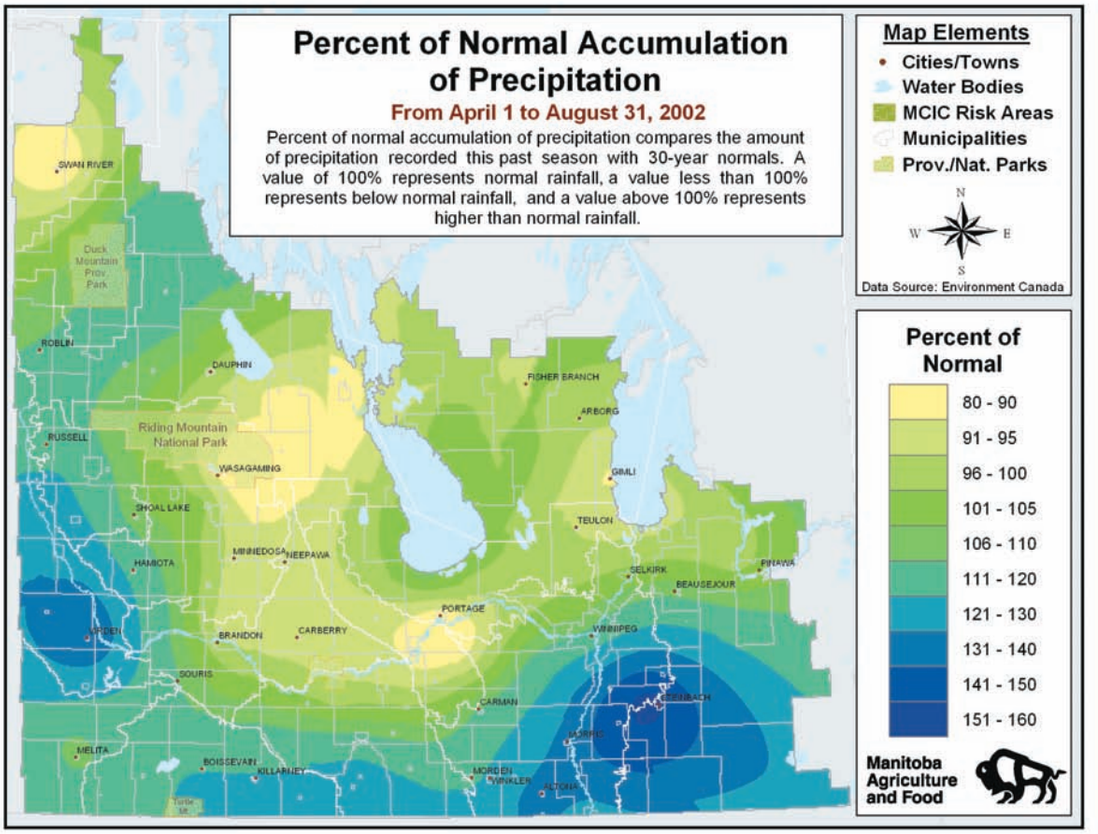


FIELD PEAS YIELDS BY VARIETY 1998—2002†							MANITOBA
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
MAJORET	35	37	42	34	9,440	35	13,561
EIFFEL	32	41	42	37	9,217	32	10,500
CDC MOZART	—	—	—	36	901	37	10,393
ECLIPSE	—	—	—	40	794	38	7,347
SCORPIO	30	21	42	47	5,664	26	3,496
SW BRAVO	—	50	38	33	4,840	35	3,047
CARNEVAL	32	35	37	30	6,036	30	2,680
TOLEDO	—	—	—	33	1,253	39	2,563
ESPACE	—	39	37	28	3,371	33	2,308
COBRA	—	—	48	40	1,144	30	1,650
CARRERA	31	39	37	37	2,414	27	1,467
DS STALWARTH	—	—	—	—	—	39	1,364
PROFI	30	31	33	26	3,263	27	1,204
4010	—	—	—	21	1,244	33	1,133
DS-ADMIRAL	—	—	—	—	—	36	1,122
MARCO	—	40	43	33	3,059	22	1,076
MILLENNIUM	—	—	—	37	510	46	1,076
NITOUCHE	—	—	—	35	829	43	993
CDC APRIL	—	—	—	—	—	20	785
PACKER	28	30	—	—	—	27	665
SWIFT	—	—	—	—	—	24	585
COURIER (MAPLE)	—	—	—	—	—	23	503
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**32.6**	**176,414**

RED SPRING WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 1
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC BARRIE	29	16	39	32	56,567	26	51,824
AC CORA	28	17	33	28	9,570	30	7,889
MCKENZIE	—	—	40	29	10,831	30	7,607
AC CADILLAC	—	—	42	29	6,391	29	6,654

RED SPRING WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 1
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
CDC BOUNTY	—	—	—	—	—	30	4,025
AC INTREPID	—	—	39	28	3,917	27	2,641
COLUMBUS	27	18	26	22	2,421	15	1,876
PRODIGY	—	—	35	28	6,412	26	1,773
AC DOMAIN	25	17	30	32	1,922	26	1,377
CDC TEAL	24	23	34	28	6,040	23	1,255
5600HR	—	—	—	31	1,243	23	650
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**26.6**	**88,959**

DURUM WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 1
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
KYLE	25	24	30	—	—	26	4,211
AC AVONLEA	—	—	38	22	5,898	21	1,445
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**25.2**	**6,291**

WINTER WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 1
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
CDC CLAIR	—	49	58	38	8,426	27	2,079
CDC FALCON	—	—	—	—	—	38	1,633
CDC HARRIER	—	—	—	42	5,888	36	921
CDC KESTRAL	34	43	57	35	4,466	25	900
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**31.5**	**5,686**

OAT YIELDS BY VARIETY 1998—2002†							RISK AREA 1
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC ASSINIBOIA	—	65	78	70	22,869	37	36,405

† Yields only for those varieties grown on more than 500 acres and by more than 2 growers
‡ On system as of January 10, 2002
* Assuming 48 lbs./bu.
§ Weighted Average Yield and Total Acreage include acres not reported in the table
** AC Snowbird is considered feed wheat for CI insurance purposes only

Management Plus

OAT YIELDS BY VARIETY 1998—2002†							RISK AREA 1
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC PREAKNESS	67	23	69	66	3,188	38	2,741
AC PINNACLE	—	—	—	—	—	42	2,678
DUMONT	50	22	46	50	2,252	27	2,393
TRIPLE CROWN	—	—	—	51	1,582	42	1,858
AC MEDALLION	49	—	70	49	2,154	19	1,657
CDC BOYER	68	—	82	48	872	48	1,360
ROBERT	54	17	40	29	1,190	10	1,340
COMMON	—	—	—	—	—	21	522
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**35.9**	**51,626**

BARLEY* YIELDS BY VARIETY 1998—2002†							RISK AREA 1
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC METCALFE	—	—	62	48	7,860	37	14,055
ROBUST	50	35	55	48	18,884	33	12,571
CDC STRATUS	—	—	53	57	6,388	42	5,517
CDC DOLLY	—	—	65	43	3,800	51	3,327
AC ROSSER	—	—	63	54	2,514	38	3,280
XENA	—	—	—	—	—	40	2,689
CDC SISLER	—	—	—	74	740	35	1,525
EXCEL	51	38	60	46	2,826	30	1,280
CDC KENDALL	—	—	—	—	—	38	1,034
ELLICE	—	—	—	—	—	25	587
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**36.7**	**48,361**

FLAX YIELDS BY VARIETY 1998—2002†							RISK AREA 1
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
TAURUS	—	—	—	19	3,257	15	7,306
1084	—	—	20	18	1,795	14	6,187
CDC BETHUNE	—	—	—	20	651	19	3,990
SOMME	12	9	18	16	4,876	12	3,186
CDC NORMANDY	—	11	19	17	3,761	11	2,469
AC WATSON	—	—	17	16	1,947	15	2,401
NORLIN	17	12	17	18	917	13	1,320
AC EMERSON	17	—	18	—	—	18	577
FLANDERS	19	—	17	—	—	18	517
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**14.4**	**29,403**

ARGENTINE CANOLA YIELDS BY VARIETY 1998—2002†							RISK AREA 1
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
46A76 (ST)	—	—	31	26	11,431	19	12,423
45A55 (RT)	—	—	—	—	—	21	7,644
45A77 ST	—	—	—	—	—	22	6,944
INVIGOR 2273 (LT)	—	26	31	26	3,711	20	5,457
INVIGOR 2573 LT	—	—	—	23	4,743	24	5,400
34-55 RT	—	—	28	24	3,665	21	3,152
INVIGOR 2663 LT	—	—	—	33	788	22	2,424
INVIGOR 2153 (LT)	26	21	29	21	1,411	19	2,018
NEX 705	—	—	—	22	1,025	19	1,922
SW RAZOR (RT)	—	—	—	—	—	20	1,290
NEX 720	—	—	—	—	—	16	1,289
45A51 (RT)	24	20	28	22	2,063	30	895
46A65	18	18	23	22	1,031	14	729
INVIGOR 2733 LT	—	—	—	—	—	24	576
EBONY	18	15	28	19	2,984	26	524
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**20.3**	**62,884**

FIELD PEAS YIELDS BY VARIETY 1998—2002†							RISK AREA 1
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
DELTA	—	—	—	36	3,957	28	5,703
ALFETTA	36	—	52	51	965	24	2,133
MAJORET	28	—	41	24	1,094	26	1,484
CROMA	—	—	—	—	—	18	1,203
CDC MOZART	—	—	—	—	—	30	933
COBRA	—	—	49	—	—	29	746
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**26.5**	**15,285**

RED SPRING WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 2
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC BARRIE	36	23	42	37	235,480	35	212,669
CDC BOUNTY	—	—	—	42	1,284	36	21,896

RED SPRING WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 2
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC DOMAIN	34	28	45	38	25,588	38	21,498
AC CORA	33	25	40	35	20,490	30	16,094
AC CADILLAC	—	37	43	33	38,793	27	12,884
5600HR	—	—	—	38	2,163	32	4,726
MCKENZIE	—	37	40	36	6,013	40	4,218
AC INTREPID	—	41	43	38	6,476	37	4,137
PRODIGY	—	—	38	28	6,220	29	3,349
AC SUPERB	—	—	—	—	—	41	2,952
ALSEN	—	—	—	—	—	42	2,432
AC MAJESTIC	33	22	42	36	3,263	40	2,074
AC ELSA	52	20	41	33	8,496	40	1,821
CDC TEAL	32	23	36	29	10,789	20	1,777
COLUMBUS	27	15	31	21	5,344	20	1,755
5500HR	—	—	—	—	—	27	894
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**34.8**	**315,906**

DURUM WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 2
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acre
KYLE	34	30	36	29	8,355	26	9,181
AC AVONLEA	—	38	41	30	5,389	38	4,520
AC NAPOLEON	—	—	—	—	—	41	759
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**29.8**	**14,941**

FEED WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 2
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC SNOWBIRD**				42	2,816	43	1,899
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**43.1**	**1,899**

WINTER WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 2
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
CDC HARRIER	—	—	65	56	19,273	48	4,675
CDC CLAIR	—	63	59	56	10,562	35	3,463
CDC FALCON	—	—	—	62	2,335	46	2,390
CDC KESTRAL	42	61	61	51	8,401	37	1,934
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**42.1**	**12,492**

OAT YIELDS BY VARIETY 1998—2002†							RISK AREA 2
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC ASSINIBOIA	—	72	95	84	12,685	51	25,729
AC PINNACLE	—	—	—	101	533	64	6,386
TRIPLE CROWN	91	53	91	74	6,104	42	5,470
DUMONT	56	25	56	35	1,193	19	1,064
COMMON		—	71	—	—	26	886
ROBERT	72	35	70	59	1,188	26	667
AC RONALD	—	—	—	—	—	78	657
NO VAR	—	1	—	—	—	32	537
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**50.0**	**42,559**

BARLEY* YIELDS BY VARIETY 1998—2002†							RISK AREA 2
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
ROBUST	59		60	59	37,823	39	28,450
CDC STRATUS	—	36	73	67	10,498	54	18,160
AC METCALFE	—	51	69	62	11,624	47	15,814
EXCEL	64	48	70	65	12,713	47	12,705
BEDFORD	61	41	66	60	1,972	44	1,784
CONLON	—	—	—		—	55	1,730
CDC BOLD	—	—	—	69	906	46	1,455
CDC DOLLY		—	—	—	—	42	1,152
STANDER	61	45	70	—	—	45	1,028
XENA	—	39	—	—	—	53	727
AC LACOMBE	50	46	61	55	1,089	40	527
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**45.6**	**87,381**

FLAX YIELDS BY VARIETY 1998—2002†							RISK AREA 2
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
TAURUS	—	—	19	20	6,424	18	13,447
CDC BETHUNE	—	—	22	22	11,207	19	11,849
1084	—	—	21	19	3,924	15	7,197

† Yields only for those varieties grown on more than 500 acres and by more than 2 growers

§ Weighted Average Yield and Total Acreage include acres not reported in the table

‡ On system as of January 10, 2002

** AC Snowbird is considered feed wheat for CI insurance purposes only

* Assuming 48 lbs./bu.

Management Plus

FLAX YIELDS BY VARIETY 1998—2002†							RISK AREA 2
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC EMERSON	21	17	21	22	3,979	16	6,345
FLANDERS	20	19	18	18	5,024	15	4,623
NORLIN	20	18	18	18	2,380	15	2,907
2047	—	—	—	—	—	16	1,864
CDC NORMANDY	22	19	21	21	8,562	12	1,811
AC CARNDUFF	—	—	20	20	4,326	16	1,704
AC LINORA	23	20	19	26	2,052	14	1,172
AC WATSON	—	19	19	19	825	20	820
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**16.9**	**55,365**

ARGENTINE CANOLA YIELDS BY VARIETY 1998—2002†							RISK AREA 2
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
INVIGOR 2663 LT	—	—	—	34	16,863	29	37,770
45A55 (RT)	—	—	—	31	911	24	35,112
45A77 ST	—	—	—	—	—	24	19,288
34-55 RT	—	—	33	31	24,739	25	17,546
46A76 (ST)	—	—	35	33	23,048	27	17,225
INVIGOR 2573 LT	—	—	36	31	8,491	31	15,870
INVIGOR 2273 (LT)	—	31	32	32	12,683	26	12,343
INVIGOR 2733 LT	—	—	—	—	—	27	7,383
NEX 720	—	—	—	—	—	26	6,082
SW RAZOR (RT)	—	—	—	27	876	23	5,230
INVIGOR 2153 (LT)	32	29	27	32	1,290	27	4,196
35-25 RT	—	—	35	30	9,534	27	3,871
NEX 705	—	—	—	30	4,284	29	3,273
HYLITE 225RR RT	—	—	—	—	—	22	3,233
SW FLARE LL (LT)	—	—	—	33	813	26	2,856
45H21 (RT)	—	—	—	—	—	28	2,834
SW GLADIATORR RT	—	—	—	—	—	27	2,229
SW WARRIOR (RT)	—	—	—	—	—	28	2,204
CONQUEST (RT)	—	—	31	25	22,988	18	2,036
1812 RT	—	—	—	—	—	31	2,005
46A65	32	31	31	31	6,989	16	1,837
EBONY	33	32	32	34	4,662	23	1,812
HYOLA 454RR (RT)	—	—	—	—	—	21	1,525
3640 (LT)	—	—	18	—	—	20	1,435
DKL 35-85 (RT)	—	—	—	—	—	28	1,430
449RR RT	—	—	—	—	—	17	1,307
NEX 500	—	—	—	—	—	29	1,305
MILLENNIUM 03	—	—	—	25	1,440	13	1,265
RR CHAMPION RT	—	—	—	35	1,433	25	1,265
46A73 (ST)	—	30	30	28	1,416	27	1,225
811RR (RT)	—	—	—	—	—	22	1,051
45A54 RT	—	—	—	31	6,888	19	1,024
46A55	—	—	—			31	855
561RR RT	—	—	—	30	1,235	23	695
HYLITE 243CL (ST)	—	—	—	—	—	16	685
799RR RT	—	—	—	—	—	24	609
NEX 700	—	—	31	—	—	22	594
CANTERRA 1867 RT	—	—	33	29	3,250	22	573
2631LL (LT)	—	—	—	29	560	27	523
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**25.9**	**231,945**

FIELD PEAS YIELDS BY VARIETY 1998—2002†							RISK AREA 2
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
ALFETTA	38	40	52	51	14,269	32	19,039
DELTA	—	35	49	42	8,267	30	9,771
CROMA	—	—	—	56	540	30	6,298
EIFFEL	32	35	48	49	2,998	29	4,217
ECLIPSE	—	—	—	43	568	35	4,195
SCORPIO	32	21	42	49	4,788	27	3,150
MAJORET	37	—	48	44	1,158	32	2,367
CDC MOZART	—	—	—	—	—	38	1,450
NITOUCHE	—	—	—	—	—	44	808
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**31.2**	**53,596**

RED SPRING WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 3
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC BARRIE	31	25	37	32	49,573	35	40,109
AC CADILLAC	—	36	36	31	11,870	32	11,039
CDC TEAL	30	33	39	31	16,104	36	7,720

RED SPRING WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 3
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC INTREPID	—	—	42	31	8,576	37	7,110
AC CORA	25	26	38	30	13,806	34	7,062
AC DOMAIN	25	23	38	32	6,163	37	6,644
CDC BOUNTY	—	—	—	—	—	37	5,108
MCKENZIE	—	—	40	30	6,626	37	3,776
AC MAJESTIC	—	—	38	31	2,307	28	1,851
5500HR	—	—	—	—	—	40	1,590
5600HR	—	—	—	26	892	33	1,335
ALSEN	—	—	—	—	—	40	832
AC ELSA	—	37	30	40	707	37	767
AC SPLENDOR	—	—	—	29	814	33	591
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**34.5**	**100,001**

EXTRA STRONG WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 3
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
GLENLEA	35	22	38	34	864	32	1,000
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**31.7**	**1,000**

WINTER WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 3
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
CDC HARRIER	—	—	—	46	6,134	36	6,543
CDC KESTRAL	36	49	53	34	6,694	35	1,972
CDC FALCON	—	—	—	—	—	30	1,616
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**35.2**	**10,501**

OAT YIELDS BY VARIETY 1998—2002†							RISK AREA 3
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
TRIPLE CROWN	88	60	79	61	10,011	47	16,176
AC ASSINIBOIA	—	71	73	61	4,682	45	7,902
AC PINNACLE	—	—	—	—	—	62	2,266
DUMONT	51	37	53	40	3,055	33	2,175
COMMON	35	54	49	33	1,217	38	1,773
CDC BOYER	79	71	80	57	1,085	38	1,374
AC MEDALLION	—	58	65	—	—	65	1,294
DERBY	96	63	107	45	903	45	746
ROBERT	54	35	53	53	500	43	677
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**45.5**	**35,991**

BARLEY* YIELDS BY VARIETY 1998—2002†							RISK AREA 3
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC METCALFE	—	—	59	46	15,716	45	17,659
ROBUST	49	48	58	40	12,933	43	10,453
CDC STRATUS	49	39	62	50	3,351	49	8,471
EXCEL	52	48	61	56	10,242	46	7,556
CDC DOLLY	—	—	61	45	4,595	48	4,953
AC ROSSER	—	—	56	54	1,624	47	2,155
AC LACOMBE	47	46	59	41	2,099	51	1,701
HARRINGTON	47	35	45	53	1,392	46	1,568
AC OXBOW	47	38	44	35	1,420	32	1,184
CDC KENDALL	—	—	—	51	660	48	834
CDC BOLD	—	—	—	—	—	52	642
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**45.5**	**60,123**

FLAX YIELDS BY VARIETY 1998—2002†							RISK AREA 3
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
1084	—	—	24	18	1,799	16	5,740
CDC BETHUNE	—	—	—	22	2,785	23	4,961
CDC NORMANDY	—	16	21	19	2,390	18	4,039
TAURUS	—	—	—	22	836	20	3,232
AC WATSON	—	19	18	18	2,533	24	1,594
NORLIN	14	12	15	15	2,319	18	1,427
SOMME	16	11	16	14	700	17	633
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**19.0**	**23,328**

ARGENTINE CANOLA YIELDS BY VARIETY 1998—2002†							RISK AREA 3
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
INVIGOR 2573 LT	—	—	—	26	6,410	31	10,439

† Yields only for those varieties grown on more than 500 acres and by more than 2 growers

‡ On system as of January 10, 2002

* Assuming 48 lbs./bu.

