



pt 55 A

R. & A. MILLER'S CANADIAN FARMER'S ALMANAC

FOR THE YEAR OF OUR LORD

1860,

8



Being Bissextile or Leap Year, and until the 20th June, the
Twenty-Third Year of the Reign of Her Majesty Queen
Victoria.

Calculated for the Meridian of Montreal, in Latitude $45^{\circ} 30' 26''$ North, and Longitude $73^{\circ} 24' 22''$ West, from the Royal
Observatory, Greenwich, but arranged so as to serve without
essential variation for all parts of Canada, East and West.

EDITION OF TWENTY THOUSAND.

Entered according to Act of Provincial Legislature, in the year of our Lord
One thousand eight hundred and fifty-nine, by R. & A. MILLER, in the
office of the Registrar of the Province of Canada.

Montreal:

PUBLISHED BY R. & A. MILLER,

60, ST. FRANÇOIS XAVIER STREET.

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Also bound by the compiler.

Explanation of Calendar Pages.

The Publishers of this Almanac, with a view to increase its circulation and usefulness, have adapted its calculations for the whole country. The Moon's changes are given for four different places, viz; Montreal, Kingston, Toronto, and London. The rising and setting of the Sun are given for Montreal and Toronto. The Sun's declination North or South is given as usual. The rising and setting of the Moon are given with sufficient exactness for all practical purposes. The weather prognostications are again calculated according to the table of the celebrated Dr. Herschel, and for extraordinary accuracy Miller's Almanac retains its wonderful popularity.

Chronological Cycles.

Dominical Letter	A. G.	Julian Period.....	6573
Golden Number.....	18	Jewish year commencing	
Jewish Lunar Cycle.....	15	14th January, 1859.....	5621
Epact or Moon's Age.....	7	Age of the World	5863
Solar Cycle	21	Mahometan year, Oct. 15th	1275

Movable Festivals.

Septuagesima Sunday, Febr.	5	Low Sunday.....	April 15
Quinquagesima " "	19	Rogation Sunday.....	May 13
Ash Wednesday.....	22	Ascension Day.....	" 17
First Sunday in Lent ...	26	Whitsunday	" 27
Palm Sunday.....	April 1	Trinity Sunday.....	June 3
Good Friday.....	" 6	Corpus Christi, Fete-Dieu	" 7
Easter Sunday.....	" 5	Advent Sunday.....	Dec. 2

Holidays observed at Public Offices.

Circumcision.....	Jan. 1	Corpus Christi	June
Epiphany.....	" 6	St. Peter and St. Paul .	" 29
Annunciation	March 25	All Saints Day	Nov. 1
Good Friday	April 6	Conception of the Blessed	
Ascension Day.....	May 17	Virgin Mary	Dec. 8
Queen Victoria's Birthday	" 24	Christmas Day	" 25

ECLIPSES DURING THE YEAR 1860.

During this year there will be four Eclipses, two of the Sun and two of the Moon.

I.—On the 22nd of January there will be an Annular Eclipse of the Sun, but it will not be visible in America.

II.—On the 6th day of February there will be a partial Eclipse of the Moon. Visible in size 9.744 digits on the North limb. It begins in the Evening at Montreal 9 minutes past 8. The Eclipse attains its largest size at 35 minutes past 9, and ends about 11 o'clock. It begins in Toronto 7.46; middles 9.12, and ends at 38 minutes past 10.

III.—On the 18th of July there will be a total Eclipse of the Sun in the Morning. On this Continent it will be only partial. In Canada it will be visible about two hours, beginning a few minutes past 7 in the morning and ending a few minutes past 9.

IV.—On the 1st day of August there will be a partial Eclipse of the Moon, but it will not be visible in Canada.

DURATION OF THE SEASONS, &c.

		D.	H.	M.
Vernal Equinox,	begins	20	3	57 Morn.
Summer Solstice,	"	21	0	35 Morn.
Autumnal Equinox,	"	22	2	44 Even.
Winter Solstice,	"	21	8	43 Morn.

	D.	H.	M.		D.	H.	M.
Sun in Winter Signs....	89	1	2	Tropical Year.....	365	5	48
Sun in Spring Signs....	92	20	38	Sun North of the Equator	186	10	47
Sun in Summer Signs....	93	14	9	Sun South of the Equator	178	19	6
Sun in Autumnal Signs.	89	17	59	Difference	7	15	46

APPEARANCE OF PLANETS, 1860.

Until July 18th Venus will be the Evening Star, and then the Morning Star the rest of the year. Until July 17th, Mars will be Morning Star, then Evening the remainder of the year. Saturn will be Morning Star until February 11th, then Evening Star until August 22nd, then Morning Star the rest of the year. Venus will be Eclipsed by the Moon on the 24th of April, visible generally throughout the country. The Planet will disappear behind the Moon about half past eight in the Evening and re-appear about 9. Jupiter will also be Eclipsed by the Moon North 43° on the 26th of April, about one hour before the Moon sets,

1st Month.

JANUARY, 31 Days. Begins on Sunday.

Moon's Phases.		Montreal.	Kingston.	Toronto.	London.	Sun on Meridian		
	d.	h. m.	h. m.	h. m.	h. m.	d.	h. m.	s.
Full Moon,	8	10 29 mo.	10 17 mo.	10 6 mo.	9 58 mo.	1	12 3	43
Last Quarter,....	15	2 5 mo.	1 53 mo.	1 41 mo.	1 33 mo.	9	12 7	17
New Moon,	22	7 23 ev.	7 11 ev.	6 59 ev.	6 51 ev.	17	12 10	18
First Quarter,...	31	0 17 mo.	0 5 mo.	11 53 ev.	11 45 ev.	25	12 12	34

M. Week.	DAYS.	Montreal.		Toronto.		Sun's Declinat.		The Moon.	Calendar, Aspects, &c.
		Sun Rises.	Sun Sets.	Sun Rises.	Sun Sets.	South.		R. & S.	
		h. m.	h. m.	h. m.	h. m.	Deg.	Min.	h. m.	
1	A.	7 46	4 20	7 40	4 28	23	2	Morn.	<i>Circumcision.</i>
2	Mon.	46	21	40	29	22	57	1 12	<i>1st Sun. after Christmas.</i>
3	Tues.	46	22	40	30	22	51	2 16	Inclement weather may
4	Wed.	45	23	39	31	22	45	3 24	be looked for at the begin-
5	Thu.	45	24	39	32	22	39	4 33	ning of the year.
6	Fri.	45	25	39	33	22	32	5 42	<i>Epiphany.</i>
7	Sat.	44	27	39	34	22	24	6 44	Variable.
8	A.	7 44	4 28	7 38	4 35	22	17	Rises.	<i>1st Sun. after Epiphany.</i>
9	Mon.	44	29	38	36	22	8	6 18	Very unsettled and stormy
10	Tues.	43	31	37	37	22	0	7 37	weather.
11	Wed.	43	33	37	38	21	51	8 54	Some thaw but not for
12	Thu.	42	34	37	40	21	41	10 9	long yet.
13	Fri.	43	36	37	41	21	31	11 22	Very fine day.
14	Sat.	41	37	36	42	21	21	Morn.	Agreeable weather.
15	A.	7 40	4 38	7 35	4 43	21	10	1 35	<i>2nd Sun. after Epiphany.</i>
16	Mon.	40	39	35	44	20	59	1 46	With the new moon look
17	Tues.	39	41	35	45	20	47	2 58	for a change of weather.
18	Wed.	39	42	34	46	20	35	4 5	Very cold but steady and
19	Thu.	38	43	33	48	20	23	5 6	Lower Canada like.
20	Fri.	37	45	32	49	20	10	5 58	
21	Sat.	36	47	31	50	19	57	6 41	Fair and frosty.
22	A.	7 35	4 40	7 30	4 52	19	44	Sets.	<i>3rd Sun. after Epiphany.</i>
23	Mon.	34	51	29	53	19	30	5 58	
24	Tues.	33	52	28	54	19	16	7 0	The January thaw came
25	Wed.	32	53	27	56	19	1	8 0	as usual
26	Thu.	31	54	26	57	18	46	8 58	<i>Conversion of St. Paul.</i>
27	Fri.	31	55	25	58	18	31	9 59	but a little earlier. The end
28	Sat.	30	56	24	5 00	18	15	11 0	of the month
29	A.	7 29	4 53	7 24	5 01	17	59	Morn.	<i>4th Sun. after Epiphany.</i>
30	Mon.	28	59	23	2	17	43	3	rather severe weather.
31	Tues.	27	5 00	23	4	17	26	1 7	

JANUARY.—A sensible farmer will employ the comparative leisure of the winter season in useful and profitable undertakings. His time is largely occupied in the manufactories of those fertilizing materials, the product of the stables and stock-yards. He will look to the continued fertility of his land, and will therefore have well-considered and thoroughly-applied plans for the *feeding*, as well as the cropping of the soil. His thoughts will be directed to procuring, as far as possible, the necessary supplies of manure upon the farm. Home-sources of strength, and unemployed valuable fertilizers, will receive due consideration. He will find that labour here, is time and money saved.

1860.]

MEMORANDUM FOR JANUARY.

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*The Rice did not pass on
our meeting in Gov. met
December this year*

2nd MONTH. **FEBRUARY, 29 Days.** Begins on Wednesday.

Moon's Phases.		Montreal.	Kingston.	Toronto.	London.	Sun on Meridian.		
	d.	h. m.	h. m.	h. m.	h. m.	d.	h. m.	s.
Full Moon,.....	6	9 41 ev.	9 29 ev.	9 18 ev.	9 10 ev.	1	12 13	51
Last Quarter,...	13	1 57 ev.	1 45 ev.	1 34 ev.	1 26 ev.	9	12 14	29
New Moon,.....	21	2 44 ev.	2 32 ev.	2 21 ev.	2 13 ev.	17	12 14	17
First Quarter,...	29	3 1 ev.	2 49 ev.	2 38 ev.	2 30 ev.	25	12 13	21

DAYS.		Montreal.		Toronto.		Sun's Declinat.	The Moon.	Calendar, Aspects, &c.
M.	Week.	Sun Rises.	Sun Sets.	Sun Rises.	Sun Sets.	South.	R. & S.	
		h. m.	h. m.	h. m.	h. m.	Deg. Min.	h. m.	
1	Wed.	7 27	5 1	7 24	5 5	17 10	2 15	Severe and clear.
2	Thu.	26	2	22	5	16 52	3 23	Purification of B. V. M.
3	Fri.	25	3	21	6	16 35	4 25	Fine and agreeable days
4	Sat.	23	4	20	6	16 17	5 24	for some time.
5	A.	7 22	5 5	7 19	5 7	15 59	6 10	Septuagesima Sunday.
6	Mon.	20	7	17	9	15 41	Rises.	The wind if South or
7	Tues.	19	9	16	9	15 22	6 28	South West will bring snow.
8	Wed.	18	11	14	11	15 4	7 47	Look out for a considerable
9	Thu.	17	13	13	13	14 44	9 3	fall. If North or North-East
10	Fri.	16	14	12	14	14 25	10 19	very hard frost.
11	Sat.	14	16	11	16	14 6	11 84	
12	A.	7 13	5 17	7 9	5 17	13 46	Morn.	Sexagesima Sunday.
13	Mon.	11	18	7	18	13 26	0 48	Fine winter day.
14	Tues.	10	19	6	19	13 5	1 57	ST. VALENTINE DAY.
15	Wed.	9	20	4	20	12 45	2 55	Busy at the Post Office
16	Thu.	8	22	2	22	12 24	3 54	whether rain or shine.
17	Fri.	6	24	1	24	12 4	4 42	But about this time there
18	Sat.	4	25	6 00	25	11 42	5 18	will be snow.
19	A.	7 3	5 27	6 59	5 27	11 21	5 47	Quinquagesima Sunday.
20	Mon.	1	28	57	28	11 0	6 12	Unsteady weather.
21	Tues.	7 00	30	55	30	10 38	Sets.	Shrove Tuesday.
22	Wed.	6 59	32	52	31	10 16	6 52	Ash Wednesday.
23	Thu.	57	34	50	33	9 54	7 50	Pleasant day.
24	Fri.	56	35	49	34	9 32	8 51	St. Matthias.
25	Sat.	54	37	47	35	9 10	9 58	Fair and mild.
26	A.	6 52	5 38	6 46	5 37	8 48	10 57	1st Sunday in Lent.
27	Mon.	49	39	46	38	8 55	Morn.	The month ends somewhat
28	Tues.	48	40	45	39	8 3	0 1	cloudy but on the whole plea-
29	Wed.	47	41	44	40	7 40	1 7	sant.