§ Weighted Average Yield and Total Acreage include acres not reported in the table

** AC Snowbird is considered feed wheat for CI insurance purposes only

Management Plus

ARGENTINE CANOLA YIELDS BY VARIETY 1998—2002†							RISK AREA 3
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
34-55 RT	—	—	—	25	6,583	30	8,367
45A55 (RT)	—	—	—	25	1,601	26	7,170
46A76 (ST)	—	—	34	26	7,878	28	6,795
45A77 ST	—	—	—	—	—	29	4,409
INVIGOR 2273 (LT)	—	32	32	23	1,888	32	3,113
DS ROUGHRIDER RT	—	—	—	24	2,393	16	2,979
INVIGOR 2153 (LT)	24	27	33	—	—	28	2,821
NEX 720	—	—		—	—	23	2,578
INVIGOR 2663 LT	—	—	—	27	1,831	30	2,105
INVIGOR 2733 LT	—	—	—	—	—	31	1,835
SW RAZOR (RT)	—	—	—	—	—	28	1,739
46A65	25	25	30	21	4,227	27	1,736
45H21 (RT)	—	—	—	—	—	39	1,695
CONQUEST (RT)	—	—	30	26	6,102	21	1,495
EBONY	23	25	32	27	721	31	1,153
PGS 3640 (LT)	—	—	34	—	—	31	1,079
AC EXCEL	20	—	—	14	904	14	902
45A71 (ST)	20	22	25	—	—	17	895
NEX 705	—	—	—	—	—	25	837
SKYHAWK	—	—	—	—	—	23	766
561RR RT	—	—	—	—	—	27	736
HYOLA 401	29	28	32	—	—	18	519
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**27.3**	**74,228**

FIELD PEAS YIELDS BY VARIETY 1998—2002†							RISK AREA 3
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
SWING	—	—	54	37	1,759	37	2,359
MAJORET	36	39	44	36	961	33	1,584
DELTA	—	—	48	34	1,560	35	1,229
EIFFEL	25	—	44	33	651	30	839
CARNEVAL	27	25	41	33	720	21	600
ECLIPSE	—	—	—	—	—	43	507
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**33.4**	**9,524**

RED SPRING WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 4
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC BARRIE	37	28	40	34	124,771	36	107,764
AC DOMAIN	36	33	42	36	29,519	36	21,847
AC CORA	36	30	42	33	20,859	35	15,269
MCKENZIE	—	—	43	34	9,072	39	9,364
AC CADILLAC	—	28	39	33	10,953	35	7,416
AC MAJESTIC	39	30	38	32	8,940	32	5,007
CDC BOUNTY	—	—	—	—	—	38	3,797
PRODIGY	—	—	—	31	1,750	36	2,571
CDC TEAL	31	32	38	32	4,383	38	1,990
AC INTREPID	—	—	39	31	3,779	30	944
KATEPWA	35	28	38	17	1,517	29	725
ALSEN	—	—	—	—	—	45	536
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**36.3**	**179,254**

DURUM WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 4
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC MORSE	—	38	42	38	2,808	41	4,119
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**41.5**	**4,716**

WINTER WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 4
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
CDC FALCON	—	—	—	48	649	47	6,894
CDC HARRIER	—	—	52	51	4,916	49	5,841
CDC CLAIR	—	60	61	49	6,116	48	1,713
CDC KESTRAL	49	41	56	49	2,129	51	770
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**47.6**	**15,378**

OAT YIELDS BY VARIETY 1998—2002†							RISK AREA 4
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC ASSINIBOIA	89	71	79	71	9,722	49	17,063
TRIPLE CROWN	76	58	80	63	11,558	43	10,380
AC PINNACLE	—	—	—	—	—	71	3,111

OAT YIELDS BY VARIETY 1998—2002†							RISK AREA 4
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
ROBERT	61	43	57	44	2,296	34	1,765
AC PREAKNESS	64	33	66	67	622	43	1,049
AC RONALD	—	—	—	—	—	62	879
DUMONT	54	32	58	—	—	27	819
COMMON	31	43	32	—	—	43	768
AC MEDALLION	96	54	77	54	957	44	759
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**47.0**	**37,784**

BARLEY* YIELDS BY VARIETY 1998—2002†							RISK AREA 4
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC METCALFE	—	31	64	51	20,771	49	22,334
CDC STRATUS	57	35	65	61	9,664	59	13,311
CONLON	—	—	—	—	—	54	2,535
EXCEL	58	50	63	57	1,690	39	1,955
AC LACOMBE	56	38	57	52	2,441	39	1,944
MERIT	—	—	75	73	1,395	53	1,344
BEDFORD	61	53	45	49	1,844	52	1,246
CDC KENDALL	—	—	—	—	—	45	858
CDC FREEDOM	—	—	—	37	995	6	809
AC ROSSER	—	—	57	49	824	53	701
B1602	—	—	—	64	1,035	79	541
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**50.2**	**75,676**

FLAX YIELDS BY VARIETY 1998—2002†							RISK AREA 4
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
CDC BETHUNE	—	—	—	21	7,876	22	14,386
1084	—	—	—	—	—	19	3,435
FLANDERS	17	14	18	20	2,833	16	2,705
TAURUS	—	—	—	20	2,096	21	2,698
AC MCDUFF	20	16	18	22	2,988	22	2,140
NORLIN	21	19	19	18	2,714	19	1,092
AC EMERSON	18	15	21	22	1,528	23	1,019
CDC NORMANDY	19	22	19	17	2,249	15	772
AC CARNDUFF	—	—	—	20	786	18	720
2047	—	—	—	—	—	30	711
AC WATSON	—	16	18	—	—	20	505
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**20.5**	**31,356**

ARGENTINE CANOLA YIELDS BY VARIETY 1998—2002†							RISK AREA 4
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
INVIGOR 2663 LT	—	—	—	30	12,333	31	20,339
INVIGOR 2573 LT	—	—	35	32	8,039	33	15,111
46A76 (ST)	—	—	34	29	14,183	28	9,290
45A77 ST	—	—	—	—	—	28	8,891
45A55 (RT)	—	—	—	27	572	29	8,821
34-55 RT	—	—	33	27	12,316	27	6,462
SW RAZOR (RT)	—	—	—	25	2,698	31	5,648
46A65	29	30	29	24	5,458	31	3,422
INVIGOR 2273 (LT)	—	34	31	27	8,709	35	2,809
INVIGOR 2733 LT	—	—	—	—	—	31	2,572
NEX 720	—	—	—	—	—	33	2,441
45H21 (RT)	—	—	—	—	—	38	1,679
INVIGOR 2153 (LT)	28	31	31	20	570	19	1,486
HYLITE 225RR RT	—	—	—	27	939	19	1,335
PGS 3640 (LT)	—	—	—	—	—	33	1,265
NEX 705	—	—	—	27	1,980	29	1,263
23-38 RT	—	—	—	—	—	26	1,168
CONQUEST (RT)	—	—	29	27	8,573	30	1,147
HYLITE 243CL (ST)	—	—	—	24	1,227	24	1,082
CANTERRA 1867 RT	—	—	—	27	816	20	834
45A51 (RT)	30	31	29	22	2,008	25	803
HYOLA 401	33	33	30	25	1,156	28	728
3235 (RT)	—	—	—	—	—	20	714
HYOLA 454RR (RT)	—	—	—	20	556	30	635
45H20 RT	—	—	—	—	—	33	619
799RR RT	—	—	—	—	—	27	579
MILLENNIUM 03	—	—	—	20	754	27	552
SP ADMIRABLE RR RT	—	—	—	—	—	24	540
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**29.6**	**111,413**

† Yields only for those varieties grown on more than 500 acres and by more than 2 growers

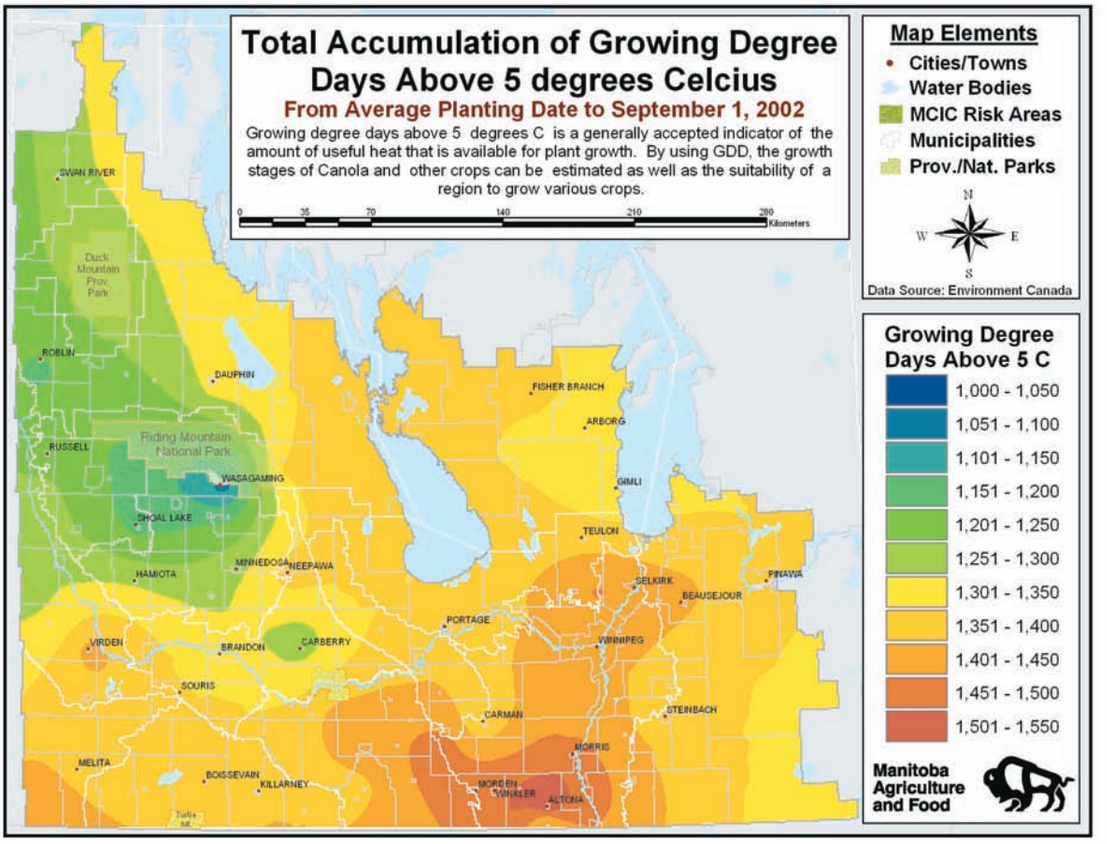
§ Weighted Average Yield and Total Acreage include acres not reported in the table

‡ On system as of January 10, 2002

** AC Snowbird is considered feed wheat for CI insurance purposes only

* Assuming 48 lbs./bu.

Management Plus



FIELD PEAS YIELDS BY VARIETY 1998—2002†							RISK AREA 4
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
CDC MOZART	—	—	—	—	—	41	3,044
ALFETTA	—	—	54	36	3,373	38	3,028
SWING	—	—	—	46	1,037	30	2,719
MAJORET	39	29	40	39	1,605	35	2,434
MARCO	—	—	42	32	1,442	21	950
DS STALWARTH	—	—	—	—	—	37	757
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**34.2**	**15,539**

RED SPRING WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 5
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC BARRIE	43	40	45	38	176,792	41	132,656
AC DOMAIN	40	42	47	40	79,986	43	78,560
AC CADILLAC	—	37	44	37	22,921	36	17,734
AC MAJESTIC	46	45	47	40	32,569	40	17,465
CDC BOUNTY	—	—	—	44	1,099	41	11,878
AC INTREPID	—	—	50	44	8,658	47	6,086
AC CORA	35	39	41	36	7,932	38	5,577
AC SUPERB	—	—	—	—	—	53	3,696
MCKENZIE	48	51	44	35	4,049	40	3,365
ALSEN	—	—	—	—	—	51	2,462
5600HR	—	—	—	40	3,238	34	1,183
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**41.2**	**282,915**

WINTER WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 5
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
CDC FALCON	—	—	—	63	1,457	64	8,916
CDC CLAIR	—	63	64	55	9,915	50	4,763
CDC HARRIER	—	—	68	55	4,621	57	2,435
CDC KESTRAL	51	68	67	54	3,254	57	1,471
CDC RAPTOR	—	—	—	—	—	56	1,138
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**58.2**	**18,869**

OAT YIELDS BY VARIETY 1998—2002†							RISK AREA 5
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC ASSINIBOIA	94	87	90	80	21,798	62	30,185
TRIPLE CROWN	95	97	95	78	6,797	69	7,820
AC PINNACLE	—	—	—	—	—	60	3,114
ROBERT	81	62	84	67	1,964	43	1,559
AC RONALD	—	—	—	—	—	90	1,308
RIEL	73	54	61	50	751	56	1,059
AC PREAKNESS	86	79	74	89	693	44	615
JERRY	94	89	96	71	945	64	606
COMMON	64	47	78	60	779	53	531
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**62.1**	**48,145**

BARLEY* YIELDS BY VARIETY 1998—2002†							RISK AREA 5
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
ROBUST	69	61	71	63	40,552	59	38,482
AC METCALFE	—	55	75	61	9,925	62	17,012
BEDFORD	68	64	69	64	12,087	64	9,125
EXCEL	77	66	74	68	8,432	64	7,564
CDC STRATUS	67	61	66	59	2,359	59	3,702
CDC BOLD	—	—	—	64	1,709	58	2,400
CONLON	—	—	—	—	—	78	2,289
AC BACON	—	—	81	63	3,362	57	2,119
STANDER	73	76	83	59	1,224	69	1,413
VIVAR	—	—	—	—	—	73	1,311
CDC MCGWIRE	—	—	—	—	—	58	917
CDC GAINER	—	—	54	43	915	32	727
NO VAR	—	1	—	—	—	10	666
AC LACOMBE	63	51	64	50	1,064	51	660
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**59.6**	**93,901**

† Yields only for those varieties grown on more than 500 acres and by more than 2 growers
‡ On system as of January 10, 2002
* Assuming 48 lbs./bu.
§ Weighted Average Yield and Total Acreage include acres not reported in the table
** AC Snowbird is considered feed wheat for CI insurance purposes only

Management Plus

ARGENTINE CANOLA YIELDS BY VARIETY 1998—2002†						RISK AREA 5	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
45A55 (RT)	—	—	37.7	32.3	8732	32.9	39212
34-55 RT	—	—	36.1	34.9	41049	34.4	38425
46A76 (ST)	—	47.8	37.4	36.6	26767	36.8	21750
45A77 ST	—	—	—	39.8	1333	34.0	20583
INVIGOR 2573 LT	—	—	36.2	35.7	11032	38.2	18324
INVIGOR 2663 LT	—	—	—	36.6	8859	38.5	16733
46A65	37.2	40.5	35.8	35.6	20316	37.3	11391
NEX 720	—	—	—	—	—	34.2	10818
INVIGOR 2733 LT	—	—	—	—	—	38.7	10155
45H21 (RT)	—	—	—	—	—	35.3	8677
INVIGOR 2273 (LT)	—	40.5	36.3	33.5	4547	37.9	4757
DKL 35-85 (RT)	—	—	—	—	—	39.9	3057
NEX 705	—	—	—	28.4	1987	30.1	2183
EBONY	41.9	43.0	36.6	42.5	2337	39.4	2127
CONQUEST(RT)	—	—	34.0	31.6	16679	28.8	1383
811RR (RT)	—	—	—	—	—	30.2	1371
46A55	—	—	—	—	—	34.1	1260
45A51 (RT)	38.2	37.9	33.4	28.8	7906	36.5	1250
799RR RT	—	—	—	—	—	31.4	1185
HYOLA 401	41.0	37.9	36.2	31.1	1516	30.0	970
45A54 RT	—	—	—	32.4	10816	24.1	794
3235 (RT)	—	40.0	33.3	29.1	4538	33.1	732
MILLENNIUM 03	—	—	—	33.1	950	21.0	610
DS ROUGHRIDER RT	—	—	—	—	—	29.9	612
HYLITE 225RR RT	—	—	—	—	—	33.9	570
HYLITE 243CL (ST)	—	—	—	—	—	24.6	583
35-25 RT	—	—	—	36.3	1691	32.2	568
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**35.0**	**229052**

† Yields only for those varieties grown on more than 500 acres and by more than 2 growers;
‡ On system as of January 10, 2002;
§ Weighted Average Yield and Total Acreage include acres not reported in the table.
* Assuming 48 lbs./bu.

Management Plus

FLAX YIELDS BY VARIETY 1998—2002†							RISK AREA 5
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
CDC BETHUNE	—	—	23	23	17,124	22	25,331
AC MCDUFF	24	23	22	22	10,006	20	6,682
AC EMERSON	21	23	17	22	5,820	21	4,829
TAURUS	—	—	—	23	631	20	2,675
AC LINORA	23	26	21	26	1,727	20	2,348
FLANDERS	21	23	20	21	5,968	20	2,228
2047	—	—	—	21	522	21	2,173
CDC NORMANDY	22	22	19	21	3,265	19	2,040
AC CARNDUFF	—	22	22	23	3,458	20	1,934
AC WATSON	—	23	25	24	1,445	25	1,027
NORMAN	21	23	18	20	1,488	19	895
NORLIN	22	23	19	21	2,647	22	500
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**20.8**	**53,719**

FIELD PEAS YIELDS BY VARIETY 1998—2002†							RISK AREA 5
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
CROMA	—	—	51	42	3,433	30	4,101
SW BRAVO	—	—	—	47	714	34	780
EIFFEL	—	53	45	28	990	37	677
COBRA	—	—	53	—	—	35	663
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**31.8**	**7,727**

RED SPRING WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 6
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC BARRIE	37	27	40	34	137,059	40	108,661
AC DOMAIN	35	31	40	34	39,062	39	42,922
AC MAJESTIC	37	24	39	34	30,853	36	29,282
AC CADILLAC	38	34	39	33	18,807	38	16,135
AC CORA	34	29	43	35	15,667	39	13,550
AC INTREPID	—	—	45	37	11,884	44	12,230
CDC TEAL	35	33	37	32	17,173	41	12,193
CDC BOUNTY	—	—	—	—	—	44	5,538
MCKENZIE	—	26	45	36	4,970	44	4,741
AC SUPERB	—	—	—	—	—	42	3,523
AC SPLENDOR	38	25	38	34	4,310	42	3,256
AC ELSA	—	33	44	38	1,488	42	2,281
PRODIGY	—	—	34	32	2,199	46	1,394
ALSEN	—	—	—	—	—	41	677
NO VAR	—	0	—	—	—	8	532
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**39.4**	**258,729**

DURUM WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 6
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC MORSE	—	—	47	42	1,225	54	616
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**50.7**	**877**

PRAIRIE SPRING WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 6
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC TABER (HY380)	47	29	46	40	1,943	41	4,272
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**43.7**	**5,689**

FEED WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 6
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
PIONEER 2375	49	—	45	33	1,145	41	1,923
RUSS	—	—	—	50	1,759	53	1,418
FJELD	—	39	42	—	—	30	1,138
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**42.0**	**4,717**

WINTER WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 6
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
CDC FALCON	—	—	—	—	—	56	7,871
CDC HARRIER	—	—	—	51	3,130	56	4,138
CDC CLAIR	—	65	59	50	5,181	55	2,208
CDC KESTRAL	42	54	57	50	3,454	48	1,138
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**54.9**	**15,969**

OAT YIELDS BY VARIETY 1998—2002†							RISK AREA 6
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
TRIPLE CROWN	90	67	89	83	18,556	72	28,509
AC ASSINIBOIA	103	77	94	90	3,656	72	9,191
AC PINNACLE	—	—	—	—	—	71	3,546
ROBERT	75	55	68	57	1,748	50	2,732
COMMON	—	54	58	33	714	55	1,298
HARMON	—	—	—	—	—	27	623
AC MEDALLION	104	—	71	—	—	46	616
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**68.4**	**48,386**

BARLEY* YIELDS BY VARIETY 1998—2002†							RISK AREA 6
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC METCALFE	62	36	59	51	14,950	56	22,431
ROBUST	64	46	58	48	35,357	54	21,942
CDC STRATUS	—	46	69	54	8,547	58	12,035
EXCEL	65	50	59	51	9,480	57	7,752
AC ROSSER	—	—	73	66	2,700	69	4,741
B1602	73	—	62	57	5,219	66	4,139
CDC KENDALL	—	—	—	59	4,464	56	3,873
CDC DOLLY		75	73	60	1,704	56	3,070
AC LACOMBE	64	44	54	46	1,818	50	2,081
CDC GAINER	—	—	60	51	2,231	58	1,159
AC OXBOW	58	38	53	33	672	38	1,003
HARRINGTON	51	44	60	51	1,075	56	770
CDC BOLD	—	—	—	56	1,719	71	667
COMMON	—	—	—	—	—	32	607
CONLON	—	—	—	—	—	65	515
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**56.3**	**92,360**

FLAX YIELDS BY VARIETY 1998—2002†							RISK AREA 6
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
CDC BETHUNE	—	—	—	21	9,701	23	21,698
CDC NORMANDY	22	16	19	20	4,024	20	5,252
AC CARNDUFF	—	—	—	22	2,796	23	5,230
NORLIN	22	16	18	19	6,827	23	4,487
TAURUS	—	—	—	23	1,374	24	4,110
1084	—	—	—	—	—	21	3,897
FLANDERS	22	14	18	21	7,278	19	2,802
AC MCDUFF	20	6	21	24	860	19	1,628
AC WATSON	—	—	16	22	1,401	21	1,351
989	—	—	—	—	—	28	773
SOMME	17	9	—	15	782	13	698
CDC VALOUR	—	—	—	15	887	19	676
M5791	—	—	—	—	—	22	562
AC EMERSON	20	15	17	15	1,045	14	550
AC LINORA	20	15	—	—	—	11	524
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**21.8**	**55,991**

ARGENTINE CANOLA YIELDS BY VARIETY 1998—2002†							RISK AREA 6
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
46A76 (ST)	—	—	34	30	37,614	32	36,668
INVIGOR 2663 LT	—	—	—	30	20,763	36	36,137
45A77 ST	—	—	—	—	—	33	19,012
34-55 RT	—	—	33	29	15,826	34	17,060
INVIGOR 2573 LT	—	—	35	32	8,244	30	15,492
INVIGOR 2733 LT	—	—	—	—	—	35	10,189
45A55 (RT)	—	—	—	18	1,691	31	8,244
HYLITE 243CL (ST)	—	—	—	24	2,248	27	5,124
HYOLA 401	33	27	31	28	2,640	30	4,894
INVIGOR 2273 (LT)	—	29	31	27	9,208	33	3,885
46A65	32	29	30	24	5,839	30	3,633
35-25 RT	—	—	34	26	4,720	32	3,189
NEX 705	—	—	36	26	3,850	29	3,144
45A71 (ST)	28	27	26	21	2,580	30	2,494
NEX 715	—	—	—	—	—	30	2,394
HYLITE 225RR RT	—	—	—	25	3,922	31	2,252
3235 (RT)	—	—	—	—	—	31	1,830
23-38 RT	—	—	—	—	—	30	1,798
SW RAZOR (RT)	—	—	23	28	793	38	1,572
INVIGOR 2153 (LT)	33	27	29	20	528	33	1,541
MILLENNIUM 03	—	—	—	23	3,477	28	1,317
45H21 (RT)	—	—	—	—	—	36	1,218

† Yields only for those varieties grown on more than 500 acres and by more than 2 growers

‡ On system as of January 10, 2002

* Assuming 48 lbs./bu.

§ Weighted Average Yield and Total Acreage include acres not reported in the table

** AC Snowbird is considered feed wheat for CI insurance purposes only

ARGENTINE CANOLA YIELDS BY VARIETY 1998—2002†							RISK AREA 6
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
IMC 302	—	—	—	—	—	25	1,215
HYOLA 454RR (RT)	—	—	—	29	690	31	1,163
561RR RT	—	—	—	—	—	38	1,157
SP ADMIRABLE RR RT	—	—	—	—	—	31	1,134
SW WARRIOR (RT)	—	—	—	—	—	32	1,119
AC EXCEL	20	7	—	—	—	17	1,080
DKL 35-85 (RT)	—	—	—	—	—	41	1,075
799RR RT	—	—	—	—	—	35	948
LG 3445	—	—	—	—	—	38	848
45A54 RT	—	—		24	7,081	26	775
SW ARROW (RT)	28	24	27	21	5,187	32	773
CONQUEST (RT)	—	—	—	25	11,846	28	733
SP BANNER (RT)	—	—	—	—		38	597
BEACON	23	16	17	14	754	12	591
NEX 720	—	—	—	—	—	38	565
NO VAR	—	0	—	—	—	31	505
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**32.5**	**207,302**

FIELD PEAS YIELDS BY VARIETY 1998—2002†							RISK AREA 6
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
SWING	—	42	47	38	3,731	41	7,716
EIFFEL	37	31	45	34	1,448	37	3,727
CDC MOZART	—	—	—	—	—	43	2,525
DELTA	—	43	44	35	3,387	40	2,289
ALFETTA	—	—	—	39	1,679	34	2,209
MAJORET	39	31	43	31	1,683	40	1,908
CROMA	—	—	—	48	747	48	923
TOLEDO	—	—	—	29	538	38	865
ECLIPSE	—	—	—	—	—	45	776
CARRERA	32	37	31	39	1,102	39	600
ESPACE	—	—	—	—	—	36	505
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**39.6**	**25,314**

RED SPRING WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 7
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC BARRIE	36	37	39	38	49,702	42	46,403
AC DOMAIN	33	37	39	40	26,273	42	27,637
CDC TEAL	35	41	40	39	22,135	42	14,127
AC INTREPID	—	—	45	40	12,292	44	12,146
AC CADILLAC	—	41	39	36	3,782	36	3,042
AC ELSA	44	42	40	35	3,585	32	2,581
AC SPLENDOR	36	42	39	35	1,384	37	2,530
CDC BOUNTY	—	—	—	—	—	42	2,072
MCKENZIE	—	25	36	34	2,171	40	1,837
AC SUPERB	—	—	—	—	—	56	1,247
5500HR	—	—	—	—	—	45	1,006
AC MAJESTIC	—	—	42	—	—	47	540
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**41.7**	**117,181**

PRAIRIE SPRING WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 7
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC CRYSTAL	56	28	59	—	—	43	898
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**46.1**	**1,243**

WINTER WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 7
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
CDC FALCON	—	—	—	63	784	63	5,045
CDC CLAIR	—	67	63	60	2,627	56	1,660
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**60.4**	**7,120**

OAT YIELDS BY VARIETY 1998—2002†							RISK AREA 7
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
TRIPLE CROWN	—	77	82	81	4,519	78	9,485
AC ASSINIBOIA	90	95	84	88	1,642	61	3,315
AC PINNACLE	—	—	—	—	—	78	2,516
CDC BOYER	—	81	88	76	1,350	74	1,664
DERBY	63	48	75	—	—	61	1,365
COMMON	—	52	70	71	784	45	1,077
DUMONT	58	—	50	61	750	60	1,047
ROBERT	72	62	79	63	1,192	55	799
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**69.9**	**21,959**

BARLEY* YIELDS BY VARIETY 1998—2002†							RISK AREA 7
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC METCALFE	—	51	56	58	7,052	56	12,724
EXCEL	66	59	64	59	20,485	61	12,064
CDC DOLLY	—	53	63	58	5,420	55	5,212
CDC STRATUS	56	44	—	54	858	58	4,880
ROBUST	54	58	60	59	4,148	57	4,298
HARRINGTON	58	46	61	58	2,352	62	2,088
AC LACOMBE	61	57	54	54	2,423	47	2,022
CDC BOLD	—	—	—	66	707	58	1,227
AC OXBOW	59	40	49	52	1,906	46	1,216
AC ROSSER	—	—	—	61	698	23	779
AC RANGER	—	—	—	—	—	66	741
CDC SISLER	—	—	—	—	—	57	525
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**56.6**	**50,021**

FLAX YIELDS BY VARIETY 1998—2002†							RISK AREA 7
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
TAURUS	—	—	—	27	545	27	2,296
1084	—	—	—	—	—	24	2,116
CDC BETHUNE	—	—	—	25	868	27	2,021
AC CARNDUFF	—	—	—	—	—	17	1,738
SOMME	17	20	20	—	—	20	1,309
M5791	—	—	—	—	—	25	1,238
NORLIN	19	17	16	23	2,135	19	909
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**23.0**	**13,020**

ARGENTINE CANOLA YIELDS BY VARIETY 1998—2002†							RISK AREA 7
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
46A76 (ST)	—	—	32	30	20,808	36	22,653
45A77 ST	—	—	—	—	—	33	10,424
45A55 (RT)	—	—	—	27	4,180	33	10,139
34-55 RT	—	—	—	30	7,784	34	7,341
INVIGOR 2733 LT	—	—	—	—	—	38	4,432
INVIGOR 2663 LT	—	—	—	33	2,767	39	3,585
INVIGOR 2573 LT	—	—	—	33	2,319	39	3,530
NEX 705	—	—	—	28	1,410	35	2,743
45H21 (RT)	—	—	—	—	—	37	2,681
INVIGOR 2273 (LT)	—	37	31	28	1,220	36	2,628
MILLENNIUM 03	—	—	28	24	2,288	35	2,465
35-25 RT	—	—	—	25	3,630	31	2,201
46A65	31	33	34	26	2,085	32	1,632
561RR RT	—	—	—	—	—	30	1,629
HYLITE 243CL (ST)	—	—	—	31	1,077	31	1,381
NEX 715	—	—	—	—	—	36	1,342
INVIGOR 2153 (LT)	32	35	—	24	750	26	1,338
EBONY	26	27	32	22	1,296	34	1,325
CONQUEST (RT)	—	—	31	24	6,861	35	938
3235 (RT)	—	—	—	—	—	27	879
SW ARROW (RT)	28	30	30	28	1,503	32	656
DKL 3311	—	—	31	—	—	23	629
DKL 35-85 (RT)	—	—	—	—	—	32	598
RR CHAMPION RT	—	—	—	—	—	27	563
46A73 (ST)	—	32	33	26	810	28	535
HYOLA 454RR (RT)	—	—	—	—	—	35	526
HYLITE 225RR RT	—	—	—	—	—	32	507
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**34.3**	**93,265**

FIELD PEAS YIELDS BY VARIETY 1998—2002†							RISK AREA 7
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
SWING	—	29	46	37	2,510	40	4,288
MAJORET	39	39	39	34	2,302	41	2,617
CROMA	—	—	—	44	945	22	2,017
DELTA	—	32	43	37	2,150	40	1,819
TOLEDO	—	—	—	—	—	41	1,528
CDC MOZART	—	—	—	—	—	41	779
ECLIPSE	—	—	—	—	—	46	769
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**37.0**	**16,668**

RED SPRING WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 8
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC DOMAIN	36	49	50	43	79,780	35	73,051
AC SPLENDOR	43	52	51	44	31,793	41	23,731
AC INTREPID	—	—	52	46	18,618	38	21,409
AC BARRIE	40	48	44	43	15,466	31	10,304

† Yields only for those varieties grown on more than 500 acres and by more than 2 growers

‡ On system as of January 10, 2002

* Assuming 48 lbs./bu.

§ Weighted Average Yield and Total Acreage include acres not reported in the table

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RED SPRING WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 8
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
CDC TEAL	36	45	46	41	9,507	36	9,305
CDC BOUNTY	—	—	—	—	—	32	2,806
KATEPWA	26	37	35	33	3,568	31	2,063
MCKENZIE	—	54	52	44	3,182	42	1,496
PRODIGY	—	—	—	25	1,395	41	1,371
AC SUPERB	—	—	—	—	—	43	1,157
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**36.3**	**148,023**

EXTRA STRONG WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 8
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
LASER	—	55	53	49	5,526	31	5,108
WILDCAT	45	50	51	40	1,897	27	1,735
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**29.8**	**7,345**

PRAIRIE SPRING WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 8
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC TABER	51	64	62	62	3,492	38	10,851
AC CRYSTAL	52	61	62	54	3,198	41	3,807
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**38.8**	**14,808**

WINTER WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 8
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
CDC HARRIER	—	—	—	46	637	40	1,683
CDC FALCON	—	—	—	—	—	45	1,328
CDC KESTRAL	18	61	67	—	—	43	1,006
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**42.4**	**4,387**

OAT YIELDS BY VARIETY 1998—2002†							RISK AREA 8
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
TRIPLE CROWN	—	—	81	87	2,924	35	6,589
DUMONT	41	62	57	42	1,193	23	1,784
CDC BOYER	—	86	76	32	609	22	1,514
AC ASSINIBOIA	—	91	89	79	2,176	49	1,369
ROBERT	52	72	69	30	1,065	21	848
AC PREAKNESS	73	71	71	82	574	23	735
RIEL	41	63	81	70	610	42	718
DERBY	59	62	67	71	562	30	672
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**32.9**	**15,355**

BARLEY* YIELDS BY VARIETY 1998—2002†							RISK AREA 8
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
ROBUST	50	69	73	66	10,960	44	12,729
CDC BOLD	—	—	—	79	685	51	2,767
EXCEL	59	79	74	67	2,768	46	1,757
AC LACOMBE	36	66	56	51	880	39	1,412
STANDER	52	65	59	66	712	40	1,316
AC METCALFE	—	—	—	—	—	46	1,181
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**43.9**	**23,270**

FLAX YIELDS BY VARIETY 1998—2002†							RISK AREA 8
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
CDC BETHUNE	—	—	—	33	627	16	1,116
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**15.8**	**1,513**

ARGENTINE CANOLA YIELDS BY VARIETY 1998—2002†							RISK AREA 8
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
INVIGOR 2573 LT	—	—	41	36	11,852	34	20,677
INVIGOR 2733 LT	—	—	—	—	—	33	16,048
45A55 (RT)	—	—	—	—	—	27	16,043
46A76 (ST)	—	—	36	33	29,419	30	14,688
45A77 ST	—	—	—	—	—	34	14,029
HYOLA 401	30	38	39	34	8,707	27	5,951
34-55 RT	—	—	41	34	7,949	31	5,519
45H21 (RT)	—	—	—	—	—	33	3,661
CONQUEST (RT)	—	—	35	34	17,886	33	2,982

ARGENTINE CANOLA YIELDS BY VARIETY 1998—2002†							RISK AREA 8
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
INVIGOR 2153 (LT)	26	32	31	24	2,919	26	1,820
INVIGOR 2273 (LT)	—	37	36	37	1,904	32	1,777
SW RIDER (RT)	—	—	36	35	3,596	28	1,732
HYOLA 454RR (RT)	—	—	34	36	559	27	1,644
3235 (RT)	—	—	—	—	—	27	1,638
HYLITE 243CL (ST)	—	—	—	30	3,493	33	1,334
23-38 RT	—	—	—	—	—	24	1,240
HYLITE 225RR RT	—	—	—	29	1,824	31	1,038
CANTERRA 1867 RT	—	—	—	33	2,101	27	948
SW RAZOR (RT)	—	—	—	—	—	31	634
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**30.7**	**120,951**

FIELD PEAS YIELDS BY VARIETY 1998—2002†							RISK AREA 8
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
CROMA	—	—	52	45	1,432	9	2,408
CDC MOZART	—	—	—	—	—	8	953
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**10.1**	**4,209**

RED SPRING WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 9
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC DOMAIN	33	40	41	38	100,877	41	87,787
AC BARRIE	39	39	41	34	89,985	38	67,954
AC INTREPID	—	53	44	41	43,682	40	35,968
CDC TEAL	33	41	40	39	20,382	42	16,213
CDC BOUNTY	—	—	—	46	868	40	12,161
AC SPLENDOR	41	53	48	37	12,891	33	7,867
AC ELSA	37	44	43	37	10,134	40	7,494
AC CADILLAC	—	46	47	41	9,396	41	5,432
PRODIGY	—	—	—	40	3,023	41	5,190
600HR	—	—	—	38	615	37	2,350
ALSEN	—	—	—	—	—	45	1,598
AC SUPERB	—	—	—	—	—	46	1,403
AC CORA	44	21	41	—	—	32	1,197
NO VAR	—	2	—	—	—	39	1,007
5500HR	—	—	—	—	—	39	790
KATEPWA	34	30	39	32	641	31	640
MCKENZIE	—	50	40	42	1,225	44	620
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**39.7**	**256,635**

DURUM WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 9
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
KYLE	44	44	—	—	—	44	1,140
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**44.9**	**1,140**

EXTRA STRONG WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 9
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
GLENLEA	39	43	43	41	3,379	40	1,493
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**43.7**	**2,612**

PRAIRIE SPRING WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 9
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
OSLO	60	72	55	63	1,235	48	1,642
AC VISTA	—	—	—	—	—	57	1,132
AC TABER	50	52	52	50	954	47	954
AC CRYSTAL	50	37	48	34	672	45	540
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**50**	**4,442**

WINTER WHEAT YIELDS BY VARIETY 1998—2002†							RISK AREA 9
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
CDC FALCON	—	—	—	—	—	46	3,373
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**41.8**	**4,550**

OATS YIELDS BY VARIETY 1998—2002†							RISK AREA 9
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
TRIPLE CROWN	92	99	87	78	19,740	50	36,945

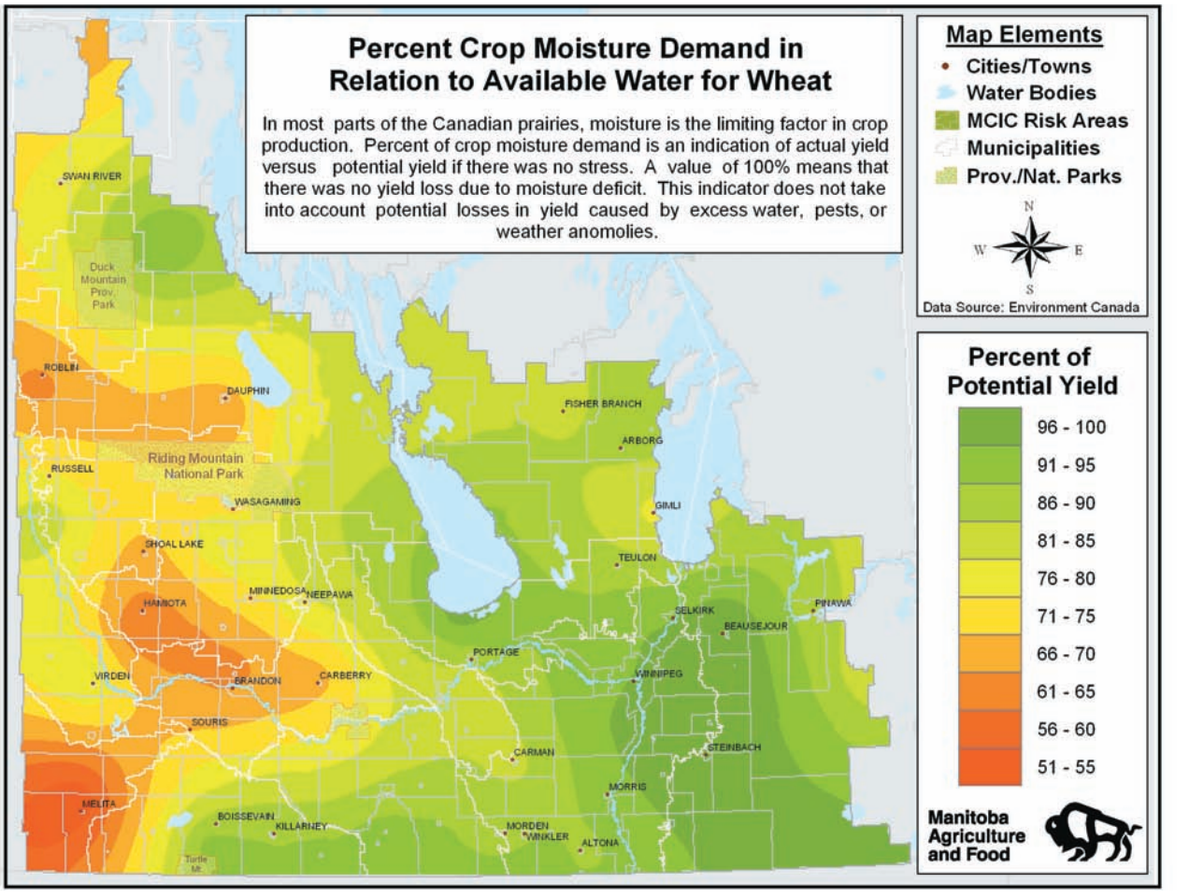
† Yields only for those varieties grown on more than 500 acres and by more than 2 growers

§ Weighted Average Yield and Total Acreage include acres not reported in the table

‡ On system as of January 10, 2002

** AC Snowbird is considered feed wheat for CI insurance purposes only

* Assuming 48 lbs./bu.



OAT YIELDS BY VARIETY 1998—2002†							RISK AREA 9
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC ASSINIBOIA	94	87	87	78	9,771	60	15,626
ROBERT	70	75	67	58	8,396	39	6,307
DERBY	65	72	73	67	3,927	44	3,843
COMMON	55	69	62	50	2,481	39	3,053
AC PINNACLE	—	—	—	—	—	70	2,321
AC PREAKNESS	77	93	75	53	1,357	51	1,598
AC RONALD	—	—	—	—	—	61	1,093
NO VAR	—	5	—	—	—	49	843
RIEL	61	53	84	—	—	20	777
JERRY	59	65	75	—	—	19	665
DUMONT	58	53	49	50	575	26	547
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**50.4**	**74,778**

FLAX YIELDS BY VARIETY 1998—2002†							RISK AREA 9
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
CDC BETHUNE	—	—	—	20	1,029	23	6,135
TAURUS	—	—	27	25	3,209	22	3,037
LINOTT	20	10	17	15	3,025	17	2,096
1084	—	—	—	—	—	17	1,839
AC EMERSON	20	18	20	21	3,262	18	1,785
CDC NORMANDY	21	21	19	20	4,612	18	1,284
SOMME	20	17	16	20	2,210	22	1,137
HALA	—	—	—	—	—	20	747
AC WATSON	—	21	20	—	—	22	673
NORMAN	18	15	16	19	679	17	643
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**19.8**	**21,550**

BARLEY* YIELDS BY VARIETY 1998—2002†							RISK AREA 9
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
ROBUST	60	60	66	58	32,935	47	29,930
EXCEL	65	68	66	61	14,700	57	12,531
CDC STRATUS	—	49	60	67	3,677	63	8,525
AC METCALFE	—	—	69	66	4,459	61	7,596
STANDER	59	62	67	61	5,158	51	6,007
VIRDEN	67	61	69	45	3,518	8	2,996
AC OXBOW	55	62	47	57	4,243	40	2,920
AC LACOMBE	50	55	57	64	2,230	56	2,748
STANDARD	—	61	64	57	1,257	59	2,330
CHAPAIS	—	—	—	—	—	57	1,740
CDC DOLLY	—	—	—	69	1,122	46	1,599
B1602	65	53	63	60	2,690	55	1,157
BEDFORD	47	45	59	43	1,346	36	1,041
AC ROSSER	—	—	—	59	565	49	748
CDC BOLD	—	—	—	49	1,147	59	738
SOMERVILLE	—	—	—	—	—	9	657
COMMON	—	—	—	48	520	23	504
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**50.5**	**87,821**

ARGENTINE CANOLA YIELDS BY VARIETY 1998—2002†							RISK AREA 9
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
INVIGOR 2573 LT	—	—	35	32	22,159	33	30,404
INVIGOR 2733 LT	—	—				33	22,736
34-55 RT	—	—	33	30	13,988	30	22,382
46A76 (ST)	—	—	35	29	28,244	31	17,045
45A55 (RT)	—	—	—	25	1,764	28	16,474
45A77 ST	—	—	—	—	—	30	13,950
INVIGOR 2153 (LT)	28	33	29	27	5,117	29	10,609
INVIGOR 2273 (LT)	—	35	31	31	4,389	29	8,675
46A65	25	34	30	31	5,937	28	7,137
INVIGOR 2663 LT	—	—	—	36	10,837	39	6,874
SW RIDER (RT)	—	—	—	30	1,908	30	4,019
EBONY	26	40	33	35	2,823	36	3,891
HYOLA 401	29	34	30	32	4,620	27	3,873
45H21 (RT)	—	—	—	—	—	30	3,657
SW RAZOR (RT)	—	—	—	—	—	28	3,499
NEX 715	—	—	—	—	—	25	3,355
NEX 705	—	—	—	29	2,741	24	2,843

† Yields only for those varieties grown on more than 500 acres and by more than 2 growers
‡ On system as of January 10, 2002
* Assuming 48 lbs./bu.
§ Weighted Average Yield and Total Acreage include acres not reported in the table
** AC Snowbird is considered feed wheat for CI insurance purposes only