FEBRUARY.—The subject of *saving manure* should be given place and prominence in our agricultural journals. To turn, as far as possible, every resource to economical account, is a secret of success in the business of farming, as in every other. It should be, indeed, as a good farmer once remarked, "a prominent part of the farm-work, to manufacture as much manure thereon as possible." It should be a subject of careful study, to so apply the manurial resources, and so vary the course of cropping, as to give every field its due share; that thus the whole farm may become alike fertile and productive, and alike pay a fair profit to the owner.

1860.]

MEMORANDUM FOR FEBRUARY.

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3rd Month.

MARCH, 31 Days.

Begins on Thursday.

Moon's Phases.		Montreal.	Kingston.	Toronto.	London.	Sun on Meridian.	
	d.	h. m.	h. m.	h. m.	h. m.	d.	h. m. s
Full Moon.....	7	7 50 mo.	7 38 mo.	7 27 mo.	7 19 mo.	1	12 12 27
Last Quarter,...	14	4 15 mo.	4 3 mo.	3 51 mo.	3 43 mo.	9	12 10 34
New Moon.....	22	9 1 mo.	8 49 mo.	8 38 mo.	8 30 mo.	17	12 8 19
First Quarter,...	30	1 50 mo.	1 47 mo.	1 35 mo.	1 27 mo.	25	12 5 54

DAYS.		Montreal.		Toronto.		Sun's Declinat.		The Moon.	Calendar, Aspects, &c.
M.	Week.	Sun Rises.	Sun Sets.	Sun Rises.	Sun Sets.	South.		R. & S.	
		h. m.	h. m.	h. m.	h. m.	Deg.	Min.	h. m.	
1	Thu.	6 45	5 42	6 43	5 41	7	17	2 12	ST. DAVID'S DAY. March is remarkable this year for very variable weath.
2	Fri.	4 44	43	42	42	6	54	3 10	
3	Sat.	12	44	40	44	6	31	3 59	
4	G.	6 40	5 45	6 39	5 46	6	8	4 41	2nd Sunday in Lent.
5	Mon.	38	47	37	48	5	45	5 15	There will be a good deal of snow in L. C. In U. C. I foresee a good deal of rain mixed with snow and sleet.
6	Tues.	36	48	34	49	5	22	5 46	
7	Wed.	34	49	33	50	4	58	rises.	
8	Thu.	31	51	31	51	4	35	7 51	
9	Fri.	29	53	29	53	4	12	9 10	
10	Sat.	27	54	27	55	3	48	10 28	
11	G.	6 25	5 55	6 25	5 56	3	25	11 42	3rd Sunday in Lent.
12	Mon.	24	56	23	57	3	1	Morn.	The wind will be high and storming about the time of new moon.
13	Tues.	22	58	22	58	2	37	0 64	
14	Wed.	20	59	20	6 1	2	14	1 50	Dashes of rain and some snow yet.
15	Thu.	18	1	18	2	1	50	2 43	
16	Fri.	16	2	16	3	1	26	3 18	ST. PATRICK'S DAY.
17	Sat.	14	3	15	4	1	3	3 50	
18	G.	6 12	6 4	6 12	6 6	0	39	4 17	4th Sunday in Lent.
19	Mon.	10	5	10	7	0	15	4 37	In the west not much prospect of settled weather, but the sun occasionally smiles with warmth and much of winter disappears.
20	Tues.	9	7	9	8	North.	4	59	
21	Wed.	7	8	6	9	0	31	5 18	
22	Thu.	5	9	5	11	0	55	Sets.	
23	Fri.	3	11	3	12	1	19	7 47	
24	Sat.	1	13	1	13	1	42	8 49	
25	G.	5 59	6 15	6 00	6 14	2	6	9 54	5th Sunday in Lent and Annunciation of V. M.
26	Mon.	57	16	5 58	16	2	29	11 0	Hard frosts continue to the East, but the end of the month will be pleasant and spring like.
27	Tues.	55	17	56	17	2	53	Morn.	
28	Wed.	53	18	54	18	3	16	0 2	
29	Thu.	52	19	53	20	3	39	1 3	
30	Fri.	50	20	51	21	4	3	1 54	
31	Sat.	48	21	49	21	4	26	2 38	

MARCH.—It is a conceded fact, that farming, as it is too often practised, does not pay as it once did. But there are good reasons for this diminution of profits. *Land can be worn out*; and unless care be taken to restore again what is taken in cropping, it will wear out. The cultivation of land exhausted by long tillage, is both unpleasant and unprofitable—enough to discourage the most shiftless and unenergetic. The sooner they quit their system or their farms the better off they will find themselves; for such farming, or any other business conducted on such principles, can never pay, either in pleasure or in profit. Nature is bountiful, but demands human exertion.

1860.]

MEMORANDUM FOR MARCH.

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th Month.

APRIL, 30 Days.

Begins on Sunday.

Moon's Phases.	Montreal.	Kingston.	Toronto.	London.	Sun on Meridian.
	d.	h. m.	h. m.	h. m.	d. h. m. s.
Full Moon,.....	5	5 6 ev.	4 54 ev.	4 42 ev.	4 34 ev. 1 12 3 35
Last Quarter,....	12	8 40 ev.	8 28 ev.	8 17 ev.	8 9 ev. 9 12 1 25
New Moon,.....	21	0 50 mo.	0 39 mo.	0 27 mo.	0 19 mo. 17 11 59 23
First Quarter, .	28	9 42 mo.	9 30 mo.	9 19 mo.	9 11 mo. 25 11 57 40

d.	Week.	Montreal.		Toronto.		Sun's Declinat.		The Moon.	Calendar, Aspects, &c.
		Sun Rises.	Sun Sets.	Sun. Rises.	Sun Sets.	North.		R. & S.	
		h. m.	h. m.	h. m.	h. m.	Deg.	Min.	h. m.	
1	G.	5 46	6 22	5 47	6 21	4	49	3 13	<i>1st Sun. before Easter, and All fools days, so called. This quarter of the Moon will be fair and fine. Some frost by night. Good Friday. Very pleasant day.</i>
2	Mon.	44	23	46	22	5	12	3 43	
3	Tues.	42	24	44	23	5	35	4 11	
4	Wed.	41	25	42	25	5	58	4 37	
5	Thu.	39	27	40	27	6	21	Rises.	
6	Fri.	37	29	38	28	6	43	7 59	
7	Sat.	35	30	36	29	7	6	9 17	
8	G.	5 33	6 31	5 36	6 31	7	28	10 30	<i>Easter Sunday. Easter Monday. Easter Tuesday. Fine weather if wind be North, but if South-westerly look for rain and dull weather.</i>
9	Mon.	32	32	35	32	7	50	11 36	
10	Tues.	30	33	33	33	8	12	Morn.	
11	Wed.	28	34	31	34	8	34	1 31	
12	Thu.	26	35	28	35	8	56	1 15	
13	Fri.	24	37	26	36	9	18	1 51	
14	Sat.	22	38	24	37	9	40	2 18	
15	G.	5 20	6 40	5 23	6 39	10	1	2 41	<i>1st Sun. after Easter. I am of opinion that this week will be on the whole a very fine and agreeable week. Encouraging signs of spring.</i>
16	Mon.	18	42	21	40	10	22	3 3	
17	Tues.	17	43	20	41	10	43	3 22	
18	Wed.	15	44	18	42	11	4	3 43	
19	Thu.	13	45	16	43	11	25	4 3	
20	Fri.	11	47	14	44	11	45	4 24	
21	Sat.	10	48	13	45	12	6	Sets.	
22	G.	5 3	6 49	5 11	6 46	12	26	8 50	<i>2nd Sun. after Easter. ST. GEORGE'S DAY. Raw and cold, be sure and St. Mark. keep your feet dry. Snow disappears greatly.</i>
23	Mon.	6	50	9	47	12	46	9 55	
24	Tues.	5	51	8	48	13	6	10 56	
25	Wed.	3	53	7	49	13	25	11 50	
26	Thu.	2	55	5	51	13	44	Morn.	
27	Fri.	5 0	57	4	52	14	3	3 35	
28	Sat.	4 58	58	2	53	14	23	1 13	
29	G.	4 56	59	1	54	14	41	1 45	<i>3rd Sunday after Easter. Month ends smiling.</i>
30	Mon.	55	7 0	5 0	55	14	59	2 12	

APRIL.—Examples of the wonderful difference between good and bad farming are to be seen in every part of the country; and it is surprising that those who are going down hill in their circumstances, or are just keeping their heads above water, should not easily find out the cause. What is the condition of your fences? Have the weeds been carefully eradicated from your fields? What is the state of your farm-buildings and barn-yards? What care do you take of your cattle in winter? What effort have you made in preserving, manufacturing, and using manure? These are not impertinent questions. The answer to them will tell the story of success or failure in farming.

1860.]

MEMORANDUM FOR APRIL.