Management Plus

ARGENTINE CANOLA YIELDS BY VARIETY 1998—2002†						RISK AREA 9	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
MILLENNIUM 03	—	—	—	25	5,008	24	2,748
HYLITE 243CL (ST)	—	—	—	30	3,272	28	2,444
NO VAR	—	0	—	27	1,831	24	2,110
799RR RT	—	—	—	—	—	29	1,554
PGS 3640 (LT)	—	—	—	—	—	35	1,360
CONQUEST (RT)	—	—	30	29	14,660	28	1,140
HYOLA 454RR (RT)	—	—	32	31	1,733	30	1,139
CANTERRA 1867 RT	—	—	30	29	1,645	29	1,130
561RR RT	—	—	—	—	—	20	996
Q 2	—	—	28	—	—	30	791
1812 RT	—	—	—	—	—	32	728
45H20 RT	—	—	—	—	—	30	691
QUANTUM	21	29	26	21	788	22	685
3235 (RT)	—	—	—	—	—	26	671
3345 (RT)	—	—	—	—	—	35	616
JEWEL	26	25	37	—	—	32	516
45A51 (RT)	31	30	30	27	7,743	24	507
EAGLE	20	31	25	28	877	36	505
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**30.5**	**214,455**

FIELD PEAS YIELDS BY VARIETY 1998—2002†						RISK AREA 9	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
DELTA	—	45	54	41	2,377	38	2,545
CROMA	—	—	—	—	—	34	1,379
COURIER (MAPLE)	—	—	—	—	—	23	503
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**33**	**7,622**

RED SPRING WHEAT YIELDS BY VARIETY 1998—2002†						RISK AREA 10	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC BARRIE	41	38	46	28	48,876	40	37,713
AC MAJESTIC	39	26	40	25	2,765	35	2,380
AC CORA	36	27	41	28	5,962	35	2,290
AC DOMAIN	35	34	40	23	2,300	30	1,977
ALSEN	—	—	—	—	—	44	860
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**38.7**	**46,805**

WINTER WHEAT YIELDS BY VARIETY 1998—2002†						RISK AREA 10	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
CDC FALCON	—	—	—	66	5,463	48	5,702
CDC CLAIR	—	60	56	38	4,874	38	1,735
CDC HARRIER	—	—	—	37	1,149	43	735
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**44.8**	**9,002**

OAT YIELDS BY VARIETY 1998—2002†						RISK AREA 10	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC ASSINIBOIA	96	84	83	60	16,072	70	25,031
AC PINNACLE	—	—	—	102	530	74	7,050
TRIPLE CROWN	91	95	86	53	8,534	58	6,646
RIEL	87	62	87	53	5,228	82	3,686
JERRY	85	88	88	52	1,090	23	1,533
ROBERT	59	44	57	41	1,025	32	1,105
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**65.8**	**47,235**

BARLEY* YIELDS BY VARIETY 1998—2002†						RISK AREA 10	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
ROBUST	54	57	66	42	7,531	52	8,641
EXCEL	62	56	62	24	2,678	45	4,208
CDC STRATUS	—	48	71	22	5,094	58	2,396
AC METCALFE	—	—	—	29	1,036	46	1,134
BEDFORD	45	41	73	25	3,120	44	1,101
B1602	—	—	—	—	—	59	659
STANDARD	34	30	40	—	—	32	525
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**48.7**	**20,748**

FLAX YIELDS BY VARIETY 1998—2002†						RISK AREA 10	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
CDC BETHUNE	—	—	—	11	1,555	18	578
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**18.9**	**1,848**

ARGENTINE CANOLA YIELDS BY VARIETY 1998—2002†						RISK AREA 10	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
INVIGOR 2663 LT	—	—		30	5,715	38	11,892
34-55 RT	—	—	27	24	5,077	34	4,719
45A77 ST	—	—	—	—	—	34	3,086
INVIGOR 2733 LT	—	—	—	—	—	35	2,234
45A55 (RT)	—	—	—	18	640	31	2,215
INVIGOR 2573 LT	—	—	31	27	2,259	33	2,081
NEX 720	—	—	—	—	—	31	1,061
46A76 (ST)	—	—	34	23	6,024	35	1,044
HYLITE 225RR RT	—	—	—	—	—	33	769
45H21 (RT)	—	—	—	—	—	33	679
3235 (RT)	—	—	—	—	—	31	544
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**34.4**	**37,029**

RED SPRING WHEAT YIELDS BY VARIETY 1998—2002†						RISK AREA 11	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC BARRIE	45	46	48	29	164,214	43	113,339
AC DOMAIN	41	42	46	28	9,348	39	10,203
AC CORA	41	40	43	26	6,974	38	6,229
AC MAJESTIC	47	46	49	25	11,645	40	5,247
ALSEN	—	—	—	—	—	50	4,472
AC SUPERB	—	—	—	—	—	53	4,449
CDC BOUNTY	—	—	—	—	—	35	1,669
AC INTREPID	—	—	58	32	5,003	37	1,453
MCKENZIE		55	44	27	2,832	39	1,262
5600HR	—	—	—	30	1,035	39	1,066
KATEPWA	39	38	34	21	746	32	1,016
AC CADILLAC	—	—	49	24	2,347	32	711
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**42.3**	**152,242**

WINTER WHEAT YIELDS BY VARIETY 1998—2002†						RISK AREA 11	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
CDC FALCON	—	—	—	—	—	65	11,643
CDC CLAIR	55	64	69	54	7,774	57	1,345
CDC KESTRAL	50	61	68	57	1,701	59	830
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**63.5**	**14,150**

OAT YIELDS BY VARIETY 1998—2002†						RISK AREA 11	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC ASSINIBOIA	109	101	96	76	24,031	78	39,322
TRIPLE CROWN	—	116	104	67	6,191	56	5,585
AC PINNACLE	—	—	—	73	507	61	4,187
RIEL	94	85	92	55	3,625	67	3,321
ROBERT	77	69	71	51	2,635	65	1,419
AC RONALD	—	—	—	—	—	113	989
AC PREAKNESS	83	57	70	—	—	29	593
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**73.3**	**56,633**

BARLEY* YIELDS BY VARIETY 1998—2002†						RISK AREA 11	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
ROBUST	63	64	64	44	18,060	58	19,206
CDC STRATUS	78	72	72	41	16,326	59	15,574
AC METCALFE	—	—	63	34	5,963	53	7,488
EXCEL	72	66	66	42	4,198	38	4,697
BEDFORD	56	65	64	42	1,851	61	2,659
CDC DOLLY	—	—	89	44	1,405	73	1,415
AC LACOMBE	63	50	41	30	641	51	1,110
CDC MCGWIRE	—	—	—	—	—	63	914
STANDER	66	73	66	40	1,898	53	779
COMMON	—	—	—	—	—	48	523
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**54.5**	**59,018**

FLAX YIELDS BY VARIETY 1998—2002†						RISK AREA 11	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
CDC BETHUNE	—	—	19	20	4,051	22	5,698
TAURUS	—	—	—	18	1,624	17	2,947
NORLIN	19	22	18	15	3,021	19	1,835
AC LINORA	21	24	18	18	1,591	22	1,130
2047	—	—	—	—	—	18	883
AC EMERSON	20	22	17	16	1,472	24	694
1084	—	—	—	—	—	17	549
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**19.8**	**15,434**

† Yields only for those varieties grown on more than 500 acres and by more than 2 growers

‡ On system as of January 10, 2002

* Assuming 48 lbs./bu.

§ Weighted Average Yield and Total Acreage include acres not reported in the table

** AC Snowbird is considered feed wheat for CI insurance purposes only

ARGENTINE CANOLA YIELDS BY VARIETY 1998—2002†						RISK AREA 11	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
INVIGOR 2663 LT	—	—		32	17,251	37	29,101
34-55 RT	—	—	30	27	13,551	34	15,537
INVIGOR 2573 LT	—	—	39	28	9,702	34	13,132
45A77 ST	—	—	—	—	—	34	10,070
46A76 (ST)	—	—	33	29	15,075	28	10,067
45A55 (RT)	—	—	—	30	2,397	31	6,841
INVIGOR 2273 (LT)	—	38	31	25	3,881	31	5,972
45H21 (RT)	—	—	—	—	—	34	4,291
INVIGOR 2733 LT	—	—	—	—	—	39	3,938
NEX 705	—	—	—	25	2,812	30	2,590
NEX 720	—	—	—	33	678	27	2,428
INVIGOR 2153 (LT)	37	33	30	—	—	6	2,189
46A65	32	38	26	26	4,111	36	2,066
HYOLA 401	36	37	32	26	1,413	32	1,795
EBONY	32	37	34	—	—	33	1,677
HYLITE 225RR RT	—	—	—	—	—	34	1,420
HYLITE 243CL (ST)	—	—	—	—	—	25	966
SP BANNER (RT)	—	—	—	—	—	33	930
NEX 715	—	—	—	—	—	28	873
CONQUEST (RT)	—	—	30	25	3,293	23	811
SP ADMIRABLE RR RT	—	—	—	—	—	23	780
SW GLADIATORR RT	—	—	—	—	—	32	766
MILLENNIUM 03	—	—	—	28	761	27	635
Q 2	—	37	—	—	—	18	625
35-25 RT	—	—	—	26	647	35	603
3345 (RT)	—	—	—	25	905	39	570
561RR RT	—	—	—	—	—	23	567
INVIGOR 2673 LT	—	—	—	—	—	36	550
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**32.5**	**131,859**

FIELD PEAS YIELDS BY VARIETY 1998—2002†						RISK AREA 11	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
DS-ADMIRAL	—	—	—	—	—	36	917
CROMA	—	—	—	27	694	41	857
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**37.7**	**2,874**

RED SPRING WHEAT YIELDS BY VARIETY 1998—2002†						RISK AREA 12	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC BARRIE	42	49	42	27	605,086	40	420,005
AC DOMAIN	36	47	44	35	48,432	42	38,318
AC MAJESTIC	41	47	44	26	35,846	41	18,257
ALSEN	—	—	—	—	—	46	12,400
AC SUPERB	—	—	—	—	—	47	6,738
CDC BOUNTY	—	—	—	31	1,820	41	5,566
AC CORA	39	45	42	27	12,705	38	4,994
MCKENZIE	37	39	49	27	4,992	47	3,934
AC CADILLAC	—	—	42	23	10,288	39	2,267
AC INTREPID	—	—	48	38	2,424	46	2,007
5600HR	—	—	—	32	3,746	47	1,902
ROBLIN	30	43	21	—	—	45	1,475
NO VAR	—	—	—	—	—	45	1,432
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**40.3**	**520,791**

FEED WHEAT YIELDS BY VARIETY 1998—2002†						RISK AREA 12	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC SNOWBIRD**	—	—	—	24	6,460	49	1,744
IVAN	—	—	—	—	—	55	1,396
GUNNER	—	—	—	16	955	33	1,064
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**46.8**	**5,650**

WINTER WHEAT YIELDS BY VARIETY 1998—2002†						RISK AREA 12	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
CDC FALCON	—	—	—	50	1,488	65	19,351
CDC CLAIR	58	70	70	50	10,012	57	18,332
CDC KESTRAL	54	69	67	36	2,420	55	6,039
CDC HARRIER	—	—	69	52	852	53	1,830
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**59.9**	**46,033**

OAT YIELDS BY VARIETY 1998—2002†						RISK AREA 12	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC ASSINIBOIA	109	112	97	65	118,471	80	207,735
TRIPLE CROWN	113	109	101	52	92,629	79	56,725
RIEL	91	105	87	54	28,409	64	26,924

OAT YIELDS BY VARIETY 1998—2002†						RISK AREA 12	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC PINNACLE	—	—	—	76	2,341	79	15,302
AC RONALD	—	—	—	—	—	87	10,737
JERRY	96	105	75	62	5,989	81	5,806
COMMON	—	—	—	—	—	90	2,408
ROBERT	84	93	78	67	2,350	73	1,497
AC PREAKNESS	98	99	94	49	1,005	82	532
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**78.5**	**328,479**

BARLEY* YIELDS BY VARIETY 1998—2002†						RISK AREA 12	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
ROBUST	59	73	65	41	49,967	56	30,905
CDC STRATUS	62	78	64	35	22,137	54	23,971
AC METCALFE	—	80	65	33	12,879	53	15,534
STANDER	65	81	59	35	6,714	53	6,634
STANDARD	57	83	57	28	1,774	59	3,714
BEDFORD	61	80	59	28	3,114	57	2,770
CDC MCGWIRE	—	—	—	—	—	38	2,156
EXCEL	70	77	73	50	2,624	73	1,617
AC ROSSER	—	76	63	45	1,680	58	1,474
CONLON	—	—	—	—	—	59	1,048
VIVAR	—	—	—	—	—	64	945
CDC THOMPSON	—	—	52	40	3,954	48	910
AC LACOMBE	60	60	—	—	—	68	754
CDC BOLD	—	—	—	23	1,054	43	563
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**55.0**	**95,458**

FLAX YIELDS BY VARIETY 1998—2002†						RISK AREA 12	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
CDC BETHUNE	—	—	20	12	26,022	24	39,325
AC EMERSON	21	24	14	12	22,492	23	16,259
NORLIN	20	23	16	11	16,248	18	8,684
TAURUS	—	—	—	14	4,738	23	7,627
AC MCDUFF	22	26	19	12	11,594	22	5,494
AC CARNDUFF	—	31	15	12	10,532	24	4,829
FLANDERS	22	24	18	10	4,872	21	3,974
NORMAN	21	23	19	12	5,173	21	2,977
AC LINORA	21	25	17	11	6,391	21	2,732
CDC NORMANDY	20	25	17	9	4,962	24	1,827
AC WATSON	—	23	16	12	2,503	26	1,530
1084	—	—	—	—	—	20	1,429
2047	—	—	—	—	—	21	999
MCGREGOR	22	22	13	10	1,049	24	987
OMEGA	20	—	—	—	—	21	850
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**2.7**	**100,195**

ARGENTINE CANOLA YIELDS BY VARIETY 1998—2002†						RISK AREA 12	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
45A77 ST	—	—	—	—	—	33	51,845
34-55 RT	—	—	23	24	45,777	31	39,761
INVIGOR 2663 LT	—	—	—	25	21,258	37	38,219
INVIGOR 2733 LT	—	—	—	22	1,870	34	36,445
45A55 (RT)	—	—	—	21	6,242	28	25,638
INVIGOR 2573 LT	—	—	29	24	15,789	36	24,680
46A76 (ST)	—	—	27	20	43,045	34	22,692
46A65	34	38	25	21	26,192	32	18,854
NEX 720	—	—	—	19	1,778	34	15,844
HYOLA 401	35	38	24	22	9,580	32	15,032
45H21 (RT)	—	—	—	—	—	31	13,437
NEX 705	—	—	—	22	12,086	34	12,050
INVIGOR 2273 (LT)	—	40	23	25	5,837	34	9,711
HYLITE 243CL (ST)	—	—	—	22	2,302	30	4,584
EBONY	33	38	24	22	3,860	35	3,973
HYLITE 225RR RT	—	—	—	17	903	29	3,294
HYOLA 454RR (RT)	—	—	—	18	832	28	2,501
MILLENNIUM 03	—	—	—	21	5,741	27	2,134
DKL 3311	—	—	20	—	—	29	2,129
799RR RT	—	—	—	29	740	32	2,105
561RR RT	—	—	—	23	2,514	32	1,931
DKL 35-85 (RT)	—	—	—	—	—	35	1,926
IMC 302	—	—	—	—	—	27	1,582
CONQUEST (RT)	—	—	29	21	29,837	28	1,467
TRAILBLAZER	31	37	20	—	—	14	1,010
811RR (RT)	—	—	—	—	—	30	982
SW RAZOR (RT)	—	—	—	—	—	30	975
INVIGOR 2153 (LT)	35	37	16	27	1,103	39	900
FOREMOST	—	—	16	13	507	32	898

† Yields only for those varieties grown on more than 500 acres and by more than 2 growers

§ Weighted Average Yield and Total Acreage include acres not reported in the table

‡ On system as of January 10, 2002

** AC Snowbird is considered feed wheat for CI insurance purposes only

* Assuming 48 lbs./bu.

Management Plus

ARGENTINE CANOLA YIELDS BY VARIETY 1998—2002†						RISK AREA 12	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
46A55	—	—	26	25	832	27	875
LBD 612RR (RT)	—	—	—	—	—	30	869
35-25 RT	—	—	31	26	3,649	39	864
SP ADMIRABLE RR RT	—	—	—	—	—	20	739
NEX 715	—	—	—	—	—	27	725
3235 (RT)	—	—	—	—	—	34	696
RR CHAMPION RT	—	—	—	—	—	23	642
45A54 RT	—	—	—	22	6,216	20	622
3345 (RT)	—	—	—	—	—	37	615
HYOLA 440	—	—	—	—	—	33	598
INVIGOR 2673 LT	—	—	—	—	—	44	550
Q 2	—	—	—	—	—	20	549
NO VAR	—	—	—	—	—	13	547
23-38 RT	—	—	—	—	—	34	512
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**32.5**	**374,093**

FIELD PEAS YIELDS BY VARIETY 1998—2002†						RISK AREA 12	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
CROMA	—	—	27	23	4,210	23	6,519
MILLENNIUM	—	—	—	37	510	47	1,054
4010	32	28	17	20	808	33	646
SW BRAVO	—	—	—	—	—	37	540
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**27.5**	**9,806**

RED SPRING WHEAT YIELDS BY VARIETY 1998—2002†						RISK AREA 14	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC BARRIE	40	47	36	25	48,039	34	39,671
AC DOMAIN	34	42	38	26	13,832	35	9,350
AC CADILLAC	—	—	34	22	11,737	36	7,645
MCKENZIE	—	—	41	27	2,220	45	3,696
AC MAJESTIC	—	49	41	20	2,431	26	2,179
AC INTREPID	—	—	41	19	3,277	48	1,782
AC SUPERB	—	—	—	—	—	46	709
AC CORA	36	40	38	25	993	19	599
KATEPWA	34	37	—	—	—	30	575
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**34.8**	**67,753**

WINTER WHEAT YIELDS BY VARIETY 1998—2002†						RISK AREA 14	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
CDC FALCON	—	—	—	—	—	63	2,761
CDC CLAIR	—	28	45	41	1,562	50	2,649
CDC KESTRAL	41	47	36	—	—	43	1,565
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**54.1**	**7,331**

OAT YIELDS BY VARIETY 1998—2002†						RISK AREA 14	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC ASSINIBOIA	90	94	70	67	20,508	72	32,708
RIEL	59	70	57	41	3,719	35	4,955
TRIPLE CROWN	—	78	57	46	6,380	63	3,587
AC PINNACLE	—	—	—	—	—	69	3,238
ROBERT	65	80	43	51	2,151	38	1,128
AC RONALD	—	—	—	—	—	90	847
COMMON	—	—	—	—	—	29	824
AC PREAKNESS	66	76	47	—	—	8	813
NO VAR	—	0	—	—	—	15	578
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**63.6**	**49,800**

BARLEY* YIELDS BY VARIETY 1998—2002†						RISK AREA 14	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
CDC STRATUS	55	77	50	41	12,796	39	11,029
ROBUST	49	64	49	34	6,784	35	10,236
STANDER	53	73	45	35	2,625	45	4,355
BEDFORD	38	74	41	36	532	41	1,296
EXCEL	60	61	31	38	635	60	869
STANDARD	36	77	23	26	515	18	737
AC METCALFE	—	—	—	—	—	35	531
COMMON	—	—	25	25	699	37	505
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**38.9**	**31,004**

FLAX YIELDS BY VARIETY 1998—2002†						RISK AREA 14	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC EMERSON	19	20	12	10	2,041	15	2,847
CDC BETHUNE	—	—	—	6	1,122	17	1,405
TAURUS	—	—	—	—	—	20	1,219
AC WATSON	—	—	—	—	—	15	632
CDC NORMANDY	19	—	9	—	—	20	554
NORLIN	15	17	7	4	819	13	524
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**16.9**	**8,404**

ARGENTINE CANOLA YIELDS BY VARIETY 1998—2002†						RISK AREA 14	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
INVIGOR 2573 LT	—	—	20	23	4,456	36	8,466
INVIGOR 2733 LT	—	—	—	—	—	38	6,039
45A77 ST	—	—	—	—	—	34	6,032
46A76 (ST)	—	—	23	24	10,614	33	5,379
HYOLA 401	35	38	15	21	2,300	27	4,333
45A55 (RT)	—	—	—	—	—	30	3,925
INVIGOR 2663 LT	—	—	—	25	1,345	36	3,256
INVIGOR 2273 (LT)	—	38	21	13	3,102	33	2,843
46A65	33	36	21	21	1,973	24	2,060
34-55 RT	—	—	18	25	1,862	29	1,495
SP BUCKY (RT)	—	—	—	—	—	22	1,002
EXCEED (LT)	26	23	10	17	675	26	644
SP BOBCAT CL (ST)	—	—	—	—	—	24	617
NEX 705	—	—	—	—	—	30	576
CONQUEST (RT)	—	—	19	14	1,240	33	531
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**31.8**	**54,260**

FIELD PEAS YIELDS BY VARIETY 1998—2002†						RISK AREA 14	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
DELTA	—	—	25	20	2,026	31	2,294
ESPACE	—	—	—	12	793	25	635
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**30.9**	**3,834**

RED SPRING WHEAT YIELDS BY VARIETY 1998—2002†						RISK AREA 15	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC BARRIE	43	43	40	27	47,449	39	38,980
AC CADILLAC	—	—	44	25	7,044	37	6,870
AC DOMAIN	38	39	38	27	6,674	37	3,731
MCKENZIE	—	49	45	30	2,179	31	1,609
5600HR	—	—	—	—	—	40	1,178
AC CORA	37	—	—	25	770	36	850
NO VAR	—	8	43	—	—	39	718
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**38.1**	**55,530**

WINTER WHEAT YIELDS BY VARIETY 1998—2002†						RISK AREA 15	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
CDC FALCON	—	—	—	—	—	61	2,361
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**57.2**	**3,196**

OAT YIELDS BY VARIETY 1998—2002†						RISK AREA 15	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC ASSINIBOIA	—	74	83	68	3,761	62	7,673
TRIPLE CROWN	—	—	68	62	2,225	47	3,386
AC PINNACLE	—	—	—	—	—	86	2,500
ROBERT	48	43	58	48	1,914	34	1,280
RIEL	43	32	69	—	—	59	1,186
COMMON	—	—	—	38	980	41	955
AC PREAKNESS	68	—	—	—	—	58	789
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**57.8**	**19,034**

BARLEY* YIELDS BY VARIETY 1998—2002†						RISK AREA 15	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
ROBUST	58	56	55	41	12,341	58	10,876
CDC STRATUS	56	56	53	40	6,123	48	5,249
CDC SISLER	—	—	—	49	586	58	1,628
EXCEL	80	80	66	50	1,237	72	1,355
AC ROSSER	—	—	58	44	855	62	1,156
STANDER	65	61	53	48	1,982	65	849
AC METCALFE	—	—	—	35	519	53	836
AC LACOMBE	45	49	44	39	642	55	684
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**55.4**	**25,938**

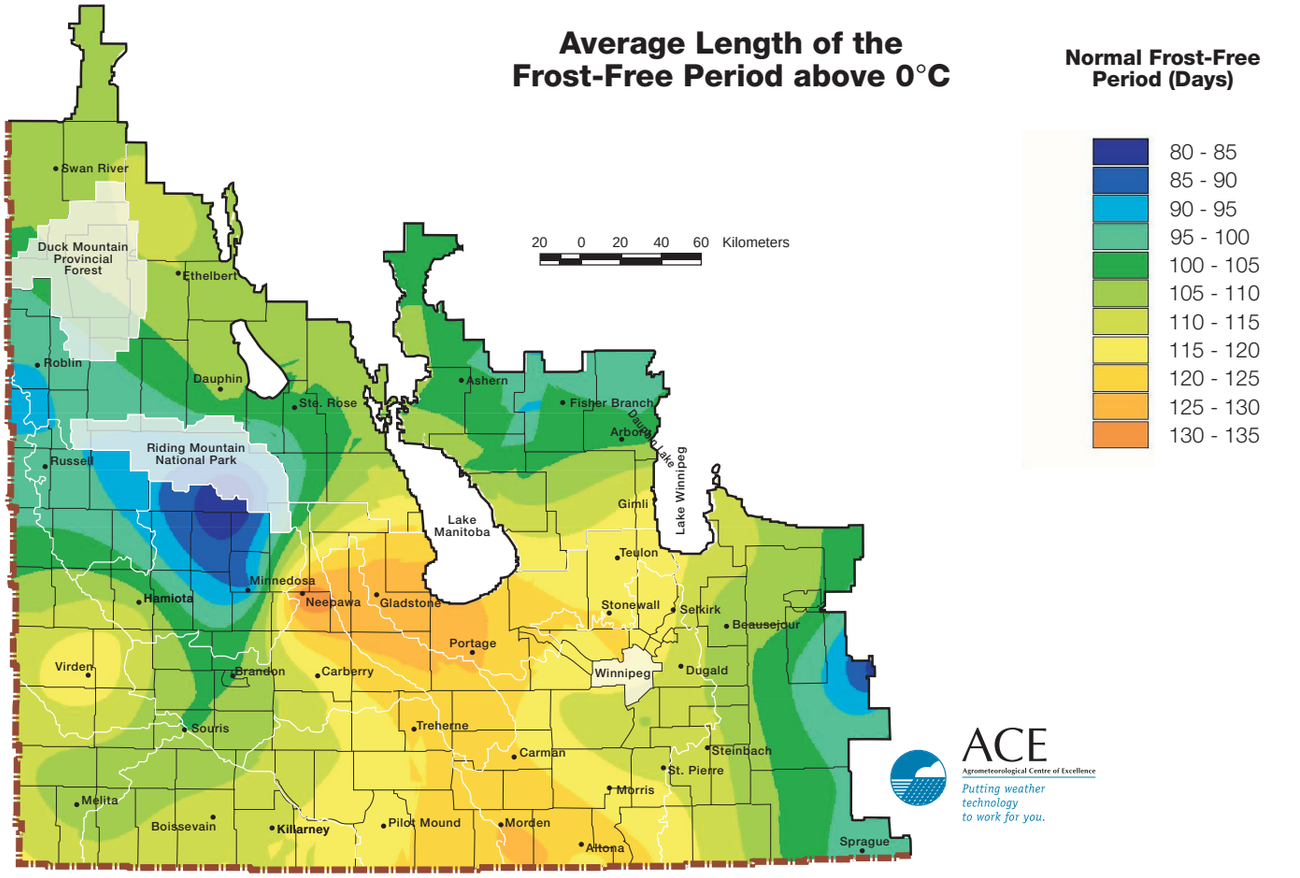
† Yields only for those varieties grown on more than 500 acres and by more than 2 growers

‡ On system as of January 10, 2002

* Assuming 48 lbs./bu.

§ Weighted Average Yield and Total Acreage include acres not reported in the table

** AC Snowbird is considered feed wheat for CI insurance purposes only



FLAX YIELDS BY VARIETY 1998—2002†						RISK AREA 15	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
NORLIN	17	18	16	17	3,064	21	4,023
AC EMERSON	20	18	—	17	554	21	1,888
1084	—	—	—	—	—	20	1,498
CDC BETHUNE	—	—	—	12	987	21	1,374
AC WATSON	—	—	—	—	—	20	581
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**21.0**	**10,538**

ARGENTINE CANOLA YIELDS BY VARIETY 1998—2002†						RISK AREA 15	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acre
45A77 ST	—	—	—	—	—	35	11,175
45A55 (RT)	—	—	—	—	—	35	7,552
HYOLA 401	—	32	24	—	—	32	6,063
INVIGOR 2573 LT	—	—	—	29	3,446	37	5,464
INVIGOR 2733 LT	—	—	—	—	—	39	4,834
INVIGOR 2663 LT	—	—	—	24	3,155	42	4,742
46A76 (ST)	—	—	29	23	5,303	28	2,556
34-55 RT	—	—	25	25	2,943	35	1,959
INVIGOR 2153 (LT)	28	32	—	—	—	32	1,771
46A65	33	35	24	26	649	29	1,740
45H21 (RT)	—	—	—	—	—	45	1,496
INVIGOR 2273 (LT)	—	36	22	28	753	29	991
45A51 (RT)	—	33	18	21	997	32	797
CONQUEST (RT)	—	—	26	—	—	19	771
SW ARROW (RT)	24	24	23	24	634	29	702
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**34.5**	**58,135**

FIELD PEAS YIELDS BY VARIETY 1998—2002†						RISK AREA 15	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
MAJORET	—	—	—	—	—	45	815
CARNEVAL	44	37	29	21	695	41	638
SW BRAVO	—	—	30	24	1,024	44	593

FIELD PEAS YIELDS BY VARIETY 1998—2002†						RISK AREA 15	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
SWIFT	—	—	—	—	—	24	585
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**39.8**	**3,324**

RED SPRING WHEAT YIELDS BY VARIETY 1998—2002†						RISK AREA 16	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
AC DOMAIN	44	46	46	46	8,813	38	9,541
AC SPLENDOR	—	—	47	50	3,401	40	2,680
CDC TEAL	42	44	38	44	2,937	32	1,046
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**37.6**	**13,727**

BARLEY* YIELDS BY VARIETY 1998—2002†						RISK AREA 16	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
ROBUST	68	—	—	—	—	67	1,896
EXCEL	54	64	62	68	2,172	49	1,415
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**57.4**	**4,666**

ARGENTINE CANOLA YIELDS BY VARIETY 1998—2002†						RISK AREA 16	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
INVIGOR 2153 (LT)	—	38	35	38	3,385	37	6,486
45A77 ST	—	—	—	—	—	37	3,429
45A55 (RT)	—	—	—	—	—	31	1,108
HYLITE 243CL (ST)	—	—	—	35	538	30	593
SW ARROW (RT)	—	29	28	35	1,514	26	570
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**35.4**	**16,731**

FIELD PEAS YIELDS BY VARIETY 1998—2002†						RISK AREA 16	
Variety	1998 Yield	1999 Yield	2000 Yield	2001 Yield	2001 Acres	2002 Yield	2002‡ Acres
ALFETTA	—	—	41	52	716	33	599
WEIGHTED AVERAGE YIELD AND TOTAL ACREAGE§						**31.4**	**759**

† Yields only for those varieties grown on more than 500 acres and by more than 2 growers

‡ On system as of January 10, 2002

* Assuming 48 lbs./bu.

§ Weighted Average Yield and Total Acreage include acres not reported in the table

** AC Snowbird is considered feed wheat for CI insurance purposes only

Management Plus

WE'RE HERE TO HELP

Figure 1 Crop yield response to planting date

Manitoba crop insurance reports 1981-2001

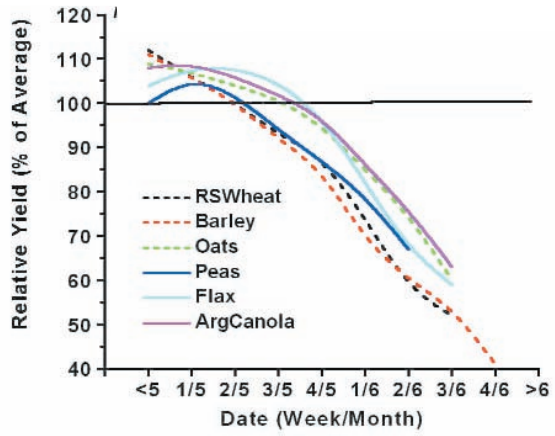
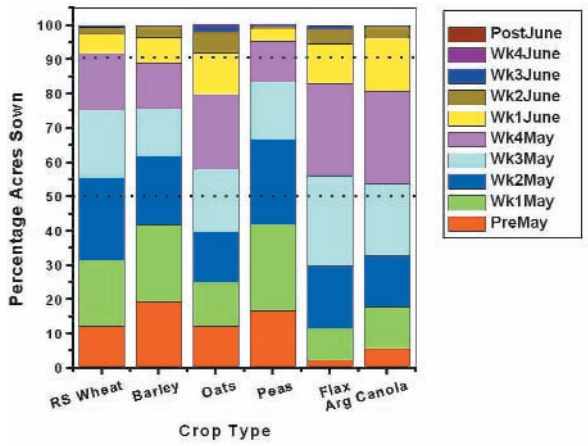


Figure 2 Relative crop acreage (%) sown at each date

Manitoba crop insurance records – average 1981-2001



No more blind dates:

Crop yield response to SEEDING DATES

By Doug Wilcox, MCIC

It is an unpleasant situation — your seeding equipment is parked while you continue to wait for rain and overcast skies to move through after weeks of wet weather.

With everything else you need to accomplish, the last thing you need is to worry about is how much yield you are losing with every day of delay. There is no need to be blind to the impacts of date of seeding on yield — the Manitoba Crop Insurance Corporation has been tracking seeding date and yield response information for years and this information is available to you.

When successful, early seeding can provide you with the advantage of increased yield potential and increased uniformity of ripening, grade and yield.

However, when sown too early, crops can be unnecessarily exposed to an increased risk of spring frost, susceptibility to herbicide residue and seed rots. Farmers are regularly challenged by the difficult task of balancing the advantages and disadvantages of early seeding to maximize return while minimizing risk.

Figure 1 illustrates the average relative reported yield for each week of the sowing season for Red Spring wheat, barley, oats, peas, flax, and Argentine canola over the 21-year period from 1981 to 2001, inclusive.

Generally, cereals had the highest yields the earlier the planting and they had a more rapid decline in yield than did broadleaf crops for every week planting was delayed. The main factor limiting yield on later sown cereals is likely the increasing prevalence of leaf and other diseases with delayed planting.

For the broadleaf crops, sowing too early resulted in reduced yields relative to later plantings, but early plantings were still superior to later plantings. The main factor increasing yields of earlier seeded broadleaf crops is likely the earlier bloom set of earlier plantings which results in greater avoidance of summer heat waves.

Another interesting phenomena is that the yield decline trend in oats associated with delayed plantings is slower than other cereals, more like a broadleaved crop.

WHEN?

How early should you plant your crop? In Manitoba the general rule of thumb appears to be the earlier the better — but not too early, especially with plants susceptible to spring frosts or requiring warm soil for germination.

Cereals and peas have high resistance to spring frosts, flax and canola are less resistant and crops like corn and buckwheat have low resistance. Manitoba Crop Insurance pays an average of over $3 million per year for reseed claims, some of which result from farmers jumping the gun and planting too early.

If you get spring frost, your crops will initially look pale white and can turn black. To see if recovery will occur, you can take a knife and dissect the growing point from top to bottom by slicing the stalk down the centre of the frozen leaves. Use a magnifying glass to examine the growing point; if it is still firm and healthy colored then there is a good chance the plant should recover. Provided the stand is adequate, the yields will probably be better than if the field is reseeded.

Although a spring frost will slow the growth of the existing crop and delay maturity, quite often reseeding can push back maturity even further and increase the risk of fall injury.

Your time and machinery options are usually limited, which mean not all crops can be sown at the same time, so which crop should you sow first? Your sequence of planting decision should be based on a combination of crop response to seeding date and crop value. The best strategy is to plant first the crops that have both high value and good yield response to early seeding.

MORE MANAGEMENT

Seeding early does require special management. Seeding early into colder soils

Figure 3 Average seeding date – red spring wheat

1996-2002

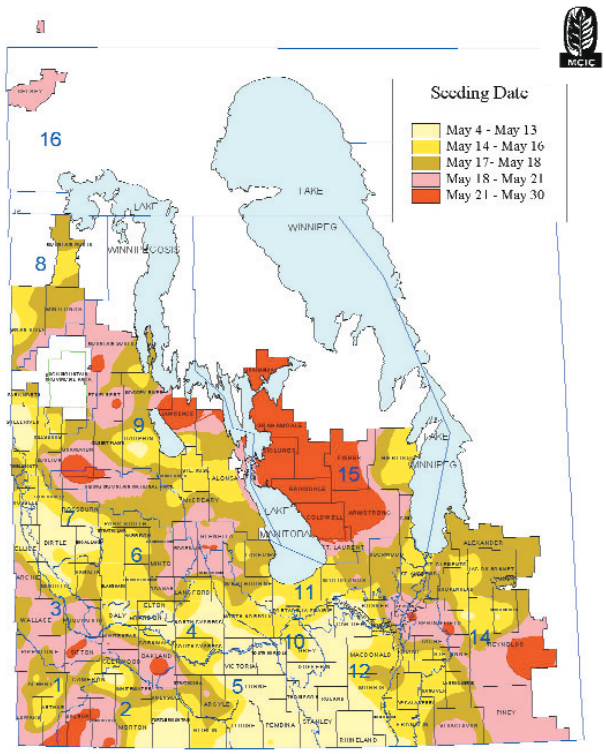


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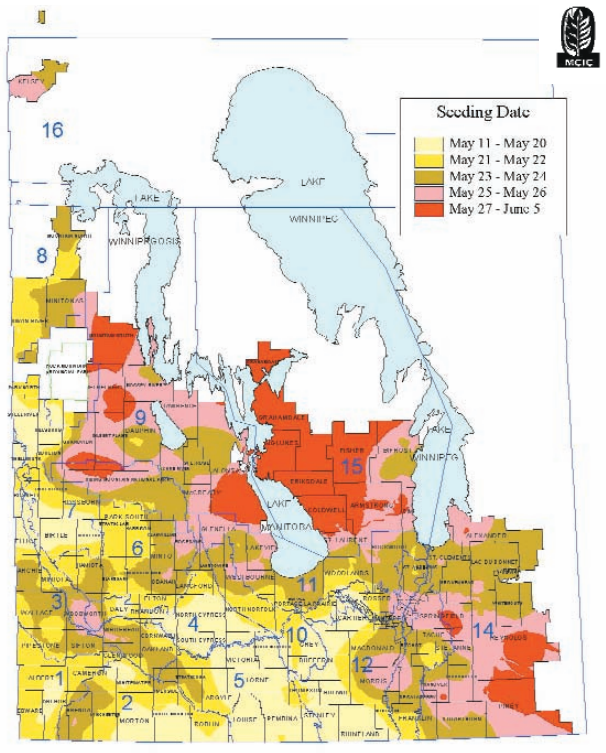
Figure 4 Average seeding date – argentine canola

1996-2002



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means slower seedling growth and these seedlings are more susceptible to damping off. Fungicidal seed treatments are therefore highly recommended. It is also recommended that shallow planting and starter phosphate be used . This will encourage more rapid "pop-up" and result in early, uniform, vigorous crop stands.

Delayed planting is a traditional approach used by some farmers to allow for the opportunity to control their first flush of weeds prior to planting — this is no longer generally necessary in crops with good post-emergent products.

In situations where herbicide-resistant weeds are a potential problem, delayed planting may still be necessary.

Late seeding can still produce a decent crop. As seeding gets pushed back, you may want to reconsider the varieties of crops you plan to seed and even crop kinds — the choices become more limited.

You may even want to reevaluate input considerations. For example too much nitrogen is known to delay maturity of some crops. Another delayed planting input strategy is to increase seeding rates to increase the rate of fall maturation. Late seeding also results in a late harvest which in turn is often subject to an increased risk of adverse fall weather and downgrading of crop quality.

Fortunately, many times when seeding has been delayed the subsequent falls have remained open and farmers have avoided crop failures — but not every time.

So when do farmers typically sow crops in Manitoba? Figure 2 shows the average percentage of crop acres sown at weekly intervals in a cumulative fashion for each of Red Spring wheat, barley, oats, peas, flax and Argentine canola over the 21-year period from 1981 to 2001, inclusive.

On average at least 70 per cent of the Manitoba acreage of these crops is sown in one month — May. At least half the acres of RS wheat, barley and peas are sown by the second week of May or in the case of oats, flax and Argentine canola by the third week of May. Sowing of these crops is largely completed (90 per cent sown) during the fourth week of May for RS wheat and peas, and during the first week of June for barley, oats, flax and Argentine canola. Also note that by the third week of June over 95 per cent of the acreage of all these crops has been sown.

This information is based on actual information reported to MCIC by farmers and management and environmental influences were not standardized. Actual relative yield response can differ significantly from the averages presented depending on the variety, year, region and other factors.

An illustration of the regional differences that can occur is provided in the maps of Figures 3 and 4. Figure 3 is a map of the average seeding date (50 per cent sown) by region for Red Spring wheat in Manitoba over the period 1996 to 2002, inclusive. Figure 4 is a similar map for Argentine canola.

The observation that crops are sown later in the north than in the south is not unexpected. The observation that the southeast and southwest corners of the province have distinct seeding date patterns is less expected but can be rationalized on the basis of climate and soil.

Please remember that Crop Insurance has seeding deadlines which vary by crop; sowing after these deadlines means that coverage will be unavailable. These seeding deadlines are generally considered the "outside" dates for successful planting of these crops.

If you want to see more information on seeding date response for other crops or look at data that is more specific to your region, you can find this on the Internet on the Manitoba Management Plus Program web site (*www.mmpp.com*). The Crop Insurance seeding deadlines for specific crops are available from your local agent or online at *www.mcic-online.com*.

Genetics as risk management:

Crop traits & variety differences key to puzzle

By Gord Leathers

Every seed that hits the ground is made up of three important parts — the embryo, the starchy endosperm that feeds it and the seed coat that holds it all together.

Laced through every cell in the embryo are the genes, half from each parent, and within the genes lie the essence of the next generation of field beans, barley or whatever else that seed may be.

"This will program everything from disease resistance to yield to maturity," says Dr. Jeannie Gilbert of the Cereal Research Centre in Winnipeg. "It's all stored in the genes."

A gene is comprised of four different bases bolted together in different ways along a twisted strand of DNA. It instructs individual cells to make or use a particular protein.

All by itself it's a simple thing, however, put several million genes together and let them engage in a tug-of-war for dominance and things get a lot more complicated. You now have an organism with countless different traits which either enhance or undermine its survival.

In farming terms that means next year's crop has to endure what nature throws at it and still fill the hoppers with plump seeds. And this must be done with a rack of genes that don't come from around here.

Wheat and barley are from the Middle East, soybeans are from China and even the sunflower, whose ancestors sprang from the North American Great Plains, calls Kansas and Missouri home.

Still, the genes that made the ancestral plants flourish in their ancient breeding grounds are the first mechanism by which they cope here.

Genetics can determine everything about a crop from seed size and type — as with these different varieties of soybeans — to end uses and days to maturity. Producers need to take genetic variability into account when selecting varieties to plant

"The varieties that make it mature within our northern agro-ecosystem, otherwise they wouldn't be here," explains Daryl Domitruk, with the Manitoba Department of Agriculture. "To make it through, and on the market, its genetics are adapted to the area."

That area extends from the Canada/U.S. border north to The Pas and is roughly divided into different climatic zones. Oddly enough, it's elevation more than latitude that influences the length of the growing season.

"Our shorter growing seasons are surrounding Riding Mountain National Park," Domitruk says, and this is certainly illustrated on the growing degree day map where Wasagaming sits in a cool, blue circle. The other extreme is a "banana belt" in the Morden/Carman/Altona area where farmers enjoy the warmest area for crop growing in the province.

However, in the North American context, the ecological differences between eastern and western Manitoba are not as significant as the greater differences between Portage la Prairie and South Dakota.

"There we're talking the difference between the cool-season cereal-growing regions of the Canadian Prairies and the United States corn belt where there is a significant difference in climate," Domitruk says. "Whereas the differences between Portage and Dauphin are much smaller."

This northerly climate doesn't seem to bother the major field crops such as wheat, barley, canola and flax.

Their ancestors moved to higher latitudes because of the seed trade from the Middle East into Europe and Asia. The

genetically suitable variants produced good crops in their adopted homelands and their descendants moved into Europe and eventually the Americas. Since then, the breeding programs have become more elaborate, especially in the last 50 years.

"One of the major advancing areas that we've had in agriculture has been genetics," Domitruk says. "Our ability to produce things is better because we know so much more."