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Moon's Phases.		Montreal.	Kingston.	Toronto.	London.	Sun on Meridian.	
	d.	h. m.	h. m.	h. m.	h. m.	d.	h. m. s.
Full Moon.	5	2 8 mo.	1 56 mo.	1 44 mo.	1 36 mo.	1	11 56 53
Last Quarter.	12	2 22 ev.	2 10 ev.	1 59 ev.	1 51 ev.	9	11 56 12
New Moon.	20	1 52 ev.	1 40 ev.	1 28 ev.	1 20 ev.	17	11 56 9
First Quarter.	27	3 11 ev.	2 59 ev.	2 47 ev.	1 39 ev.	25	11 56 42

DAYS.		Montreal.		Toronto.		Sun's Declinat.	The Moon.	Calendar, Aspects, &c.
M.	Week.	Sun Rises.	Sun Sets.	Sun Rises.	Sun Sets.	North.	R. & S.	
		h. m.	h. m.	h. m.	h. m.	Deg. Min.	h. m.	
1	Tues.	4 54	7 0	4 58	6 56	15 17	2 33	<i>St. Philip and St. James.</i> The weather will be somewhat changeable in the beginning of this month, but on the whole fine.
2	Wed.	53	1	57	57	15 35	3 2	
3	Thu.	51	3	55	59	15 53	3 28	
4	Fri.	50	4	54	7 00	16 10	3 59	
5	Sat.	49	5	53	1	16 27	Rises.	
6	G.	4 47	7 7	4 51	7 2	16 44	9 16	<i>4th Sunday after Easter.</i>
7	Mon.	45	8	49	3	17 00	10 17	Fine weather yet.
8	Tues.	43	9	48	4	17 17	11 7	Thunders rain.
9	Wed.	41	10	47	5	17 32	11 47	Unsteady weather.
10	Thu.	40	11	46	6	17 48	moon.	Probably fair.
11	Fri.	39	12	45	7	18 3	19	The spring has opened
12	Sat.	37	13	44	8	18 18	44	cheerfully. Pleasant.
13	G.	4 30	7 15	4 42	7 10	18 33	1 6	<i>5th Sunday after Easter.</i>
14	Mon.	34	16	41	12	18 48	1 26	Between last Quarter and
15	Tues.	33	17	40	12	19 2	1 47	New Moon there will be rain.
16	Wed.	32	18	39	13	19 16	2 5	and in
17	Thu.	31	19	38	14	19 29	2 28	<i>Ascension Day.</i>
18	Fri.	30	20	37	15	19 42	2 51	some parts of Canada a good
19	Sat.	29	21	36	16	19 55	3 21	deal of it.
20	G.	4 23	7 22	4 35	7 17	20 7	Sets.	<i>Sunday after Ascension.</i>
21	Mon.	27	23	34	19	20 20	8 48	Cannot promise a change
22	Tues.	27	24	33	20	20 31	9 43	for settled fair weather.
23	Wed.	26	25	32	21	20 43	10 33	[ris. b. 1819.
24	Thu.	25	27	31	22	20 54	11 14	Birth day of Queen Victo-
25	Fri.	24	28	31	23	21 4	11 48	Chilly nights throughout
26	Sat.	23	29	30	24	21 15	Morn.	the country.
27	G.	4 22	30	4 29	7 25	21 25	16	<i>Whit Sunday.</i>
28	Mon.	21	31	28	25	21 34	41	<i>Whit Monday.</i>
29	Tues.	21	32	28	26	21 44	1 5	<i>Whit Tuesday.</i>
30	Wed.	20	33	27	26	21 52	1 30	May ends very finely.
31	Thu.	20	34	27	27	22 1	1 56	Prospects good.

MAY.—One of the greatest mistakes which young farmers make in this country, in their anxious wish for large possessions, is not only in purchasing more land than they can pay for, but in the actual expenditure of all their means, without leaving any even to *begin* the great work of farming. Hence the farm continues for a long series of years poorly provided with stock, with implements, with manure, and with the necessary labour. Debts are contracted, which are not easily paid, for profits are small. Discouragement follows, and with it that want of energy and enterprise which are essential to success. Therefore, buy no more land than you can pay for, without detracting from other claims.

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MEMORANDUM FOR MAY.

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6th Month.

JUNE, 30 Days.

Begins on Friday.

Moon's Phases.		Montreal.		Kingston.	Toronto.	London.	Sun on Meridian.	
	d.	h. m.		h. m.	h. m.	h. m.	d.	h. m. a.
Full Moon,.....	3	11	52 mo.	11 40 mo.	11 28 mo.	11 20 mo.	1	11 57 35
Last Quarter,...	11	8	10 mo.	7 58 mo.	7 47 mo.	7 39 mo.	9	11 58 59
New Moon,.....	19	0	30 mo.	0 18 mo.	0 6 mo.	11 53 ev.	17	12 0 39
First Quarter, .	25	7	42 ev.	7 30 ev.	7 19 ev.	7 11 ev.	25	12 2 23

M.	Week.	Montreal.		Toronto.		Sun's Declinat.	The Moon.	Calendar, Aspects, &c.
		Sun Rises.	Sun Sets.	Sun Rises.	Sun Sets.	North.	R. & S.	
		h. m.	h. m.	h. m.	h. m.	Deg. Min.	h. m.	
1	Fri.	4 20	7 34	4 27	7 24	22 9	2 28	June enters changeably disposed, but after
2	Sat.	20	86	27	29	22 11	3 6	
3	G.	4 19	7 37	4 26	7 30	22 24	Rises.	Trinity Sunday.
4	Mon.	19	37	25	31	22 37	8 58	
5	Tues.	18	38	24	31	22 44	9 42	it becomes very pleasant, warm, and promising for good hay.
6	Wed.	17	39	24	32	22 49	10 18	[DIEU.
7	Thu.	17	40	24	32	22 55	10 45	CORPUS CHRISTI, FETE
8	Fri.	17	40	24	34	23 0	11 9	Crops for 1860, much better than 1859.
9	Sat.	17	41	24	34	23 4	11 30	
10	G.	4 17	7 42	4 24	7 35	23 8	11 40	1st Sunday after Trinity.
11	Mon.	17	42	24	36	23 12	Morn.	St. Barnabas.
12	Tues.	16	43	23	36	23 15	10	Changeable.
13	Wed.	16	43	23	37	23 18	30	More settled.
14	Thu.	16	44	23	37	23 21	52	Very pleasant.
15	Fri.	16	44	23	38	23 23	1 21	Look out for a June frost
16	Sat.	16	44	23	38	23 24	1 54	but not as
17	G.	4 16	7 45	4 23	7 39	23 26	2 35	2nd Sunday after Trinity.
18	Mon.	16	46	23	39	23 27	3 26	general or severe as that in June 1859.
19	Tues.	16	46	23	39	23 27	Sets.	
20	Wed.	16	46	23	40	23 27	9 10	Warm and showery.
21	Thu.	16	47	24	40	23 27	9 48	Some distant thunder.
22	Fri.	17	47	25	40	23 26	10 18	And no wonder.
23	Sat.	17	47	25	39	23 25	10 45	Very warm and sultry.
24	G.	4 18	7 47	4 25	39	23 25	11 10	3rd Sunday after Trin. and
25	Mon.	18	46	25	39	23 23	11 34	NATIVITY ST. J. BAPTIST.
26	Tues.	18	46	26	39	23 21	11 59	You may look for warm, and delightful weather and
27	Wed.	19	46	26	39	23 18	Morn.	
28	Thu.	19	46	26	39	23 15	29	
29	Fri.	20	46	27	38	23 12	1 4	Sts. Peter and Paul
30	Sat.	20	46	27	38	23 9	1 48	June ends cheerfully,

JUNE.—Do everything at the right season. The importance of this is thus illustrated:—Two farmers had each a crop of rutabagas, of an acre each. The first, by hoeing his crop early, accomplished the task with two days work, and the young plants then grew vigorously, and yielded a heavy return. The second, being prevented by deficiency of help, had to defer his hoeing one week, and then through rain three days more—making ten days. During this time the weeds had sprung up six or ten inches high. No less than six days were required to hoe them; and, so much was the growth of the crop checked, that the owner had 150 bushels less on his acre than the farmer who took time by the forelock and hoed early.

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MEMORANDUM FOR JUNE.

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7th Month.

JULY, 31 Days.

Begins on Sunday.

Moon's Phases.		Montreal.		Kingston.		Toronto.		London.		Sun on Meridian.		
	d.	h. m.		h. m.		h. m.		h. m.	d.	h. m.	s.	
Full Moon.....	2	11 13 ev.		11 1 ev.		10 49 ev.		10 21 ev.	1	12	3 35	
Last Quarter,...	11	1 4 mo.		0 52 mo.		0 41 mo.		0 33 mo.	9	12	4 56	
New Moon.....	18	9 26 mo.		9 14 mo.		9 3 mo.		8 55 mo.	17	12	5 51	
First Quarter,...	25	0 46 mo.		0 34 mo.		0 23 mo.		0 15 mo.	25	12	6 13	

DAYS.		Montreal.		Toronto.		Sun's Declinat.		The Moon.		Calendar, Aspects, &c.
M.	Week.	Sun Rises.	Sun Sets.	Sun Rises.	Sun Sets.	North.		E. & S.		
		h. m.	h. m.	h. m.	h. m.	Deg.	Min.	h. m.		
1	G.	4 20	7 46	4 27	7 39	23	4	2 38		<i>4th Sunday after Trinity.</i> July opens with strong heat, but on the whole the moon's quarter will be fair, and no doubt need be felt about the crops. They are very encouraging. But be-
2	Mon.	21	46	23	39	23	0	Rises.		
3	Tues.	22	46	29	39	22	55	8 17		
4	Wed.	23	45	30	38	22	50	8 46		
5	Thu.	23	45	30	38	22	44	9 12		
6	Fri.	24	44	31	38	22	38	9 33		
7	Sat.	25	44	32	38	22	31	0 54		
8	G.	4 26	7 44	4 33	7 37	22	25	10 12		<i>5th Sunday after Trinity.</i> fore the New Moon there will be rain, thunder and lightning, gusts of wind, and showers of rain.
9	Mon.	27	44	34	36	22	17	10 32		
10	Tues.	28	43	34	36	22	10	10 54		
11	Wed.	28	43	34	36	22	2	11 19		
12	Thu.	29	42	34	35	21	53	11 49		
13	Fri.	30	41	35	34	21	45	Morn.		
14	Sat.	31	41	36	34	21	35	0 26		
15	G.	4 32	7 41	4 37	7 33	21	26	1 12		<i>6th Sunday after Trinity.</i> A changeable and unsettled week. Heat prevails—some rain descends. Make hay while you may. Work and you shall have your pay.
16	Mon.	33	40	38	32	21	16	2 10		
17	Tues.	33	39	39	32	21	6	3 18		
18	Wed.	34	38	40	31	20	55	Sets.		
19	Thu.	35	37	41	30	20	44	8 19		
20	Fri.	35	36	42	29	20	33	8 48		
21	Sat.	36	35	43	29	20	21	9 14		
22	G.	4 37	7 34	4 44	7 28	20	9	9 38		<i>7th Sunday after Trinity.</i> After New Moon and throughout the first quarter, ST. JAMES, the weather will be variable. Hot and dusty.
23	Mon.	38	33	45	27	19	57	10 4		
24	Tues.	39	32	46	26	19	44	10 33		
25	Wed.	40	31	47	25	19	31	11 6		
26	Thu.	41	30	47	24	19	18	11 34		
27	Fri.	42	30	49	23	19	4	Morn.		
28	Sat.	43	28	49	22	18	50	0 33		
29	G.	4 44	7 27	4 50	7 21	18	36	1 29		<i>8th Sunday after Trinity.</i> Hot and sultry. Some rolling thunder.
30	Mon.	46	26	51	21	18	21	2 32		
31	Tues.	47	25	52	20	18	7	3 39		

JULY.—Heavy soils are much improved by draining; open drains to carry off the surface water, and covered drains, the water which settles beneath. A farmer covered a low, wet, clayey field with a net-work of under-drains; and, from a production of almost nothing but grass, it yielded the first year forty bushels of wheat per acre—enough to pay the expense; and the land was tilled more easily and cheaply afterwards. Heavy soils are also made lighter and freer by manuring; by plowing under coatings of straw, rotten chip, and swamp-muck. Sub-soil plowing is also very beneficial, and may be repeated to great advantage, as the sub-soil gradually settles again.

8th MONTH.

AUGUST, 31 Days.

Begins on Wednesday.