There is nothing new about genetic manipulation within crop species — that's been the focus of breeding since its inception. Farmers selected seed that grew best in their own regions and produced the best plants that lost the least to pests and disease. This has been a constant, long-term game.

"You're basically putting a selection pressure on a pest and it's responding," Domitruk says. "There are new races of rust that appear, just through natural processes and advancements in genetics have made the necessity to keep ahead of the pathogens easier."

Other crops, such as soybeans and sunflowers are on the northern extension of their geographic range so, because of their metabolism, growing them becomes risky.

"Maturity is probably the No. 1 factor," says Rob Park, oilseed specialist and sunflower grower. "If you're going to grow a variety that matures in 129 days and there's no chance of that happening, then there's no point even starting."

For sunflowers, the critical element is the length of the growing season, particularly with confection varieties. They do well and are widely grown in the Dakotas and Minnesota. The northern ecological boundary for sunflowers appears to be the Trans Canada Highway although there are some growers as far north as Minnedosa.

"There's a lot of times we see that border being pushed quite a bit so growers have to be very careful that they're growing a variety that will mature and finish and yield in this area," Park says. "There's not a lot of lines that are bred specifically for this region because we're on the very outskirts of the sunflower region."

Soybeans are also critical for a slightly different reason. While the length of the growing season is important, what's really crucial for soybean is the amount of heat the plant can collect during its lifespan.

It's the heat that drives the plant's metabolism so its growth, its seed weight and seed quality are at their most productive under a warmer temperature regime than you'll find over most of the province.

"If you look at all soybean varieties, with all the genetic diversity, we're only selecting from a small percentage of the germplasm," according to Bruce Brolley with the Manitoba Department of Agriculture. "This is because we're looking at the most northern growing area in the world."

Breeding new varieties of plants is one of the driving forces behind agriculture and the last decade has seen an explosion of breeding programs in the labs of the government and the private sector.

Consequently there's been an explosion in the number of new varieties growing in the fields of the Manitoba farmer.

Some breeds are more resistant to pests and disease, some breeds are designed for specific crop rotations and others are able to produce products for new markets.

For instance, the last 10 years has seen a demand for euricic acid in industrial lubricants so new strains of canola are producing it in the fields of Manitoba.

As a result of these new breeds, farmers are faced with a bewildering range of choices among breeds and brands and that's not likely to become any simpler any time soon. How is a farmer to know what will work in the home region?

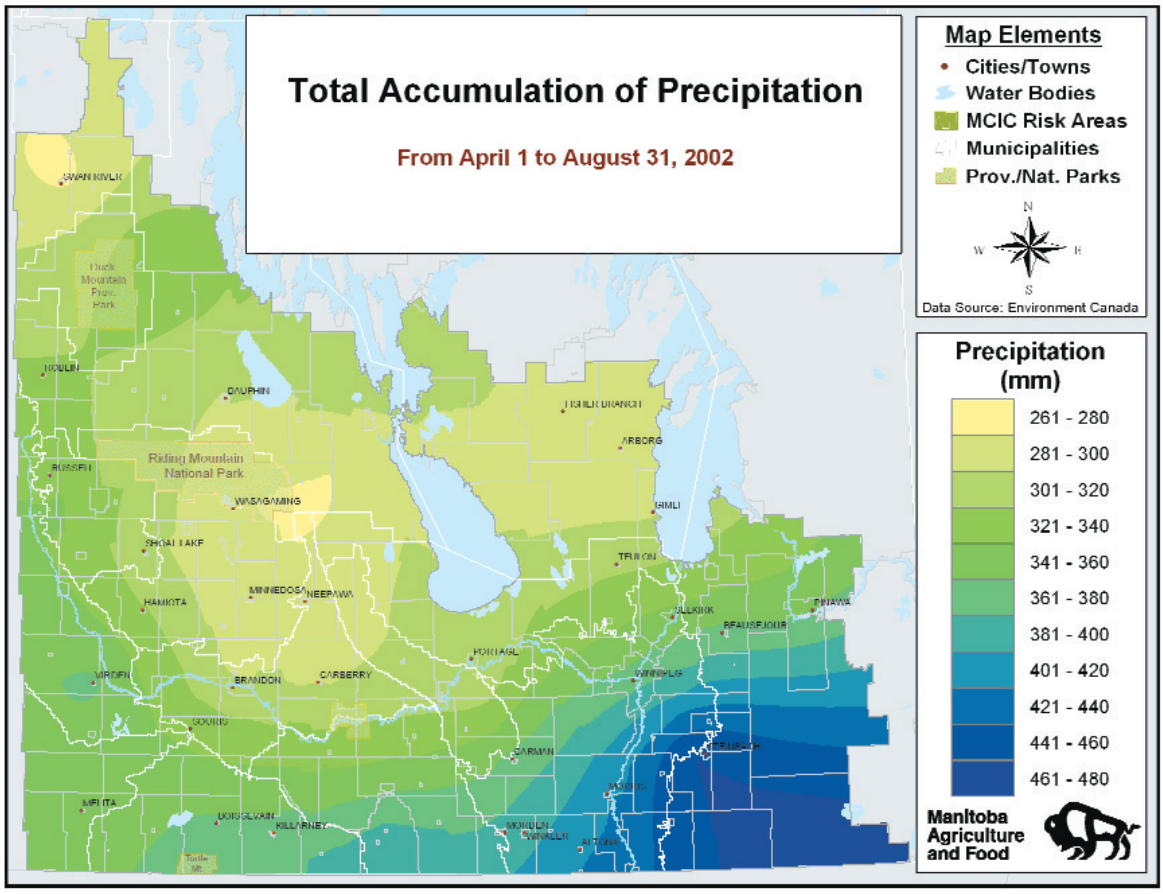
> "...farmers are faced with a bewildering range of choices among breeds and brands and that's not likely to become any simpler any time soon"

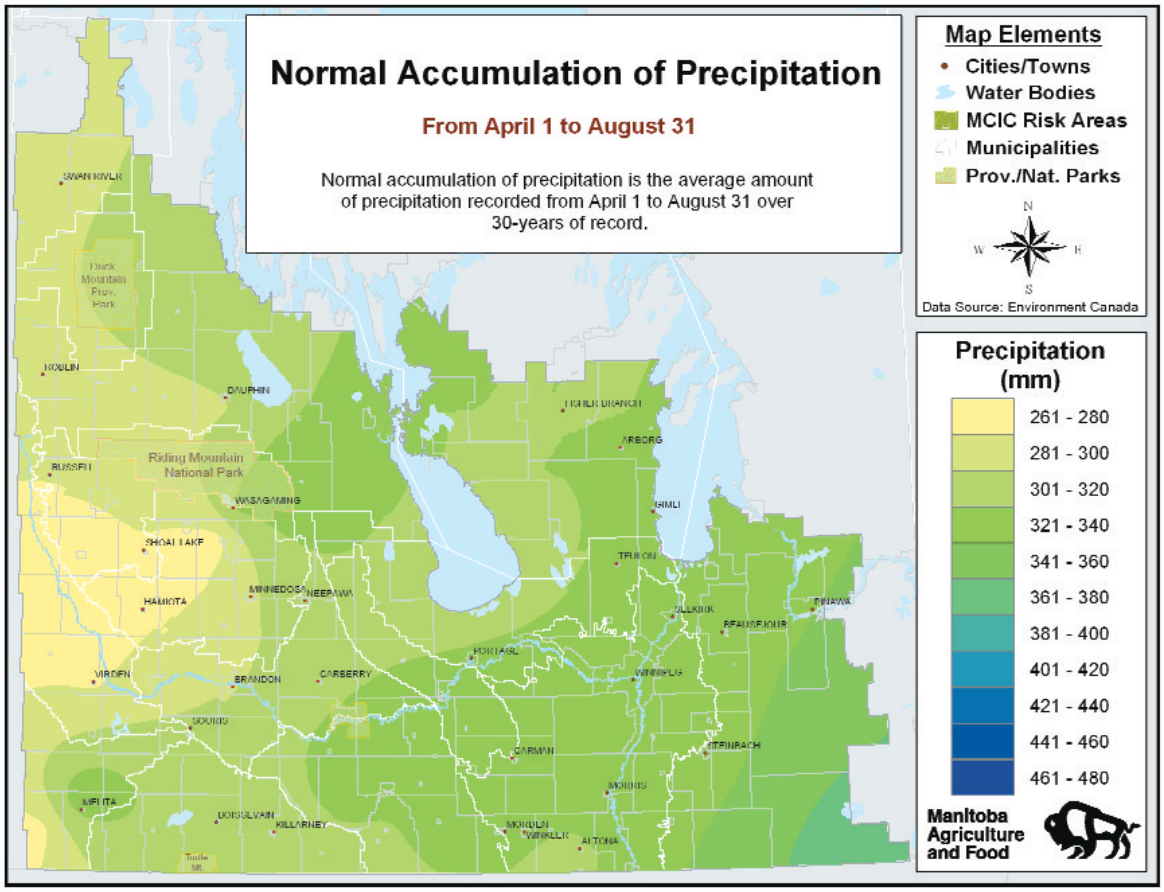
"The whole issue of adaptation has been taken care of by embedding it within in the variety registration system, the variety evaluation system and other programs such as crop insurance," Domitruk says. "Farmers are guaranteed that the material they have is inherently adapted to the Canadian Prairies."

The Manitoba Crop Variety Evaluation Team (MCVET) makes sure they are by testing different breeds of plants in 19 sites across the province. The different varieties are evaluated and yields are compared to those of previous years and other breeds.

This gives the farmer a good idea as to how well the seeds suit the geography and how well they'll fit into an agronomic package. While emphasis on variety selection is warranted, it shouldn't be at the expense of other agronomic practices.

"It's really not a stand-alone decision," Domitruk says. "If you're going to select something with particularly high yield potential, you'd better support that yield potential with good agronomy."


Total Accumulation of Precipitation
From April 1 to August 31, 2002
Map Elements
Cities/Towns
Water Bodies
MCIC Risk Areas
Municipalities
Prov./Nat. Parks
N
W
E
S
Data Source: Environment Canada
Precipitation (mm)
261 - 280
281 - 300
301 - 320
321 - 340
341 - 360
361 - 380
381 - 400
401 - 420
421 - 440
441 - 460
461 - 480
Manitoba Agriculture and Food
Riding Mountain National Park
DAUPHIN
RUSSELL
WASAGAMING
SHOAL LAKE
HAMIOTA
MINNEDOSA
NEEPAWA
VIRDEN
BRANDON
CARBERRY
PORTAGE
WINNIPEG
GIMLI
TRURO
ARBORG
STEINBACH
CARMAN
MORDEN
WINKLER
MORRIS
MELITA
KILLARNEY
BOISSEVAIN


Normal Accumulation of Precipitation
From April 1 to August 31
Normal accumulation of precipitation is the average amount of precipitation recorded from April 1 to August 31 over 30-years of record.
Map Elements
Cities/Towns
Water Bodies
MCIC Risk Areas
Municipalities
Prov./Nat. Parks
N
W
E
S
Data Source: Environment Canada
Precipitation (mm)
261 - 280
281 - 300
301 - 320
321 - 340
341 - 360
361 - 380
381 - 400
401 - 420
421 - 440
441 - 460
461 - 480
Manitoba Agriculture and Food
Riding Mountain National Park
DAUPHIN
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VIRDEN
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CARBERRY
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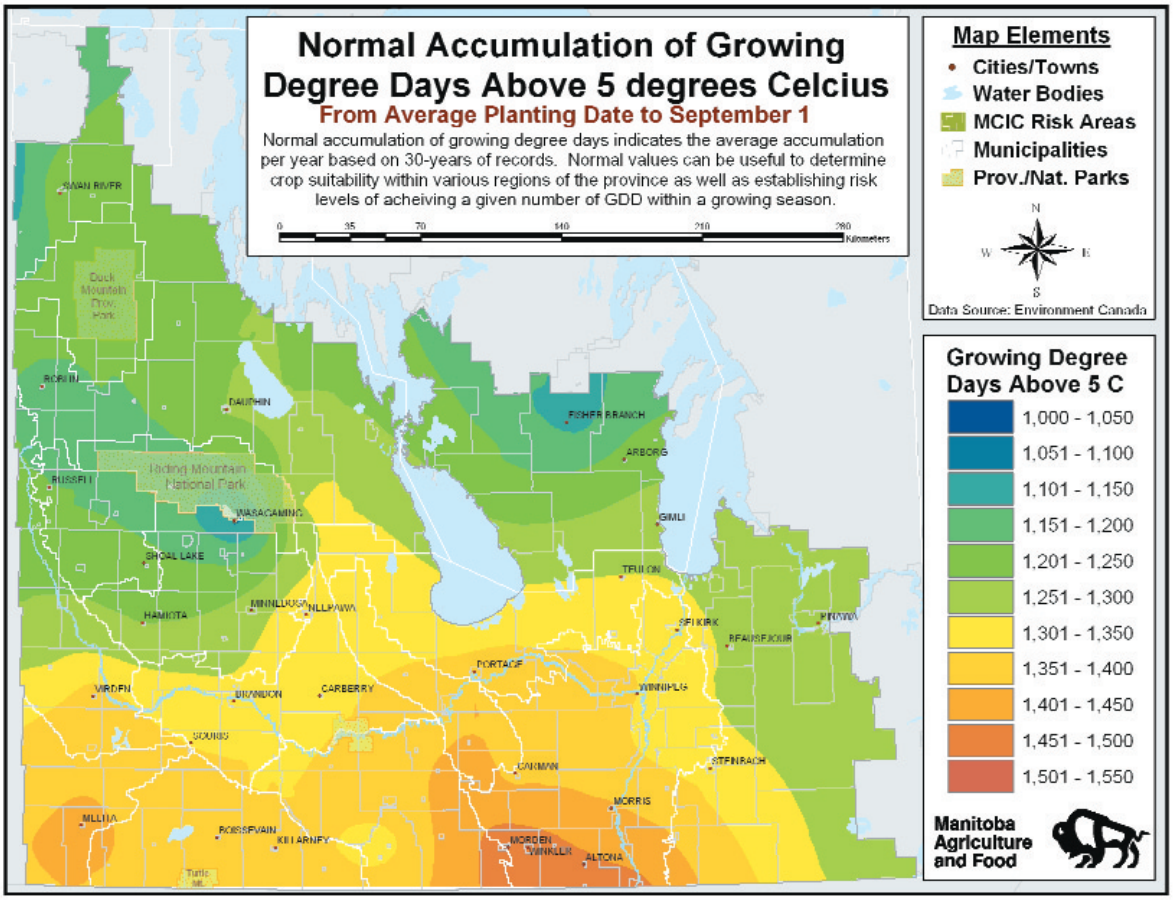
MELITA
KILLARNEY
BOISSEVAIN


Normal Accumulation of Growing Degree Days Above 5 degrees Celcius
From Average Planting Date to September 1
Normal accumulation of growing degree days indicates the average accumulation per year based on 30-years of records. Normal values can be useful to determine crop suitability within various regions of the province as well as establishing risk levels of acheiving a given number of GDD within a growing season.
Map Elements
Cities/Towns
Water Bodies
MCIC Risk Areas
Municipalities
Prov./Nat. Parks
Data Source: Environment Canada
Growing Degree Days Above 5 C
1,000 - 1,050
1,051 - 1,100
1,101 - 1,150
1,151 - 1,200
1,201 - 1,250
1,251 - 1,300
1,301 - 1,350
1,351 - 1,400
1,401 - 1,450
1,451 - 1,500
1,501 - 1,550
Manitoba Agriculture and Food
SWAN RIVER
Duck Mountain Prov. Park
ROBLIN
DAUPHIN
Riding Mountain National Park
RUSSELL
WASAGAMING
SHOAL LAKE
HAMIOTA
MINNEDOSA
NEEPAWA
VIRDEN
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SOURIS
MELITA
ROSSBURN
KILLARNEY
MORDEN
WINKLER
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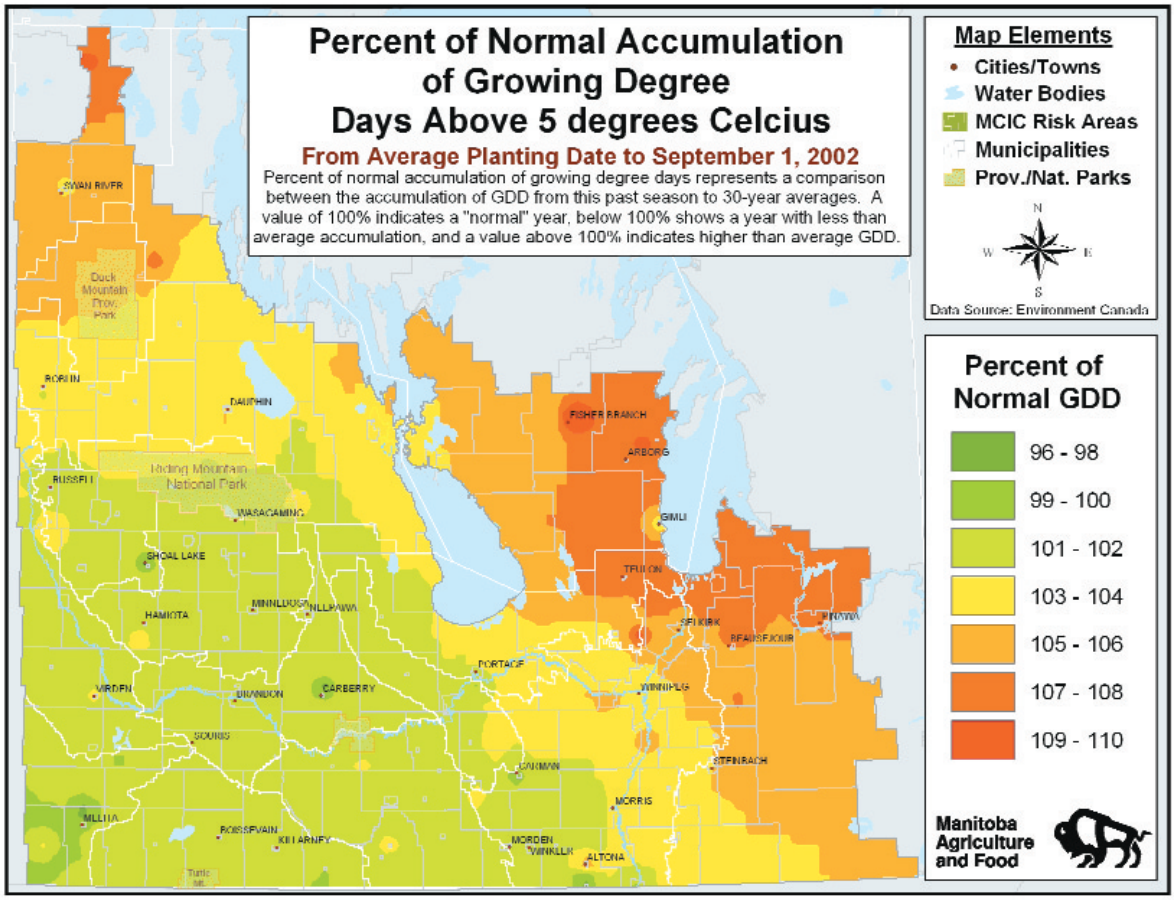
FISHER BRANCH
ARBORG
GIMLI
TRURO
SELKIRK
BEAUSEJOUR
STEINBACH
MORRIS


Percent of Normal Accumulation of Growing Degree Days Above 5 degrees Celcius
From Average Planting Date to September 1, 2002
Percent of normal accumulation of growing degree days represents a comparison between the accumulation of GDD from this past season to 30-year averages. A value of 100% indicates a "normal" year, below 100% shows a year with less than average accumulation, and a value above 100% indicates higher than average GDD.
Map Elements
Cities/Towns
Water Bodies
MCIC Risk Areas
Municipalities
Prov./Nat. Parks
Data Source: Environment Canada
Percent of Normal GDD
96 - 98
99 - 100
101 - 102
103 - 104
105 - 106
107 - 108
109 - 110
Manitoba Agriculture and Food
SWAN RIVER
Duck Mountain Prov. Park
ROBLIN
DAUPHIN
Riding Mountain National Park
RUSSELL
WASAGAMING
SHOAL LAKE
HAMIOTA
MINNEDOSA
NEEPAWA
VIRDEN
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KILLARNEY
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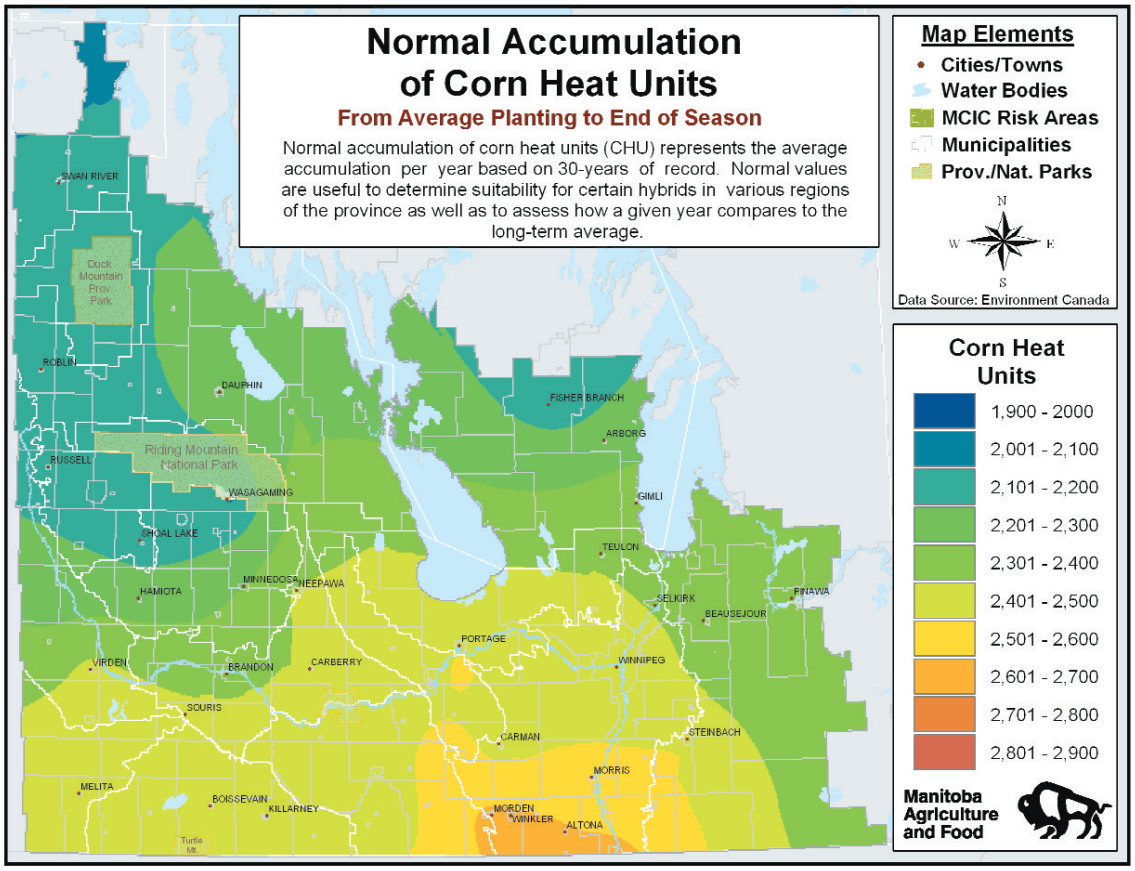
FISHER BRANCH
ARBORG
GIMLI
TRURO
SELKIRK
BEAUSEJOUR
STEINBACH
MORRIS


Normal Accumulation of Corn Heat Units
From Average Planting to End of Season
Normal accumulation of corn heat units (CHU) represents the average accumulation per year based on 30-years of record. Normal values are useful to determine suitability for certain hybrids in various regions of the province as well as to assess how a given year compares to the long-term average.
Map Elements
Cities/Towns
Water Bodies
MCIC Risk Areas
Municipalities
Prov./Nat. Parks
N
W
E
S
Data Source: Environment Canada
Corn Heat Units
1,900 - 2000
2,001 - 2,100
2,101 - 2,200
2,201 - 2,300
2,301 - 2,400
2,401 - 2,500
2,501 - 2,600
2,601 - 2,700
2,701 - 2,800
2,801 - 2,900
Manitoba Agriculture and Food
SWAN RIVER
Duck Mountain Prov. Park
ROBLIN
DAUPHIN
FISHER BRANCH
ARBORG
Riding Mountain National Park
RUSSELL
WASAGAMING
GIMLI
SHOAL LAKE
TEULON
MINNEDOSA
NEEPAWA
HAMIOTA
SELKIRK
PINAWA
BEAUSEJOUR
PORTAGE
VIRDEN
BRANDON
CARBERRY
WINNIPEG
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CARMAN
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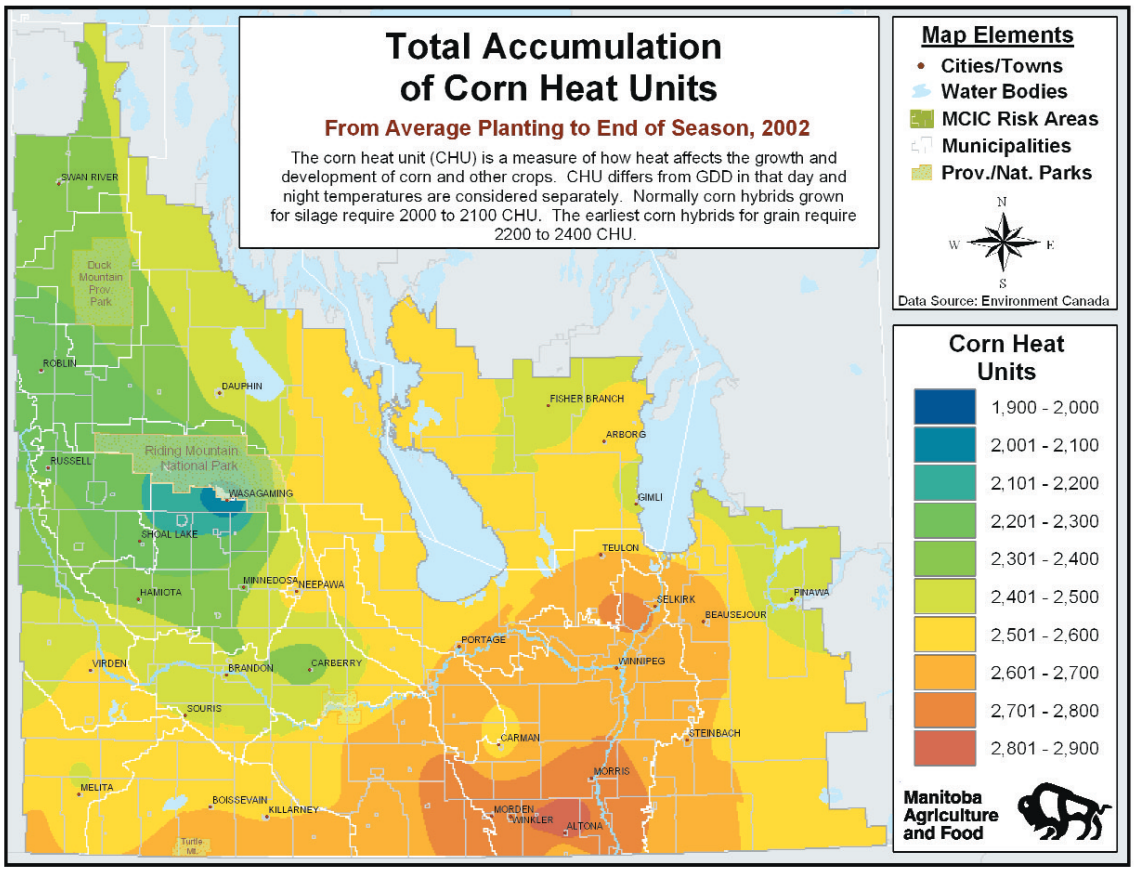
MORRIS
MELITA
BOISSEVAIN
KILLARNEY
MORDEN
WINKLER
ALTONA


Total Accumulation of Corn Heat Units
From Average Planting to End of Season, 2002
The corn heat unit (CHU) is a measure of how heat affects the growth and development of corn and other crops. CHU differs from GDD in that day and night temperatures are considered separately. Normally corn hybrids grown for silage require 2000 to 2100 CHU. The earliest corn hybrids for grain require 2200 to 2400 CHU.
Map Elements
Cities/Towns
Water Bodies
MCIC Risk Areas
Municipalities
Prov./Nat. Parks
N
W
E
S
Data Source: Environment Canada
Corn Heat Units
1,900 - 2,000
2,001 - 2,100
2,101 - 2,200
2,201 - 2,300
2,301 - 2,400
2,401 - 2,500
2,501 - 2,600
2,601 - 2,700
2,701 - 2,800
2,801 - 2,900
Manitoba Agriculture and Food
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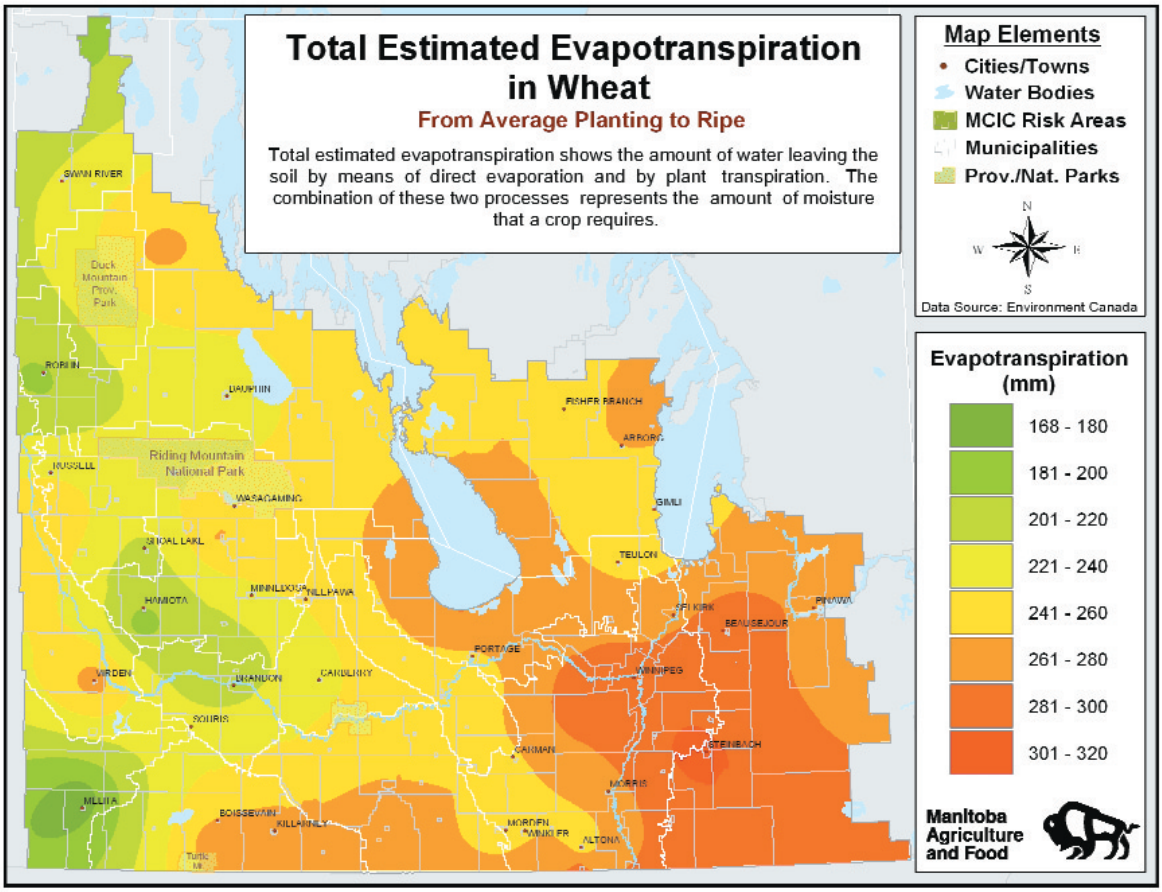
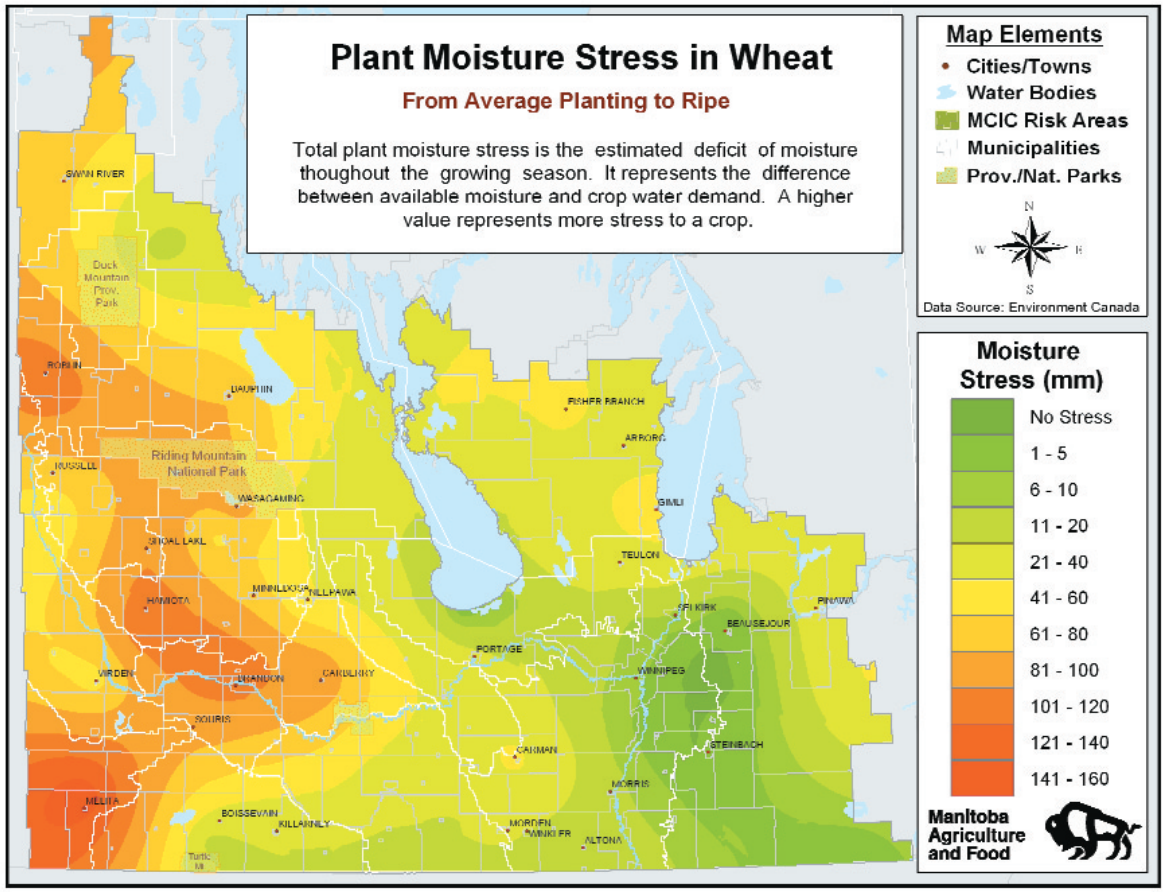
VIRDEN
BRANDON
CARBERRY
WINNIPEG
SOURIS
CARMAN
STEINBACH
MORRIS
MELITA
BOISSEVAIN
KILLARNEY
MORDEN
WINKLER
ALTONA


Total Estimated Evapotranspiration in Wheat
From Average Planting to Ripe
Total estimated evapotranspiration shows the amount of water leaving the soil by means of direct evaporation and by plant transpiration. The combination of these two processes represents the amount of moisture that a crop requires.
Map Elements
Cities/Towns
Water Bodies
MCIC Risk Areas
Municipalities
Prov./Nat. Parks
N
W
E
S
Data Source: Environment Canada
Evapotranspiration (mm)
168 - 180
181 - 200
201 - 220
221 - 240
241 - 260
261 - 280
281 - 300
301 - 320
Manitoba Agriculture and Food
SWAN RIVER
Duck Mountain Prov. Park
ROBLIN
DAUPHIN
RUSSELL
Riding Mountain National Park
WASAGAMING
ONDAL LAKE
HAMIOTA
MINNEDOSA
ELLPAWA
VIRDEN
BRANDON
CARDILNEY
SOURIS
MELITA
BOISSEVAIN
KILLARNEY
MORDEN
WINKLER
ALTONA
PORTAGE
WINNIPEG
FISHER BRANCH
ARBORG
GIMLI
TEULON
STONEWALL
STEINBACH
CARMAN
MORRIS
BEAUSEJOUR
PINAWA


Plant Moisture Stress in Wheat
From Average Planting to Ripe
Total plant moisture stress is the estimated deficit of moisture thoughout the growing season. It represents the difference between available moisture and crop water demand. A higher value represents more stress to a crop.
Map Elements
Cities/Towns
Water Bodies
MCIC Risk Areas
Municipalities
Prov./Nat. Parks
N
W
E
S
Data Source: Environment Canada
Moisture Stress (mm)
No Stress
1 - 5
6 - 10
11 - 20
21 - 40
41 - 60
61 - 80
81 - 100
101 - 120
121 - 140
141 - 160
Manitoba Agriculture and Food
SWAN RIVER
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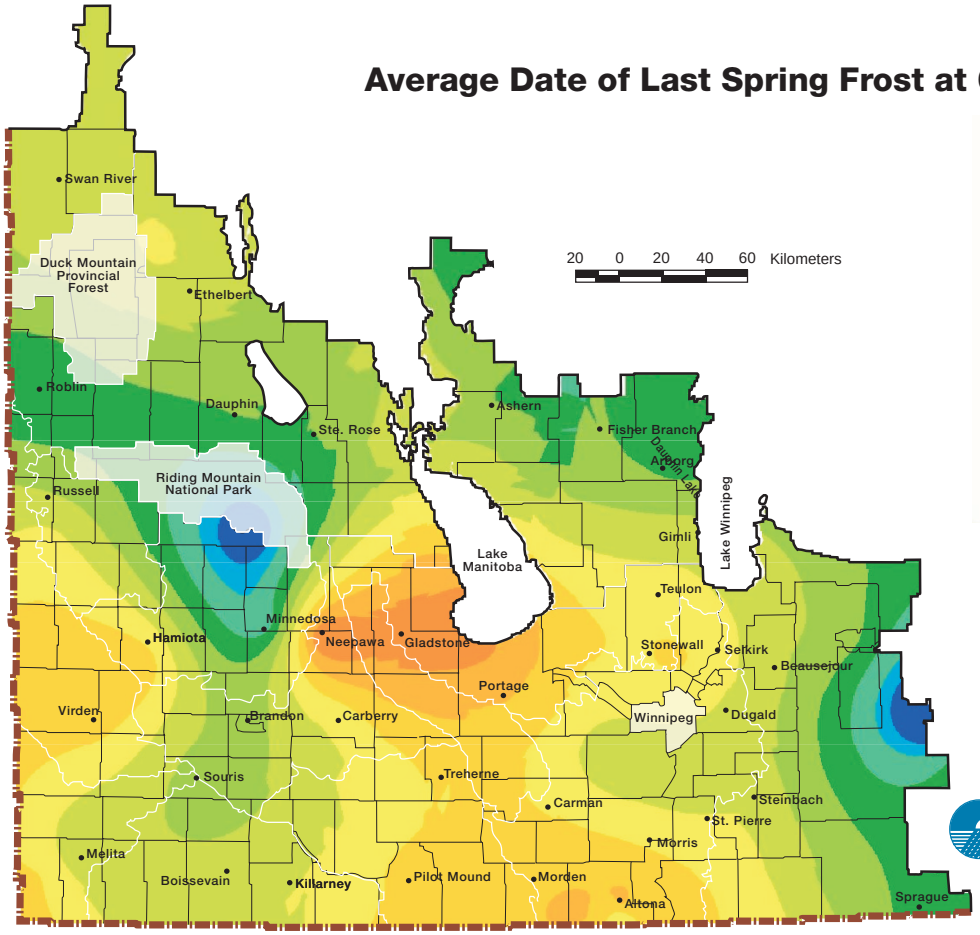
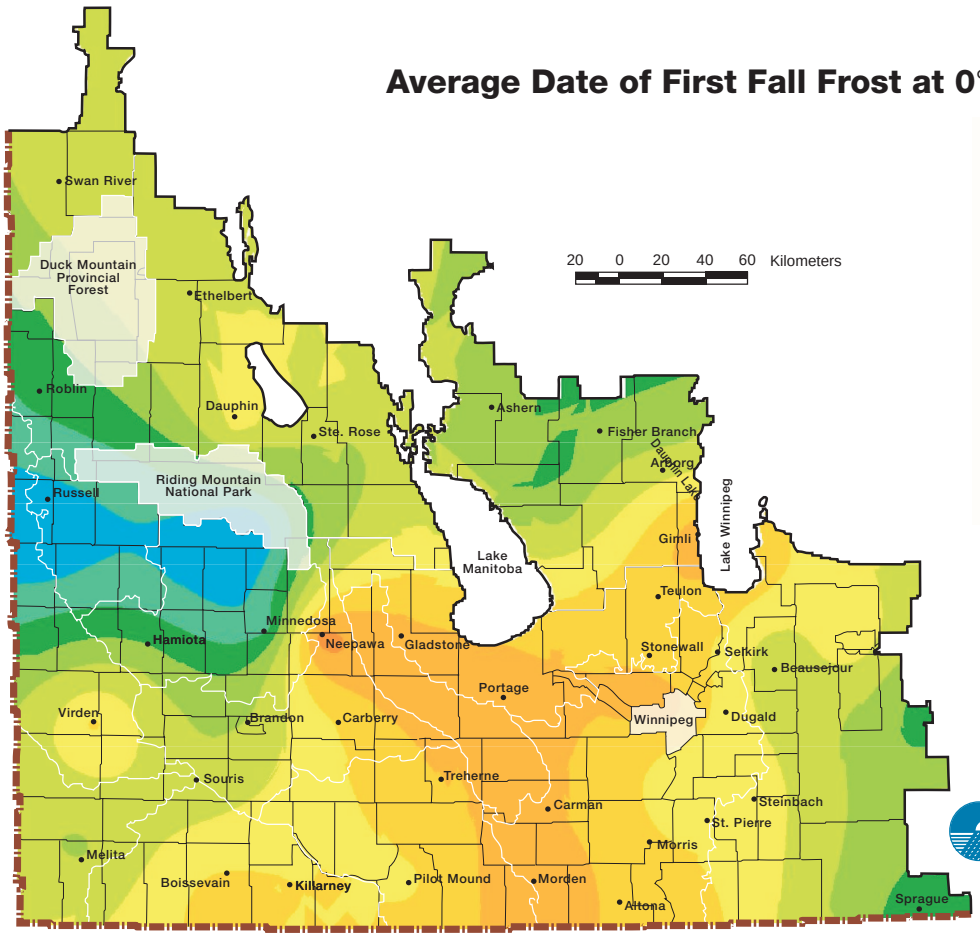
PORTAGE
WINNIPEG
FISHER BRANCH
ARBORG
GIMLI
TEULON
STONEWALL
STEINBACH
CARMAN
MORRIS
BEAUSEJOUR
PINAWA