Moon's Phases.		Montreal.	Kingston.	Toronto.	London.	Sun on meridian.		
	d.	h. m.	h. m.	h. m.	h. m.	d.	h. m.	s.
Full Moon.....	1	0 39 ev.	0 27 ev.	0 16 ev.	0 8 ev.	1	12	6 0
Last Quarter....	9	4 29 ev.	4 17 ev.	4 6 ev.	4 58 ev.	9	12	5 4
New Moon.....	16	5 26 ev.	5 14 ev.	5 3 ev.	3 58 ev.	17	12	3 43
First Quarter....	23	7 56 mo.	7 44 mo.	7 32 mo.	4 55 mo.	25	12	1 45
Full Moon.....	31	4 3 mo.	3 51 mo.	3 40 mo.	3 32 mo.			

DAYS.		Montreal.		Toronto.		Sun's Declinat.	The Moon	Calendar, Aspects, &c.
M.	Week.	Sun Rises.	Sun Sets.	Sun Rises.	Sun Sets.	North.	R. & S.	
		h. m.	h. m.	h. m.	h. m.	Deg. Min.	h. m.	
1	Wed.	4 48	7 24	4 54	7 18	17 51	Rises.	August enters gloomily.
2	Thu.	50	22	55	17	17 36	7 38	Clouds and rain.
3	Fri.	51	21	56	16	17 20	7 58	Unsettled for some days.
4	Sat.	52	20	57	15	17 4	8 17	Heat and thunder.
5	G.	4 53	7 19	58	7 14	16 48	8 37	9th Sunday after Trinity.
6	Mon.	55	17	59	13	16 31	8 57	More settled, and the prospects for harvesting are far better than on the first. Fair and fine. No reason for complaint.
7	Tues.	56	16	5 0	12	16 15	9 21	
8	Wed.	57	14	1	10	15 57	9 47	
9	Thu.	58	12	2	8	15 40	10 20	
10	Fri.	59	11	3	7	15 23	11 2	
11	Sat.	5 1	9	5	6	15 5	11 53	
12	G.	5 2	7 8	5 6	7 4	14 47	Morn.	19th Sunday after Trinity.
13	Mon.	3	7	7	3	14 28	55	This week will be agreeable and fine.
14	Tues.	4	5	8	1	14 10	2 5	
15	Wed.	5	3	9	6 59	13 51	3 23	Some heat, but not what has been felt.
16	Thu.	6	2	10	58	13 32	Sets.	Seasonable weather.
17	Fri.	7	1	11	57	13 13	7 13	No rain to-day.
18	Sat.	8	6 59	12	56	12 53	7 40	
19	G.	5 9	6 57	5 13	6 54	12 34	8 6	11th Sunday after Trinity.
20	Mon.	11	55	14	52	12 14	8 34	I fear the rain this week will spoil the prospects of a few grain fields. But it will not be of long continuance.
21	Tues.	12	54	16	50	11 54	9 6	
22	Wed.	13	52	17	49	11 33	9 44	
23	Thu.	14	50	18	47	11 13	10 31	
24	Fri.	16	48	19	46	10 52	11 25	St. Bartholomew.
25	Sat.	18	46	20	44	10 32	Morn.	tinuance.
26	G.	5 19	6 45	5 21	6 43	10 11	25	12th Sunday after Trinity.
27	Mon.	20	43	22	40	9 50	1 29	
28	Tues.	21	41	24	38	9 28	2 35	St. Augustine.
29	Wed.	22	40	25	37	9 7	3 40	Some showers.
30	Thu.	23	38	26	36	8 46	4 43	But the month ends agreeably.
31	Fri.	24	36	27	34	8 26	Rises.	

AUGUST.—The following is worth knowing, and may be relied on as correct, respecting the relative value of different kinds of straw, which is determined by the quantity of nitrogen they contain. Barley straw is the poorest of all; oat and rye straw are about one-third better. Wheat straw is nearly double in value to barley; buckwheat is rather better than wheat; meadow hay and corn-stalks are better than any of these, being five times as rich in nitrogen as barley straw. Red clover, hay and pea straw are each about eight times as rich as barley. Whether these substances are mixed directly with manure, or eaten first by animals, they produce their relative effects.

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MEMORANDUM FOR AUGUST.

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11 arrived at 1/2 P.M.

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15 a great mass meeting for Judge

16 Douglas held in morning

17 left for home to day

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24 Prince of Wales arrived to day but did

25 not land until 1/2 of this morning

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27 grand Ball given present!

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9th Month. **SEPTEMBER, 30 Days.** Begins on Saturday.

Moon's Phases.		Montreal.	Kingston.	Toronto.	London.	Sun on Meridian.		
Last Quarter, ...	d. 8	h. m. 6 13 mo.	h. m. 6 1 mo.	h. m. 5 50 mo.	h. m. 5 42 mo.	d. 1	h. m. s. 11 59 40	
New Moon,	15	1 15 mo.	1 3 mo.	0 52 mo.	0 44 mo.	9	11 57 0	
First Quarter,	21	6 31 ev.	6 19 ev.	6 7 ev.	5 59 ev.	17	11 54 13	
Full Moon,	29	8 46 ev.	8 34 ev.	8 22 ev.	8 14 ev.	25	11 51 26	

M. Week.	Days.	Montreal.		Toronto.		Sun's Declinat.	The Moon.	Calendar, Aspects, &c.
		Sun Rises.	Sun Sets.	Sun Rises.	Sun Sets.	North.	R. & S.	
1	Sat.	h. m. 5 26	h. m. 6 34	h. m. 5 28	h. m. 6 32	Deg. Min. 8 2	h. m. 8 22 6 43	Very fine day.
2	G.	5 28	6 32	5 30	6 29	7 40	7 4	13th Sunday after Trinity.
3	Mon.	29	30	31	28	7 18	7 24	Good weather continues
4	Tues.	30	28	32	26	6 56	7 50	and most of this week is
5	Wed.	31	26	33	25	6 34	8 21	pleasant.
6	Thu.	32	24	34	23	6 11	8 58	Toward the end and
7	Fri.	33	23	35	21	5 49	9 43	through the moon's last
8	Sat.	35	21	36	20	5 26	10 39	quarter disposed to rain.
9	G.	5 36	6 19	5 37	6 18	5 3	11 44	14th Sunday after Trinity.
10	Mon.	37	17	38	16	4 41	Morn.	This week very unsettled.
11	Tues.	39	16	39	15	4 18	57	A good deal of wind and
12	Wed.	40	14	40	13	3 55	2 14	rain.
13	Thu.	42	12	41	11	3 32	3 32	The leaves are changing
14	Fri.	43	10	42	9	3 9	4 50	colour, but there will be no
15	Sat.	44	7	43	8	2 45	5 24	night frost of severity.
16	G.	5 45	6 6	5 45	7	2 22	6 33	15th Sunday after Trinity.
17	Mon.	46	4	46	5	1 59	7 4	Weather fair and fine.
18	Tues.	48	2	47	3	1 36	7 41	Again changeable.
19	Wed.	49	0	48	1	1 12	8 26	Not disagreeable.
20	Thu.	50	5 58	49	5 57	0 49	9 16	Rather pleasant.
21	Fri.	51	56	50	56	0 26	10 18	St. Mathew.
22	Sat.	52	56	52	54	0 2	11 20	Rain and wind.
23	G.	5 54	5 54	5 52	5 52	South.	Morn.	16th Sunday after Trinity.
24	Mon.	56	52	53	50	0 44	23	Settled and fine.
25	Tues.	56	50	54	29	1 7	1 32	If wind be South or S. W.
26	Wed.	57	48	55	47	1 30	2 36	there will be rain toward
27	Thu.	59	46	57	45	1 54	3 37	the end of the month, and
28	Fri.	6 00	44	59	43	2 17	4 36	by the moon's full.
29	Sat.	1	42	6 00	40	2 40	Rises.	St. Michael and all Angels.
30	G.	6 2	5 40	6 1	5 30	2 54	5 30	17th Sunday after Trinity.

SEPTEMBER.—A bit of good advice is here :—To prevent confusion and embarrassment, and keep all things clearly and plainly before the farmer at the right time, he should carry a small book in his pocket, having every item of work for each week or each half-week laid down before his eyes. Any proposed improvements can be noted down on the right page. Interesting experiments, suggested in the course of reading and observation, may be thus noted down in their proper places, according to time and season, and then brought to trial. Much confusion and delay will thus be prevented, and the work of the farm proceed with regularity and satisfaction.

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1860.]

MEMORANDUM FOR SEPTEMBER.

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Moon's Phases.	Montreal.		Kingston.		Toronto.		London.		Sun on Meridian.		
	d.	n. m.	n. m.	n. m.	n. m.	n. m.	h. m.	d.	h. m.	s.	
Last Quarter,.....	7	6 11 ev.	5 59 ev.	5 47 ev.	5 39 ev.	5 32 ev.	1	11	49	28	
New Moon,.....	14	9 43 mo.	9 31 mo.	9 20 mo.	9 12 mo.	9	11	47	8		
First Quarter,.....	21	9 16 mo.	9 4 mo.	8 53 mo.	8 45 mo.	17	11	45	18		
Full Moon,.....	29	1 56 ev.	1 44 ev.	1 32 ev.	1 24 ev.	25	11	44	7		

M. Week.	DAYS.	Montreal.		Toronto.		Sun's Declinat.	The Moon.	Calendar, Aspects, &c.
		Sun Rises.	Sun Sets.	Sun Rises.	Sun Sets.	South.	R. & S.	
		h. m.	h. m.	h. m.	h. m.	Deg. Min.	h. m.	
1	Mon.	6 3	5 38	6 2	5 38	3 27	5 55	October opens very pleasantly, and root crops may be gathered without interruption. Some rain, but you need not be alarmed.
2	Tues.	4	36	3	36	3 50	6 24	
3	Wed.	5	34	4	34	4 14	6 59	
4	Thu.	7	32	5	33	4 37	7 41	
5	Fri.	8	30	6	32	5 0	8 31	
6	Sat.	9	27	7	29	5 23	9 32	
7	G.	6 11	5 25	6 8	5 27	5 46	10 39	18th Sunday after Trinity.
8	Mon.	12	24	9	26	6 9	11 52	Fair weather through the
9	Tues.	13	21	10	24	6 32	Morn.	Moon's last quarter if the
10	Wed.	14	20	11	22	6 54	1 6	wind be North or North-
11	Thu.	15	19	12	20	7 17	2 21	West.
12	Fri.	16	17	14	19	7 40	3 38	Generally pleasant.
13	Sat.	18	14	15	17	8 2	4 57	Windy and fair.
14	G.	6 20	5 12	6 16	5 15	8 25	Sets.	19th Sunday after Trinity.
15	Mon.	21	9	17	13	8 47	5 39	Changeable.
16	Tues.	23	7	19	12	9 9	6 15	Tendency to rain.
17	Wed.	24	5	20	9	9 31	7 6	Some frosty nights.
18	Thu.	25	4	21	8	9 58	8 6	St. Luke.
19	Fri.	26	2	22	6	10 14	9 10	Pleasant days.
20	Sat.	28	1	24	5	10 36	10 17	Dull weather.
21	G.	6 29	4 59	6 25	5 3	10 57	11 24	20th Sunday after Trinity.
22	Mon.	31	57	27	2	11 18	Morn.	You may look for dull,
23	Tues.	32	55	28	4 59	11 39	0 27	variable, damp and not very
24	Wed.	33	53	29	58	12 0	1 29	agreeable weather toward
25	Thu.	35	52	30	57	12 21	2 29	the end of this month.
26	Fri.	36	50	31	56	12 41	3 28	
27	Sat.	38	59	32	54	13 2	4 29	
28	G.	6 39	4 47	6 33	4 53	13 22	5 29	21st Sunday after Trinity
29	Mon.	41	46	35	52	13 42	Rises.	and Sts. Simon and Jude.
30	Tues.	42	46	38	50	14 1	5 1	The rain is cold and the
31	Wed.	43	45	40	48	14 21	5 41	winter approaches.

OCTOBER.—There are many things essential to good farm management. Some of the most obvious will be—capital enough to buy the farm and stock it well; to select a size compatible with these requisites; to lay it out in the best manner; to provide it well with fences, gates, and buildings; to select the best animals and the best implements to be had at reasonable rates; to bring the soil into good condition by draining, manuring, and good culture; to have every part under a good rotation of crops; and every operation arranged, so as the whole may be conducted without clashing and confusion. Try these methods.

Monday.

1860.]

MEMORANDUM FOR OCTOBER.

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Meridian.

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MEMORANDUM FOR NOVEMBER.

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MONTH. **DECEMBER, 31 Days.** Begins on Saturday.

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Moon's Phases.		Montreal.	Kingston.	Toronto.	London.	Sun on Meridian.	
	d.	h. m.	h. m.	h. m.	h. m.	d.	h. m. s.
Last Quarter,....	5	1 7 ev.	0 55 ev.	0 43 ev.	0 35 ev.	1	11 49 29
New Moon,.....	12	7 54 mo.	7 42 mo.	7 31 mo.	7 23 mo.	9	11 58 52
First Quarter,...	20	1 16 mo.	1 4 mo.	0 52 mo.	0 44 mo.	17	11 56 42
Full Moon,.....	27	10 23 ev.	10 11 ev.	10 00 ev.	9 52 ev.	25	12 0 41

DAYS.		Montreal.		Toronto.		Sun's Declinat.	The Moon.	Calendar, Aspects, &c.
M.	Week.	Sun Rises.	Sun Sets.	Sun Rises.	Sun Sets.	South.	R. & S.	
		h. m.	h. m.	h. m.	h. m.	Deg. Min.	h. m.	
1	Sat.	7 26	4 12	7 19	4 19	21 56	7 32	Generally pleasant.
2	G.	7 28	4 12	7 21	4 10	22 5	8 44	1st Sunday in Advent.
3	Mon.	28	12	21	19	22 13	9 55	Changeable.
4	Tues.	29	11	22	18	22 21	11 7	Snow and wind.
5	Wed.	30	11	24	18	22 28	Morn.	Sleighting in L. Canada.
6	Thu.	31	11	25	17	22 35	1 18	Wait for it in U. Canada.
7	Fri.	32	11	26	17	22 42	1 32	Weather now rather disagreeable and stormy.
8	Sat.	33	11	27	17	22 48	2 47	
9	G.	7 33	4 11	7 28	4 18	22 54	4 2	2nd Sunday in Advent.
10	Mon.	35	11	28	18	22 59	5 21	This week threatens to be windy, rainy and snowy.
11	Tues.	35	11	29	18	23 4	6 32	
12	Wed.	36	11	30	18	23 9	Sets.	Very much like winter.
13	Thu.	37	11	31	18	23 12	5 39	Keep cattle warm and yourself too.
14	Fri.	38	11	32	18	23 16	6 48	
15	Sat.	39	12	32	18	23 19	7 57	
16	G.	7 40	4 12	7 33	4 19	23 21	9 3	3rd Sunday in Advent.
17	Mon.	41	13	33	19	23 23	10 5	Generally fair for a few days, and you will have real frost.
18	Tues.	42	12	34	20	23 25	11 8	
19	Wed.	42	13	36	20	23 26	Morn.	Be thankful for what you
20	Thu.	43	13	36	20	23 27	6	St. Thomas. [have and remember the poor.
21	Fri.	43	14	37	20	23 27	1 6	
22	Sat.	44	14	37	21	23 27	2 7	
23	G.	7 44	4 15	7 38	4 21	23 26	2 8	4th Sunday in Advent.
24	Mon.	45	15	38	22	23 25	4 11	Prepare to pay your debts.
25	Tues.	45	16	38	23	23 23	5 13	Christmas Day.
26	Wed.	45	16	38	24	23 21	6 14	St. Stephen.
27	T u.	45	17	38	24	23 18	Rises.	St. John the Evangelist.
28	Fri.	46	18	38	25	23 15	5 20	Holy Innocents.
29	Sat.	46	18	39	26	23 11	6 31	Forgive your enemies.
30	G.	7 47	4 19	7 39	4 26	23 7	7 45	1st Sunday after Christmas.
31	Mon.	46	20	39	27	23 9	8 57	Very fine day.

DECEMBER.—It has been properly remarked, that farmers do not sufficiently sub-divide their yards in winter. Large and small animals are turned in promiscuously. The larger ones are very ferocious and domineer over their inferiors, but are careful not to provoke the wrath of their equals. Turn those together which are of similar size, and they will be more quiet all round. Calves are too much neglected, and come out small and puny in spring. A good manager will construct a spacious stable for calves in one of his sheds, moderately lighted, and free from currents of wind. Let the place be kept clean, the calves fed on good hay, and supplied with good water, and they will present a good and sleek appearance in spring.

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The Royal Family.

THE QUEEN.

VICTORIA, Queen of the United Kingdom of Great Britain and Ireland; only daughter of His late Royal Highness Edward Duke of Kent; born the 24th May, 1819; succeeded to the Throne on the decease of her Uncle, William IV., June 20th, 1837; Proclaimed June 21st, 1837; Crowned June 28th, 1838; Married February 10th, 1840, to Field-Marshal His Royal Highness Prince Albert Augustus Charles Emanuel, Prince of Saxe Cobourg and Gotha, Knight of the Most Noble Order of the Garter, &c., &c., &c.

ISSUE:

Victoria Adelaide Mary Louisa (Princess Royal) born November 21st, 1840.

Albert Edward (Prince of Wales,) born November 9th, 1841.

Alice Maud Mary, born April 25th, 1843.

Alfred Ernest Albert, born August 6th, 1844.

Helena Augusta Victoria, born May 25th, 1846.

Louise Caroline Alberta, born March 18th, 1848.

Arthur William Patrick Albert, born May 1st, 1850.

Leopold George Duncan Albert, born April 7th, 1853.

Beatrice Mary Victoria Feodore, born April 14th, 1857.

THE QUEEN'S MOTHER.

Victoria, Duchess of Kent, daughter of Francis, Duke of Saxe Cobourg, born August 17th, 1786; married May 29th, 1818, to Edward, Duke of Kent, who died January 23rd, 1820. Issue—The Queen.

THE QUEEN'S COUSINS.

George V., King of Hanover, born May 27th, 1819.

George, Duke of Cambridge, born March 26th, 1819.

Princess Augusta, (Duchess of Mecklenberg Strelitz), born July 19th, 1822.

Mary Adelaide Wilhelmina Elizabeth, born November 27th, 1833.

CANADA.

THE GOVERNOR GENERAL,

AIDES-DE-CAMP, &c.

SIR EDMUND WALKER HEAD, Bart., Governor General of British North America, and Captain General and Governor-in-Chief of the Provinces of Canada, New Brunswick, Nova Scotia, and the Island of Prince Edward, &c., &c.

R. T. PENNEFATHER, Governor General's Secretary.

Captain Rettallack, 63rd Regiment, Military Secretary and Aide-de-Camp.

Colonel Irvine, Provincial Aide-de-Camp.

EXECUTIVE COUNCIL.

President of the Council and Minister of Agriculture.....	Hon. John Ross.
Attorney General East.....	Hon. George E. Cartier.
Attorney General West.....	Hon. John A. Macdonald.
Commissioner of Crown Lands....	Hon. P. M. Vankoughnet,
Commissioner of Public Works....	Hon. John Rose.
Speaker of Legislative Council....	Hon. N. F. Belleau.
Provincial Secretary.....	Hon. Charles Alley.
Postmaster General.....	Hon. Sydney Smith.
Minister of Finance.....	Hon. A. T. Galt.
Receiver General.....	Hon. George Sherwood.

OFFICERS :

William H. Lee, Clerk of Executive Council : William A. Himsforth, Confidential Clerk ; M. A. Higgins, F. Vallerand, Olivier Côté, Thomas Burns, F. H. Himsforth and Henry Alexander, Clerks ; Michael Naughton, Door-keeper ; James Ryan and Charles Baker, Messengers.

INDIAN DEPARTMENT.—R. T. Pennefather, Superintendent General of Indian Affairs ; S. Y. Chesley, Assistant ditto ; Michael Turner, Chief Clerk ; W. R. Bartlett, Visiting Superintendent ; David Thorburn, ditto ; George Ironside, ditto ; Froom Talfourd, ditto ; Francis Assickenack, Interpreter.

GEOLOGICAL SURVEY.—Sir Wm. E. Logan, Provincial Geologist ; A. Murray, Assistant ditto ; T. S. Hunt, Chemist and Mineralogist ; E. Billings, Palæontologist.

EDUCATIONAL DEPARTMENT.

Lower Canada.—Old Government House.—Hon. P. J. O. Chauveau, Superintendent ; Louis Giard, Secretary ; Joseph Lenoir, French Corresponding Clerk and Librarian ; Alex. de Lusignan, Clerk of Statistics and Accountant ; Jacques Laparre, First Copying Clerk and Store-keeper ; Jean Baptiste Lenoir, Second Copying Clerk ; Hugh Murray, Assistant Clerk ; Paul Blouin, Messenger.

Catholic Board of Examiners.—Rev. L. V. L. Villeneuve, Rev. A. F. Truteau, William Doran, P. P. Denis, P. Garnot ; F. X. Valade, Secretary.

Protestant Board of Examiners.—Rev. A. F. Kemp, Rev. Dr. Wilkes, Rev. Canon Leach, D.C.L., LL.D., Rev. W. Snodgrass, Rev. J. Flannigan, W. Lunn ; A. N. Rennie, Secretary.

Upper Canada.—For the general administration of the Grammar and Common School Laws, Rev. Egerton Ryerson, D.D., Chief Superintendent of Education ; John George Hodgins, M.A., Deputy ditto ; A. Marling, First Clerk and Clerk of Accounts ; A. J. Williamson, Clerk of Correspondence ; F. J. Taylor, Clerk of Statistics ; H. Butterworth, Assistant ditto ; S. P. May, Clerk of Libraries ; T. Churchill, Depository Clerk ; J. T. R. Stinson, Assistant Clerk ; C. Alderson, Packer and Depository Messenger ; James Moore, Office Messenger.

PERMANENT OFFICERS OF THE LEGISLATIVE ASSEMBLY.

CHIEF DEPARTMENT.—Wm. B. Lindsay, Clerk; W. B. Lindsay, Jr., Clerk Assistant; Alfred Patrick, Deputy Clerk Assistant and Chief Clerk of Committees and Controverted Elections; Thomas Vaux, Accountant; Charles Langevin, Assistant ditto.

LAW CLERK'S DEPARTMENT.—G. W. Wicksteed, Law Clerk; D. P. Myrand, Assistant French Law Clerk; F. Badgley, Assistant English Clerk.