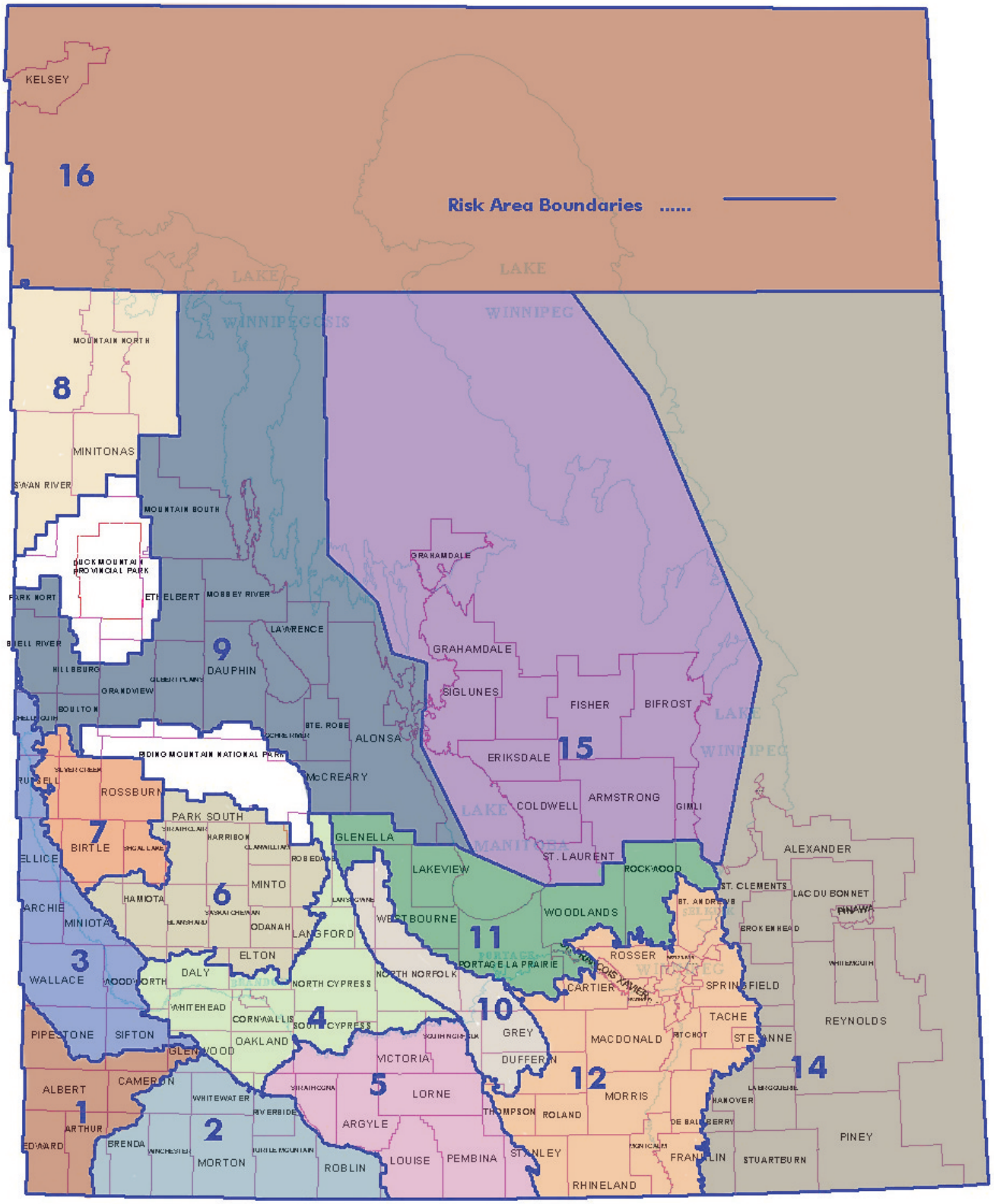
Average Date of Last Spring Frost at 0°C



Average Date of First Fall Frost at 0°C



Risk Areas


Risk Area Boundaries .....
16
KELSEY
LAKE
WINNIPEG
8
MOUNTAIN NORTH
MINITONAS
SWAN RIVER
MOUNTAIN SOUTH
DUCK MOUNTAIN PROVINCIAL PARK
ETHELBERT
MOSSEY RIVER
LAWRENCE
9
DAUPHIN
GRAHAMDALE
SIGLUNES
FISHER
BIFROST
15
ERIKSDALE
ALONSA
BTE. ROBE
RIDING MOUNTAIN NATIONAL PARK
McCREARY
ROSSBURN
PARK SOUTH
7
BIRTLE
COLDWELL
ARMSTRONG
GIMLI
GLENELLA
LAKEVIEW
ST. LAURENT
ROCKWOOD
ALEXANDER
ST. CLEMENTS
LAC DU BONNET
MINTO
6
HAMIOTA
MINIOTA
ODANAH
LANGFORD
WESTBOURNE
WOODLANDS
11
ROSSER
PORTAGE LA PRAIRIE
3
WALLACE
ELTON
DALY
NORTH NORFOLK
NORTH CYPRESS
CARTIER
SPRINGFIELD
WHITEHEAD
CORNWALLIS
SOUTH CYPRESS
4
10
GREY
TACHE
REYNOLDS
PIPESTONE
SIFTON
OAKLAND
GLENWOOD
VICTORIA
DUFFERIN
MACDONALD
STE. ANNE
14
ALBERT
CAMERON
1
5
LORNE
12
MORRIS
WHITEWATER
ARTHUR
ARGYLE
THOMPSON
ROLAND
2
BRENDA
MORTON
ROBLIN
LOUISE
PEMBINA
STANLEY
FRANKLIN
STUARTBURN
PINEY
RHINELAND

Climate change and risk:

EXPANDED

growing season could mean big changes for Manitoba crops

By Jeff Eyamie

Much is still unknown about what is happening to our climate and to growing conditions in Manitoba. Scientists disagree on the causes and the changes that will take place in the future.

Despite the unknown, it is easy for Manitoba farmers to see that something is happening. Droughts in some areas, flooding in others — a lengthening of the growing season. It would be advised to sharpen your pencils to plan for what is to come.

Despite all of the things we don't yet know, farmers need to start thinking about what to do — and how to turn climate change into opportunity — before it's too late.

THE SCIENCE – OR LACK THEREOF

While we still don't know everything about how our climate is changing, we know even less about how soil and growing conditions will change.

Humanity's best record-keeping indicates that the 20th Century was the warmest of the millennium. The '80s and '90s were the warmest decades ever recorded. Keep in mind, though, that this is global average temperature. This tells us very little. In recent years, Earth's temperature has been on the rise.

"This is not a uniform process," says Bevan Lawson, a meteorologist with Environment Canada. "When we say 'global warming,' people forget that first word."

Lawson says that generally accepted scientific models, such as the models developed by the Canadian Centre for Climate Modeling and Analysis (CCMA) based in Victoria, each demonstrate the same thing: our planet's temperature is going up.

The models developed by the CCMA predict average temperature increases for the next 100 years. In parts of Manitoba, particularly in the north, temperatures increase by as much as 6°C. When you consider the Ice Age was a global average temperature of about 6°C lower than today, the impact could be tremendous. In the next 30 years, models indicate average increases of about 1.5°C.

So what does this mean for crop choices?

Danny Blair, a geography professor at the University of Winnipeg, studied the increase in frost-free days in Manitoba from the beginning of the 20th Century. He says data collected by weather stations over the past century show an increase in frost-free days of between one and two weeks, or an average of about one frost-free day every 10 years.

Northern areas see more change than southern areas. Throughout Manitoba, the increase in frost-free

A changing climate could mean anything from an extended growing season to more variable weather. With growing evidence that global warming is a reality, it's going to be a factor farmers need to plan for in the future

days has been speeding up — over the last 50 years, we've increased by an average of three frost-free days per decade.

"The benefits of this are earlier seeding and a longer growing season," Blair says, speculating that soybeans and even corn could become more viable crops in the decades ahead.

"However, we need to know more about heat units and how much useful heat is in the soil — there's work to be done yet."

The temperature and moisture of Manitoba soil will change but no one can definitively say what that will mean, according to Paul Bullock, a professor of soil sciences at the University of Manitoba. Bullock says the research simply isn't there yet.

"I suspect that we've seen generally an increase in heat units," he says. Heat units are a calculation based on air temperature, but it doesn't necessarily require warmer temperatures during the day. Warmer overnight temperatures, or even a milder period before the thaw, can affect heat units within the soil.

"I would suspect we see either an increase in the rate of thaw or an increase in soil temperature," Bullock says. "Just like we see a change in the temperature of the atmosphere, we see a change in soil temperature.

"We have a lot to figure out before we're going to be able to say with any confidence how the agriculture industry, crop production in particular, will be affected by climate change," he says.

Several factors will interact with each other to determine exactly how the soil will respond to temperature increases. Nutrient levels, evaporation rates, a weakened winterkill and a number of other unknowns make predictions difficult.

"We expect warmer air temperatures to increase potential evaporation, which would put a greater demand on soil moisture," Bullock says. "However, we have also seen increased precipitation levels over the past century, leading us to believe that there will be more water available to recharge soil moisture. There is debate about which factor will be larger, so it is uncertain whether soil moisture levels will increase or decrease as a result of climate change."

Bullock says increased levels of carbon dioxide emission may also reduce the amount of water required by plants, which may actually reduce water requirements.

"We don't know if we will experience more drought and even if we do, we don't know whether crop growth and yield will be impacted."

It is reasonable to expect yields to increase in the years to come, which sounds like good news. However, those extreme weather events, changes in soil quality and new problems — like weeds, pests and diseases that our cold winters have killed in previous years — may take their toll on overall yields.

"Expect lots of variability," Lawson says. "It's weather — it's not climate."

That's the science of what is happening to your soil — now let's get to the science fiction.

WHAT TO PLANT IN 2003

Speculating that frost-free days were to increase by nine days everywhere in Manitoba over the next 30 years and that some of the variables like precipitation, soil moisture, heat units and new pests were held in check, a quick cross-reference of the *Manitoba Crop Atlas* published by Manitoba's Management Plus Program shows crops that are grown in some of the more fertile areas in Manitoba, such as in the Portage la Prairie and Morden areas, could be grown across half the province — crops like non-irrigated potatoes and silage corn.

Of course, you can't grow crops on rock, so these speculations only demonstrate that crop choices and yields will change — not that viable acres of farmland will expand.

Winter wheat becomes a viable option in this model, meaning nearly all of Manitoba's farms could see a two-crop season in 30 years. Fababeans could be viable as far north as Ste. Rose. The sunflower belt could extend up to Gladstone and beyond.

Now remember, this is just speculation. But the trends strongly suggest a growing season that is not only increasing, but speeding up the rate of growth in the frost-free period. It is likely the growing season will expand by more than nine days, especially in northern areas.

> **"The temperature** and moisture of Manitoba soil will change but no one can definitively say what that will mean..."

How it will affect soil, however, has yet to be determined.

"Most non-scientists think we already have all the answers about soil/crop/atmosphere interactions. That aspect appears to be missing from any research funding for climate change that I have seen. I think it is because most people — especially our policymakers who control research funding — assume we have this all figured out," Bullock says.

While there is some disagreement among researchers, it's generally assumed that we will see more extreme weather events. "Expect lots of variability," Lawson says. "It's weather — it's not climate."

Most evidence indicates we'll probably see slightly more precipitation than we currently do, but that the rain will come in heavier dumps and with less frequency. Manitobans are also very familiar with drought in one given year and flooding the next.

"Agriculture is adapting to climate change now — it's the speed of adaptation in the future that we need to determine," says Bryan Yusishen, director of Manitoba Agriculture and Food. "The same things we do for sustainable agriculture are what we'll do for climate change."

Yusishen says local ag groups had an initial meeting with the province in September to discuss adaptation in the face of climate change and provincial officials are looking into the effects of climate change on insurance premiums and payouts.

"Agriculture in Manitoba should fare not too badly, as long as we handle the issue of water," Yusishen says.

"Climate change is one reason to do what we do well." Y

Yield robbers of Manitoba:

THE USUAL SUSPECTS
catch farmers year after year

By Doug Wilcox, MCIC

When bad things happen to good farmers, Crop Insurance (CI) is often there to help.

Manitoba Crop Insurance has been in business for over 40 years and currently insures over 90 per cent of the annual cropped acres in Manitoba. This experience provides CI with good insight into the major yield robbers occurring — and recurring — in Manitoba.

The natural perils covered include drought, excess moisture, frost, hail, fire, excess heat, wind, wildlife and waterfowl, disease and pests — which do not reflect all the yield robbers present in Manitoba.

CI can only report on those yield robbers that have had a financial impact on CI (i.e. insured perils which reduce yield below coverage). To CI the financial impact of a yield robber depends on the insurance selections (crops, coverage levels and price options) and the extent and nature of the loss.

> "...the best assessment of your production risks will come by reading the criminal records of the yield robbers in your crops in your region"

The bite a yield robber takes out of your crop could be less than the deductible for your CI policy — CI does not track these losses. For example, if disease robs only 10 per cent of your yield, it will likely not put you in a claim situation and this peril will not be tracked by crop insurance.

Also, under the CI contract producers are required to follow good farming practices and properly plant, care for and harvest the insured crop. If management-related yield losses occur (e.g. chemical drift, poor seed, lack of weed control, etc.) there is no claim and these yield robbers are not tracked by CI. The result is that some yield robbers may be underreported in the CI record.

RESEEDING

Reseed claims are the first claims each year to be tracked by CI. Reseed claims are the claims occurring prior to the seeding deadline for which the producer receives the reseeding benefit and reseeds the field. They are also spot-loss claims where the total crop is not necessarily affected.

Reseeding can rob the yield of the subsequent reseeded crop by delaying planting. CI data indicates that the major reason for having to reseed crops in Manitoba is excess moisture; this accounts for 35 per cent of payouts. Other major causes of loss are soil crusting (18 per cent), frost (17 per cent), wind and heat (six per cent), poor germination and emergence (six per cent) and drought (six per cent). The relative significance of the main reseed yield robbers is illustrated in Figure 1. In recent years reseeding claims in Manitoba have averaged payouts totaling nearly $2.8 million/year.

POST-SEEDING

The main yield robbers in Manitoba are reflected in CI post-seeding claims. In recent years, post-seeding claims in Manitoba have averaged nearly $40 million a year.

The major, long-term post-seeding yield robber in Manitoba is excess moisture accounting for 36 per cent of CI payouts. Drought is the next major yield robber accounting for 31 per cent of payouts. Frost (10 per cent), hail (eight per cent), heat (six per cent) and disease (three per cent) are the other significant yield robbers.

The relative significance of post-seeding yield robbers is illustrated in Figure 2. It is interesting to note that if 31 per cent of payouts are due to drought and that on average $40 million is paid out for all post-seeding claims, this means Manitoba pays out an average of over $12.4 million per year due to drought.

Similar calculations can be done for the other yield robbers. In the other Prairie provinces drought is a significantly larger piece of their yield robber pie. So Manitobans need to be careful not to jump on the Prairie drought bandwagon; we have another as important yield robber — excess moisture.

It is important to note that the information presented so far is for all crops in all of Manitoba. Individual crops and individual regions have their own unique, predominant yield robbers. For example in white pea beans excess moisture accounts for 62 per cent post-seeding payouts, whereas in buckwheat excess moisture only accounts for 26 per cent of payouts. It is also interesting to note that only 15 per cent of buckwheat payouts are due to frost — this is higher than the all-crop average, but not as high as some might guess.

TERRITORIAL

The yield robbers present in Manitoba tend to stick to their own territories. Most territories are predictable if you are familiar with agriculture in Manitoba — the Red River Valley tends to have excess moisture concerns, the southwest corner drought concerns and the northern regions frost concerns.

Other examples of the territoriality of yield robbers are less obvious. For example Figure 3 illustrates that soil crusting is predominantly a problem in the Red River Valley and Figure 4 illustrates that diseases are predominately an issue in the southwest.

This kind of territoriality is true for almost every yield robber in Manitoba. From a CI perspective this is fortunate for Manitoba producers as the territoriality of various risk types allows year-to-year offsetting of yield robbers, reducing

Figure 1 Major reseed causes of loss

MCIC average 1993-2001

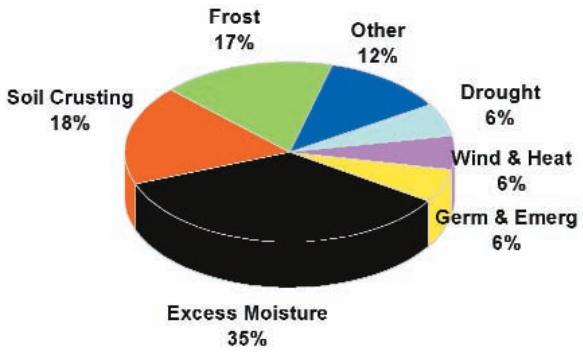


Figure 2 Major post seeding causes of loss

MCIC average 1966-2001

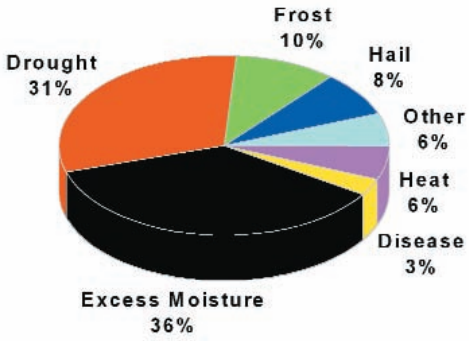


Figure 3 Cause of loss significance-soil crusting

MCIC reseeded claims 1996-2002

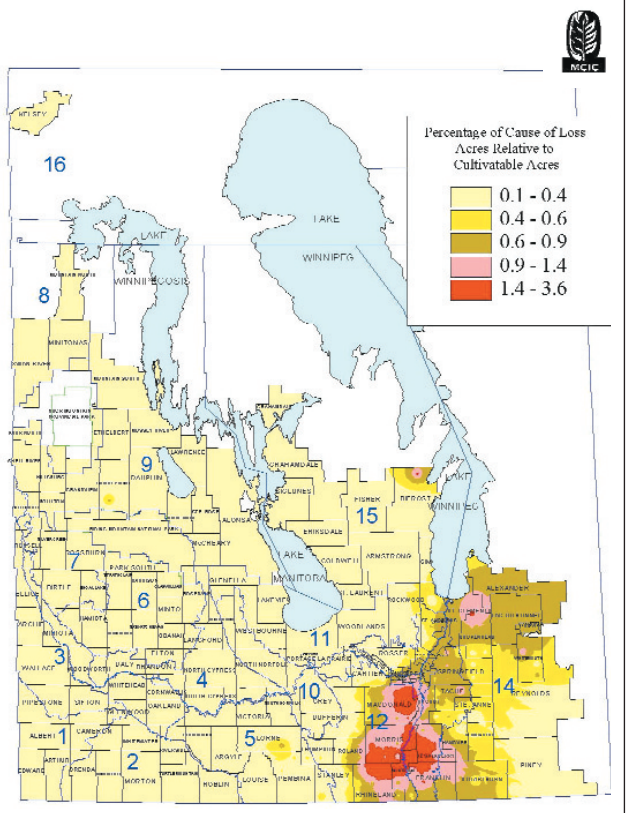


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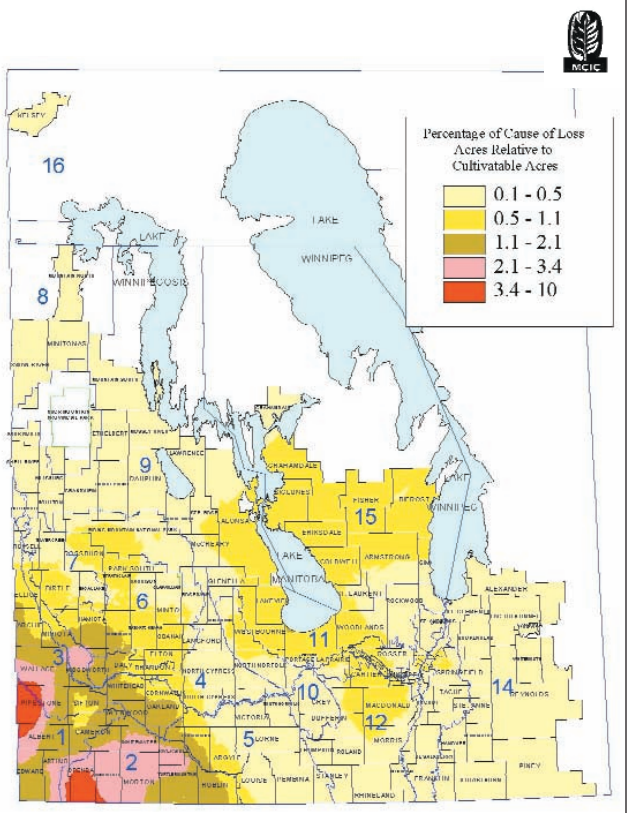
Figure 4 Cause of loss significance-all diseases

MCIC post harvest claims 1996-2001



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provincial yield variability and in turn keeping premiums low.

FEED THE BEARS

When feeding by waterfowl (ducks, geese, cranes) and big game (deer, elk, moose, bear) rob you of crop yield the wildlife loss compensation program administered by CI will reimburse you.

Over the last 15 years Manitoba's wildlife compensation program has paid over $5 million for waterfowl damage, $4 million for big game damage to crops and $2 million for big game damage to stored hay.

Wildlife damage of crops also tends to follow the territorial nature of other yield robbers. Approximately 24 per cent of the total payouts for wildlife compensation were paid out in only 29 townships. The highest payout areas are concentrated around the following three areas: Duck Mountain Provincial Park, Riding Mountain National Park and Oak Hammock Marsh.

Farmers have been worrying about yield robbers for as long as they have been praying for rain — this isn't likely to change. However, the best assessment of your production risks will come by reading the criminal records of the yield robbers in your crops in your region.

Knowledge of the criminal record of yield robbers is especially relevant if you are a new producer or are expanding your operation into new crops or into new geographic locations. This knowledge may also assist you with customizing crop insurance products to best address your production risks. Check out the Manitoba Management Plus Program web site (www.mmpp.com) for additional useful yield robber criminal record (Causes of Loss) information.