GENERAL DEPARTMENT.—W. P. Patrick, Chief Office Clerk; Henry Hartney, Assistant ditto; Wm. Spink, Clerk Routine and Records; H. B. Stuart, English Writing Clerk; Edouard Dénéchaud, French ditto; P. Rivet, A. G. D. Taylor, H. J. McCarthy, J. F. Gingras, and P. H. Blais, Junior Clerks.

COMMITTEES DEPARTMENT.—Alfred Patrick, Clerk of Committees and Controverted Elections; J. P. Leprohon, 1st Assistant ditto; F. X. Blanchet, 2nd ditto.

PRIVATE BILL DEPARTMENT.—Alfred Todd, Chief Clerk of Private Bills and Clerk of Votes; Thaddeus Patrick, Assistant ditto, and Clerk of Railroad Committee; W. B. Ross and Herrman Poetter, Assistants ditto.

TRANSLATORS.—D. P. Myrand, Chief French Translator; Wm. Fanning, E. P. Dorion, A. Desilets and T. G. Coursolles, Assistants ditto; F. Badgley, English Translator; Wm. Wilson, Assistant ditto; F. Hays, Extra ditto.

JOURNAL DEPARTMENT.—G. M. Muir, English Journal Clerk; W. C. Burrage, Assistant ditto; P. E. Gagnon, French ditto; W. H. Lemoine, Assistant ditto.

LIBRARY DEPARTMENT.—Alpheus Todd, Librarian; A. G. Lajoie, Assistant ditto; A. Lapevière, Clerk.

SERGEANT-AT-ARMS DEPARTMENT.—D. W. Macdonell, Sergeant-at-Arms; U. C. Burrage, Deputy ditto; A. L. Cardinal, Chief Messenger; M. McCarthy, O. Vincent and E. Stacy, Assistants ditto; R. Defries, Postmaster; Jos. Blais, Assistant ditto; J. O'Connor, Door-keeper; R. Bailie, Assistant ditto; P. Laliberté, Jos. Lemonde, Edward Pelletier, William Graham, Jas. Hoy and E. Storr, Messengers.

PERMANENT OFFICERS LEGISLATIVE COUNCIL.

John F. Taylor, Clerk of the House, Master in Chancery, and Acting Accountant.

Robert Lemoine, Deputy and Assistant Clerk, Master in Chancery, and French Translator.

Fennings Taylor, Deputy and Assistant Clerk, Master in Chancery, and Chief Office Clerk.

Joseph E. Doucet, Additional Clerk Assistant, and Assistant French Translator.

W. Anstruther Maingy, Additional Clerk Assistant and Second Office Clerk.

James Adamson, Clerk of the English Journals.

R. G. Belleau, Clerk of the French Journals.

John McGillivray McLean, Clerk.

W. Agar Adamson, D. C. L., Chaplain and Librarian.

E. L. Montizambert, A. M., Law Clerk, acting also as English Translator and Clerk of Select Committees.
 René Kimber, Gentleman Usher of the Black Rod.
 O. Vallerand, Sergeant-at-Arms.
 E. Botterell, Door-keeper.
 M. Keating, House-keeper and Chief Messenger.
 S. Skinner, Assistant House-keeper and Messenger.
 F. Boulet, J. Casault, A. Lachance, J. Doherty, J. Hanley, J. Young, Peter Dunn, J. Pageau, Patrick Madigan and J. B. Myrand, Messengers.

PUBLIC DEPARTMENTS.

CIVIL SECRETARY'S OFFICE.—R. T. Pennefather, Secretary; Henry Cotton, chief clerk; John Kidd, 2nd clerk; Philip Hill, office keeper; George Boxall, messenger.

PROVINCIAL SECRETARY'S OFFICE.—Hon. Charles Alleyn, Provincial Secretary; Etienne Parent, Assistant Secretary East; Edmund A. Meredith, Assistant Secretary West; Thos. Ross, Accountant of the Contingencies and Receiver of Marriage License Fees; S. Tetu, W. H. Jones, and G. S. Bertrand, first class clerks (east); J. Mackay, and H. R. Glackmeyer, second class clerks (east); G. Powell, H. E. Steele, and, C. J. Birch, first class clerks (west); J. Gow, Office-keeper; J. Dorr and J. N. Fradet, Messengers.

PROVINCIAL REGISTRAR'S OFFICE.—Hon. Charles Alleyn, Provincial Registrar; William Kent, Chief Clerk; G. H. Lane, Second ditto; Amable Bélanger, Assistant ditto; and J. A. Bélanger, Extra ditto; Maxime Valiquette, Messenger.

RECEIVER GENERAL'S OFFICE.—Hon. Geo. Sherwood, Receiver General; T. D. Harrington, Deputy ditto; G. C. Reiffenstein, Chief or Debuture Clerk; T. C. Bramley and Theo. Dufort, Book-keepers; J. B. Stanton, Warrant Clerk; Wm. Hedge, Bank Account Clerk; J. F. Pellant, General Clerk; L. F. Dufresne, Clerk in charge of Municipal Loan Fund of Upper and Lower Canada; Chas. W. Shay, Assistant Book-keeper and General Clerk; F. Braun, Clerk in charge of Seigniorial Act of 1854 F. L. Casault, Messenger; N. Casault, Assistant ditto.

DEPARTMENT OF THE MINISTER OF FINANCE.—Hon. A. T. Galt, Minister of Finance; Joseph Cary, Deputy Inspector General; William Dickinson, Acting Deputy ditto; David A. Ross, Chief Clerk; Norris Godard, Book-keeper; John Drysdale, ditto; Archibald Cary, F. G. Scott, J. J. Hackett, Jos. S. Lee, John R. Nash, G. W. Cattley, G. S. Lay, Clerks; R. W. Baxter, Extra Clerk; David Ryan, House-keeper; P. Pender, Messenger.

Auditor's Branch.—John Langton, Auditor of Public Accounts; Thomas Cruse, Book-keeper; Thomas D. Tims, Assistant ditto; C. Camble, Registrar of Free Banks; Christopher Green, James Patterson, Edward C. Barber, Clerks.

Customs Department.—R. S. M. Bouchette, Commissioner; J. W. Peachy, Corresponding Clerk; J. R. Audy, Clerk of Seizures and Forms; T. P. Roberts Statistical Clerk; H. H. Duffil, Statistical and Canal Office Clerk; J. M. Muckle, P. E. Shepherd, Dr. L. O'Brien, Check Clerks; C. Ross, Extra Check Clerk; J. Walls, Messenger.

MILITARY.

Lieut. General Sir W. F. WILLIAMS, Bart., K.C.B., Commanding the Forces in British North America.

Major W. J. Williams, Royal Artillery, Military Secretary.

Capt. O. B. B. Woolsey, Royal Artillery, and Lieut. R. Grant, Royal Engineers, Aides-de-Camp.

MILITARY SECRETARY'S DEPARTMENT.—Major W. J. Williams, Military Secretary; P. Lawlor, 1st Clerk; J. R. Spong, R. G. Greig, and M. Riordan, Clerks; R. Dalgleish, Office-keeper.

ADJUTANT GENERAL'S DEPARTMENT.—Colonel the Hon. R. Rollo, Assistant Adjutant General; Ens. C. Macdonald, Town Major; W. Wright 1st Clerk; P. Walsh and G. Frauckum, Clerks; J. Dillon, Town Major's Clerk; W. Rowan, Town Sergeant.

QUARTERMASTER GENERAL'S DEPARTMENT.—Colonel Napier, C.B., Deputy Quartermaster General; N. Hughes, 1st Clerk; E. Roe and A. Mitchell, Clerks.

MILITARY STORE DEPARTMENT.—Alexander Gun, Esq., Deputy Military Storekeeper; Edward Fayer, 1st Class Clerk and Acting Barrack Master; John Greig and Edward Willgress, 1st Class Clerks; James Duff, 2nd ditto; James Wallace, Office-keeper.

HEAD QUARTERS, ROYAL ENGINEERS OFFICE.

Montreal.—Commanding Royal Engineers Canada, Colonel Henry Servante; Assistant ditto, W. C. Menzies; Draftsman and Surveyor, C. Walkem; James Kerr, 1st Clerk; John Gardiner, Clerk; J. Collard, Clerk of Works; J. Robertson, Office-keeper.

District Branch.—Major W. C. Menzies, Commanding Royal Engineers District Branch; A. Kemp, Clerk of the Works; J. Conroy, Office-keeper.

Kingston District.—Lieut. Colonel Fanshawe, Commanding Royal Engineers Kingston; W. Wheeler, 2nd class Clerk of Works; J. B. Harper, 2nd class Clerk; R. Goodfellow, Office-keeper.

Quebec District.—Colonel Hadden, Commanding Royal Engineers Quebec District; Lieuts. C. A. L. de Montmorency and J. Garnier, Royal Engineers; W. H. Head, Clerk of Works; W. Chessell, 2nd class ditto; J. Grist, 3rd class ditto; J. H. Oakes and G. H. Peake, 2nd class Clerks; E. Lennon, Office-keeper.

COMMISSARIAT DEPARTMENT.

Montreal.—Commissary General T. C. Weir, Controller of Army Expenditure; Assistant Com. Gen. John B. Price, Military Accountant; Deputy Assist. Com. Gen. Turner, Store Accountant; Deputy Assist. Commissaries Gen. Irvine, Ogilvy and Cattell; Assist. Clerks, Woodley, Bell, Ballard and Palmer.

Quebec.—Assistant Com. General W. H. H. Plante; Deputy Assist. Com. Gen. Wm. Rogers; Assistant Clerk S. Dickenson.

Kingston.—Assist. Com. Genl. Cumming; Deputy Assist. Com. Genl. S. B. Brown.

Toronto.—Assist. Com. Gen. Goold; Deputy Assist. Com. Gen. Wild.

ARMY MEDICAL STAFF.—J. Clarke, Surgeon Major in charge, Montreal; E. B. Tuson Staff Surgeon, Montreal; W. Odell, M.D., Staff Surgeon 1st

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class, Quebec; T. Blatherwick and D. Woods, Staff Assistant Surgeons, Quebec; J. Graves, Staff Surgeon, 2nd class; T. W. Fox and J. Jamieson, M.D., Staff Assistant Surgeons, Kingston; Dr. Hunt, Staff Assist. Surgeon, Toronto; Dr. Paxton, Staff Assistant Surgeon, Red River; G. W. Mellish, Purveyor; ———, Purveyor's Clerk, 1st class; B. Abbott and Mr. Moore, Purveyor's Clerks, 2nd class, Montreal.

REGIMENTS IN CANADA AND OFFICERS COMMANDING.

Montreal.—Head Quarters of the Army in Canada.
 “ Royal Artillery, Colonel Taylor.
 “ Head Quarters Royal Canadian Rifle Regiment.
Quebec.—Royal Artillery, Colonel Dalton.
 “ 17th Regiment, Lieut. Colonel Gordon.
 “ Detachment Royal Canadian Rifle Regiment.
Kingston.—Detachment R. C. Rifle Regiment.
Toronto.—Detachment R. C. Rifle Regiment.

COURTS OF JUSTICE.

According to the Provisions of the 20th Vict., cap. 44.

COURT OF QUEEN'S BENCH.

Hon. Sir L. H. Lafontaine, Bart., Chief Justice.

“ Thomas C. Aylwin,	} Puisné Judges.
“ Jean F. Duval,	
“ René E. Caron,	
“ W. C. Meredith.	

Chs. Mondelet, Assistant Judge.

Officers.—John Boston, Sheriff; Joseph Jones, Coroner; Alexander M. Delisle, Clerk of the Crown; Charles E. Schiller, Deputy Clerk of the Crown; Benjamin Delisle, High Constable; George J. Stanley, Crier; Thomas McGinn, Gaoler.

COURTS IN APPEAL AND ERROR.

* Montreal—1st March, 1st June, 1st September and 1st December.
 Quebec—12th March, 12th June, 12th September and 12th December.
 J. U. Beaudry, Clerk of Appeals; Charles Drolet, Deputy do.

COURT OF CRIMINAL JURISDICTION.

Montreal—24th March and 24th September.

Quebec—24th January and 24th June.

Three Rivers—2nd February and 11th September.

Sherbrooke—12th February and 20th September.

Kamouraski—5th to 10th April and 21st to 26th October.

Aylmer—10th June and 10th December.

Terms to continue till the business is closed. **Extraordinary terms** may be held by proclamation.

* By the 17th Section of the 20 Vict., cap. 44, cases in Appeal from the Districts of Ottawa, Montreal, Terrebonne, Joliette, Richelieu, St. Francis, Bedford, St. Hyacinthe, Iberville and Beauharnois, are to be heard and determined at the City of Montreal only, and the writs in such cases are returnable there; and cases in Appeal from the Districts of Three Rivers, Quebec, Saguenay, Gaspé, Rimouski, Kamouraska, Montmagny, Beauce and Arthabaska are to be heard and determined at the City of Quebec only, and the writs in such cases are returnable there.

SUPERIOR COURT.

Jurisdiction for Sums exceeding £50 Currency, 12 Vict., cap. 88, sec. 17 and 47, and 20 Vic., cap. 44, sec. 35.

Honorable Edward Bowen, Chief Justice.

JUDGES.

Hon. Dominique Mondelet,
 " Charles Dewey Day.
 " James Smith.
 " J. A. Taschereau.
 " Hypolite Guy.
 " William Power.
 " Peter Winter.
 Andrew Stuart,
 S. C. Monk,
 J. A. Berthelot.

Hon. Edward Short.
 " Auguste N. Morin.
 " William Badgley.
 " Jean Chabot.
 " John S. McCord.
 " Jean C. Bruneau.
 " David Roy.

Assistant Judges.

* MONTREAL.—† Hochelaga, Jacques Cartier, Laval, Vaudreuil, Soulanges, Laprairie, Chambly and Verchères and City of Montreal—Held at Montreal from 17th to 27th of every month, except January, July and August. Clerk, Coffin & Papineau, Prothonotary; John Boston, Sheriff.

QUEBEC.—Portneuf, Quebec, Montmorency, Lévi, Lotbinière and City of Quebec—Held at Quebec from 1st to 5th February, March, April, May, September, October and December, and from 20th to 25th June and November. Burroughs & Fiset, Prothonotary; Wm. S. Sewell, Sheriff.

OTTAWA.—Ottawa and Pontiac—Held at Aylmer first ten juridical days of February and July. Henry Driscoll, Prothonotary; Louis M. Coutlée, Sheriff.

CIRCUIT COURTS.

Jurisdiction in suits not exceeding £50.

QUEBEC DISTRICT.

Quebec Circuit, held at Quebec, 20th to 25th of every month, except July and August. Clerk, Burroughs & Fiset.

Lotbinière Circuit, held at Lotbinière, 13th to 22nd March, July and November. Clerk, Joseph Filteau.

Portneuf Circuit, held at Cap Santé, 7th to 16th January, May and September. Clerk, R. Lelièvre.

MONTREAL DISTRICT.

Montreal Circuit, held at Montreal, 10th to 15th of every month, except January, July and August. Clerk, Monk, Coffin & Papineau.

Vaudreuil Circuit, held at Vaudreuil, 1st to 5th March, July & November. Clerk, J. O. Bastien.

Soulanges Circuit, held at Côteau Landing, 6th to 10th March, July and November. Clerk, H. J. Sentenne.

OTTAWA DISTRICT.

Ottawa Circuit held at Aylmer from 20th to 25th January, May and September. Clerk, H. Driscoll.

* Districts. † Counties, &c., comprised.
 Appeals from the Circuit Court to the Queen's Bench are allowed, by the 26 Vict. cap. 44, sec. 60, in cases over twenty-five pounds currency.
 Every day not a Sunday or a Holy day is a juridical day.

GENERAL QUARTER SESSIONS OF THE PEACE.

Chairman: CHARLES J. COURSOL.

A. M. Delisle and W. H. Brehaut, Clerk of the Peace; C. E. Schiller, Deputy Clerk of the Peace; L. D. René Cotret and _____ Clerks.

TERMS.

Montreal: 4th to 14th February, May, August and November.

Quebec: 8th January, 4th April, 4th July and 4th October. Clerk, Pierre A. Doucet.

Three Rivers: 8th January, 4th April, 4th July and 4th October. Clerk, L. U. A. Genest.

Sherbrooke: 8th January, 8th April, 8th July and 8th October. Clerks, Short & Morris.

Kamouraska: 7th January and 15th July. Clerks, Chalou & Déry.

Aylmer: 5th April and 5th October. Clerk, H. Driscoll.

Percé, Gaspé Basin, New Carlisle and Carleton: On the three days following the Circuit Court. Clerks, Wilkie & Harper.

LAW COURTS OF UPPER CANADA.

COURT OF ERROR AND APPEAL.—This Court is composed of the Judges of the Superior Courts of Law and Equity, and the Hon. Jas. Macaulay, late chief justice of the Court of Common Pleas, and has jurisdiction in Appeal from the Courts of Chancery, Queen's Bench and Common Pleas. It sits three times a year, namely on the 2nd Thursday after each Term, except Trinity Term.

Clerk—The Registrar of the Court of Chancery, Toronto.

COURT OF CHANCERY.—Hon. W. H. Blake, chancellor; Hon. J. C. P. Esten and Hon. J. G. Spragge, vice-chancellors; A. N. Buell, master, Alexander Grant, Registrar and reporter.

Terms for examination of witnesses commence on the second Tuesday in February and May, last Tuesday in August, and second Tuesday in November, and end on the Saturday of the following weeks.

Terms for hearing Causes commence on the second Tuesday in March, June, September and December, and end on the Saturday of the following week.

A weekly sitting on every Monday is held throughout the year (except during the regular vacations), for the purposes of hearing motions for Decrees and motions for or to dissolve special Injunctions, and appeals from the reports of the Master of any Deputy Master.

One of the Judges sits in Chambers every day, (except during the regular vacations,) for the purpose of hearing sundry applications.

COURT OF QUEEN'S BENCH.—Hon. Sir J. B. Robinson, Bart, chief justice; Hon. Archibald McLean and Hon. R. E. Burns, puisne judges; C. C. Small, clerk of the Crown and pleas; C. Robinson, reporter; Robert Pearson, clerk of the process; W. B. Heward, clerk in Banc and chambers; W. B. Heward, clerk in practice court.

This Court sits in Banc. during the four Terms, in Osgoode Hall.

COURT OF COMMON PLEAS.—Hon. W. H. Draper, C. B., chief justice ; Hon. W. B. Richards and Hon. J. H. Hagarty, puisne judges ; L. Heyden clerk of the Crown and pleas ; E. C. Jones, reporter.

The Court of Common Pleas, established by the 12 Vic. cap. 63, consists of three Judges, who sit in Term in the same manner as the Judges of the Queen's Bench.

LAW TERMS.

QUEEN'S BENCH AND COMMON PLEAS.—Hilary Term begins on the first Monday in February. Easter Term begins on the third Monday in May. Trinity Term begins on the Monday next after the 21st of August. Michaelmas Term begins on the third Monday in November. And each term ends on the Saturday of the ensuing week.

From the 1st July to the 21st August is vacation in all the Courts.

Circuits are held twice a year in each County, viz. : The Spring Circuit between Hilary and Easter Terms, The Autumn Circuit between Trinity and Michaelmas Terms.

In the County of York, however, there are three Circuits every year viz. : The Winter, commencing on the Thursday in January next after the Municipal Elections. The Spring, on the second Monday in April, and the Autumn, on the second Monday in October.

There are six Circuits, viz. : The Eastern, held at Brockville, Perth, Ottawa, L'Orignal and Cornwall ; the Midland, held at Picton, Belleville, Cobourg, Peterborough, Whitby and Kingston ; the Home, held at Owen Sound, Hamilton, Niagara, Merritsville, Milton and Barrie ; the Oxford, held at Guelph, Berlin, Stratford, Cayuga, Woodstock, Brantford and Simcoe ; the Western, held at Goderich, London, St. Thomas, Chatham, Sandwich and Sarnia ; the Toronto or Home Sittings, at Toronto.

COURT OF PROBATE.—The Governor General, judge (ex-officio) ; Secker Brough, Toronto, Official principal ; C. FitzGibbon, Toronto, registrar.

POST OFFICE DEPARTMENT.

Honorable SYDNEY SMITH, Post-Master General.

W. H. Griffin, Deputy Post-Master General ; H. A. Wickstead, Accountant ; Edwin F. King, Secretary ; John Ashworth, Cashier.

Money Order Branch.—P. Lesueur, Superintendent.

CLASSIFICATION OF CLERKS.

1st Class.—H. S. Wetherley, R. M. Julyan, E. C. Hayden, R. Oliver, D. Lawson, J. T. McCuaig, W. White.

2nd Class.—J. C. Stewart, J. Audette, Peter Holt, Charles McKenzie.

3rd Class.—John Boyd, W. D. Lesueur, J. Brophy, J. McMahon, E. H. Benjamin, D. Waters, George Mason.

4th Class.—B. King, G. H. Hargrave, H. J. Garrett, George Holt, E. G. Bennett, H. F. Hayward, R. Sinclair.

John Hinifin, Office Keeper.

MONTREAL.

J. B. Meilleur, M.D., LL.D., Postmaster.

James Simpson, Assistant Postmaster.

P. W. Cooper, B. McEvenue, M. Emery, H. A. R. Huddle, McDuff Simpson, M. Murphy, J. Maitland, U. Benoit, John McKeon, Alexander Robertson, L. Malard, W. McGillivray, John Muir and O. Raymond, Clerks.

P. O'Reilly, John J. Drew, A. Anger and L. Lafricain, Letter Carriers.

Office Hours: from 8 A. M. to 7 P. M.; and from 8 to 10 A. M.

on Sundays.

REGULATIONS AND RATES.

Letter Rates.—Letters posted in Canada addressed to any place within the Province pass, if prepaid, for 5 cents per $\frac{1}{2}$ oz., but if posted unpaid are charged 7 cents per $\frac{1}{2}$ oz.

On Letters to Nova Scotia, New Brunswick and Prince Edward's Island the rate is 5 cents per $\frac{1}{2}$ oz., with optional pre-payment.

The rate on letters to the United Kingdom will be:

By Canadian Packet 12 $\frac{1}{2}$ cents per $\frac{1}{2}$ ounce.

By Cunard " 17 " "

Letters for the United Kingdom must be prepaid, or they will be charged a fine of 6d. sterling on arrival in England.

Letters for British Colonies and possessions beyond sea, and for Foreign Countries, via England, must be prepaid.

The rate on Letters for the United States, (except

California and Oregon), 10 cents per $\frac{1}{2}$ oz.

" " for California and Oregon, 15 " "

Registration Charges.—For the Registration of a Letter addressed to any place in British North America the charge is 2 cents.

For the Registration of a Letter to United Kingdom 12 $\frac{1}{2}$ cts.

" " United States 5 "

Miscellaneous Charges.—The charge on Parcels by Parcel Post to any place in Canada is 25 cents per lb., (with 5 cents additional if registered.)

Newspapers and Periodicals.—Newspapers published in Canada may be sent by Post from the office of publication addressed to any place in Canada at the following rates, if paid quarterly in advance, by either the publisher at the post office where the papers are posted, or by the subscriber at the delivering post office:

For a paper published 6 times a week 2s. per qr., or 40 cents.

" " 3 " 1s. " 20 "

" " 2 " 8d. " 13 "

" " 1 " 4d. " 6 $\frac{1}{2}$ "

When the above rates are not paid in advance by either Publisher or Subscriber, such Papers are charged one cent each on delivery.

Newspapers by Mail from England or United States.—Newspapers received from England by the Canadian Packet Mails are delivered free.

Newspapers from England by the Cunard Packet Mails are charged 2 cents each on delivery. (This is the American transit charge.)

United States Newspapers, brought by Mail into Canada, are charged one cent each on delivery.

Postage Stamps.—Postage Stamps of the respective values of 1 cent, for Newspapers; 5 cents for ordinary Provincial Letters; 10 cents for United States rate; 12½ cents for Canadian Packet, and 17 cents for Cunard Packet, are provided for sale to the public.

The charge upon Books, &c., by Book Post to England, is 7 cents on packets not exceeding 4 oz. in weight; 12½ cents on ½ lb. packets; and 12½ cents additional for every additional ½ lb. These charges must be prepaid.

Penal Clause.—The Act contains the following penal clause:

To inclose a letter, or letters, or any writing intended to serve the purpose of a letter, in a Parcel posted for the Parcel Post, shall be a misdemeanor.

To inclose a letter or any writing, or to make any written mark to serve the purpose of a letter, or to inclose any other thing in a newspaper posted to pass as a newspaper, at the rate of postage applicable to newspapers, (except in the case of accounts and receipts of newspaper publishers, which are permitted to pass folded within the newspapers sent by them to their subscribers), shall be a misdemeanor.

Money Orders.—Money Orders payable in the Province may be obtained at any Money Order Office, (of which a list can be seen at any Post Office,) at the following rates:

Under and up to \$10.....	5 cents.
Over \$10 and not exceeding \$20.....	10 "
" 20 " 30.....	15 "
" 30 " 40.....	30 "
" 40 " 60.....	45 "
" 60 " 80.....	60 "
" 80 " 100.....	75 "

No single order can be issued for more than \$100.

N.B.—No HALF CENTS to be introduced in the Money Orders.

Money Orders on England, Scotland and Ireland.—Money Orders, payable at any Money Order Office in Great Britain and Ireland, can be obtained at any Canadian Money Order Office. The Orders are drawn in Sterling, the Commission chargeable being, for £2 and under, one shilling sterling; from £2 to £5, two shillings. No order can be drawn for more than £5; but any number of Orders of £5 each may be procured.

FARMING.

A GERMAN astronomer, Schwabe, observing for 30 years the spots upon the sun, discovered that they passed through certain phases of increase and decrease every 11 years; and that there was an intimate connection between these phases and the magnetic state of the earth.

WEEDS.—Professor Buckman of England has recently found in a pint of ordinary clover seed, 7,600 weed seeds; and in a pint of Dutch clover, 70,000 weed seeds. Some of these weeds are amazingly prolific; a single dock plant's seeds produced 1,700 young docks; and Buckman counted 8,000 seeds in a single plant of black mustard, 26,000 in a burdock, and 46,000 in a cammomile.

NEWSPAPERS.—There are 3,364 newspapers published in the United States and territories, of which 613 are in New York, 419 in Pennsylvania, 382 in Ohio, 221 in Illinois, and 219 in Massachusetts. There are 50 in Canada, 5 in the Sandwich Islands, and 2 in New Brunswick. In England and Wales there are 272; in Scotland, 66; in Ireland, 113; and in the British Isles and Jersey, 17. There are about 1,500 in Germany, about 600 in France, 30 or 40 in Spain, very few in Italy, 13 in Constantinople, and about 100 in Russia.

TO ASCERTAIN THE LENGTH OF THE DAY AND NIGHT.

At any time of the year, add 12 hours to the time of the sun's setting, and from the sum subtract the time of rising, for the *length of the day*. Subtract the time of setting from 12 hours, and to the remainder add the time of rising next morning, for the *length of the night*. These rules are equally true for *apparent* time

TRUE TIME.

Two kinds of times are used in Almanacs; *clock* or *mean-time* in some, and *apparent* or *sun-time* in others. *Clock-time* is always *right*, while *sun-time* *varies* every day. People generally suppose it is twelve o'clock when the sun is due south, or at a properly made noon-mark. But this is a mistake. The sun is seldom on the meridian *at twelve o'clock*; indeed this is the case only on four days of the year: namely, April 15, June, 15, Sept. 1, and Dec. 24. In this Almanac as in most other Almanacs, the time used is *clock-time*. The time when the sun is on the meridian or at the noon-mark, is also given to the nearest second, for the 1st, 9th, 17th, and 25th days of each month, at the right hand of the top of each calendar page. This affords a ready means of obtaining correct time and for setting a clock by using a noon-mark, adding or subtracting as the sun is slow or fast.

Old-fashioned Almanacs, which use *apparent* time, give the rising and setting of the sun's *centre*, and make no allowance for the effect of refraction of the sun's rays by the atmosphere. The more modern and improved Almanacs, which use *clock-time*, give the rising and setting of the sun's *upper limb*, and duly allow for refraction. The practice of setting timepieces by the rising or setting of the sun or moon is not strictly correct, as the unevenness of the earth's surface and intervening objects, such as hills and forests near the points of rising and setting, occasion a deviation in every place, from the time expressed in the Almanac, which time is adapted to a smooth, level horizon. The only means of keeping correct time is by the use of a noon-mark, or a meridian line.

HOME DELIGHTS.—"No man can tell," says Taylor, "but he that loves his children, how many delicious accents make a man's heart dance in their pretty conversation; their childishness, their stammering, their little angers, their innocence, their imperfection, their necessities, are so many little emanations of joy and comfort to him that delights in their person and society.

TELEGRAPH LINES.—In America, 45,000 miles; in England, 10,000; in France, 8,000; in Germany and Austria, 10,000; in Prussia, 4,000; in Russia, 5,000; in the rest of Europe, 7,650; in India, 5,000; in Australia, 12,000; elsewhere, 500. Total in 1858, 96,350. Over all the lines in the United States the number of messages per year is estimated at

4,000,000. It is supposed that a telegraph could be laid around the globe for less than half the cost of the Erie railroad.

COAL FIELDS OF EUROPE AND NORTH AMERICA.—The coal fields of England amount to 5,000 square miles; those of Europe to 8,964; of the United States to 198,850; of the British Provinces of North America, 7,530. Estimating the average thickness of good coal in the United States and British Provinces at 20 feet, we have the amount of coal stored up by the Creator for our use 4,000,000,000,000 tons.

RAILROAD TRAVELLING.—The statistics on this subject prove that this mode of travelling is much safer than the old modes. Thus in the French post system there were nearly seven times as many deaths as in an equal number of miles by railroad. Yet the number of accidents is inexcusably great, especially in the United States. The summary of several years shows

In Prussia, killed or wounded, 1, } in passengers..... } 1,404,075	In England, killed or wound- } 1, in passengers..... } 311,851
" Belgium, ditto..... 1,611,237	" United States, ditto..... 188,459
" France, ditto..... 375,092	

Thus railroad travelling is more than six times as dangerous here as in Prussia, probably because the responsibility here exacted is less in nearly that proportion.

POPULATION OF THE GLOBE.—Professor Dietrich of the University of Berlin has furnished the Academy of Sciences in that city with the most recent and reliable tables on this subject, giving the following results, with his grounds for them;

Population of Europe..... 272,000,000	Population of Australia, etc, 2,000,000
" " Asia..... 720,000,000	
" " America..... 200,000,000	Total..... 1,283,000,000
" " Africa..... 89,000,000	

or more than twelve hundred millions. Reckoning the average death as about one in every forty inhabitants, 32,000,000 die in a year; 87,671 in a day; 3,653 in an hour; and 61 in a minute. Thus one human being dies on an average every second, and more than one is born.

The entire population is thus divided in point of religion:

Christians—Protestants..... 80,000,000	Jews..... 5,000,000
Romish Church..... 170,000,000	Mohammedans..... 160,000,000
Greek Church..... 72,000,000	Heathen..... 783,000,000
Total..... 335,000,000	

This estimate is judged to be in some particulars rather too large.

The average size of living beings on the earth, midway between the smallest microscopic animalcule and the whale, is one-third of an inch in length—the common house fly.

DIFFERENCES OF TIME.—When it is 12 o'clock at noon in New York city it is forenoon at all places west of New York, and afternoon with all places east; as by the following table:

	A. M.	P. M.
Philadelphia.....	11 55 52	Lubec, Me..... 12 23 06
Buffalo, N. Y.....	11 58 32	St. Helens..... 4 33 40
Charleston, L. C.....	11 56 40	London, Eng..... 4 55 42
Cincinnati, Ohio.....	11 18 18	Rome, Italy..... 5 46 03
New Orleans, La.....	10 55 40	Jerusalem..... 7 17 24
Oregon City.....	8 46 40	Calcutta..... 10 49 36
Honolulu, Sandwich Islands.....	6 24 08	Montreal..... 12 01 44

The difference of time between Trinity bay and Valentia bay is about 2 hours and 48 minutes.

ANTIQUITY OF FARMING.

Agriculture is not only the means of supporting life, but it is to be venerated for its antiquity. Its origin has priority over all other arts. This fact alone should give it a deep place in our affections. It might seem, therefore, that the individual who casts reproach upon it is incapable of just appreciation and of logical deduction; and, that he is a stranger to refined moral perception, as well as guilty of a species of impiety. It is an attribute of our nature, and a dictate of revealed religion that we reverence the institutions of Heaven. Is not agriculture one of these institutions? Is it not the first of them? Did not man receive his commission to till the ground from the Deity himself? Was it not, too, on the very completion of the material creation, as if to constitute man his associate in a ministration of beneficence, that God placed him in the garden of Paradise, to dress it and keep it? And, as if to make this labor of man a sacred adjunct to the labor of Heaven while imparting life and joy to God's rational creatures in all coming life, was not the commission for it bestowed the very day of nature's grand jubilee, when the morning stars shouted and sang in a loud anthem of praise? Was it not granted beneath the delightful bowers of Eden, where fragrant odors and spicy aromas floated on every breeze!

To our apprehension, the circumstances attendant on the institution of agriculture, should give it the same pre-eminence in physical economy that the Christian ministry has in the moral world; a pre-eminence that should shield it from reproach and desecration of every kind. These circumstances have an impressive sanctity which cannot be resisted by the well trained mind. In order to see an object in the full splendor of its own beauty, we are often constrained to place it in company with other objects. Thus, how much more beautiful appears each hue of the rainbow when placed in juxtaposition with the others, than though it were seen alone!

MONEY MADE BY FARMING.

One of the most hacknied abuses of agricultural labor is, that money cannot be made from it. This is the common slang of those who are too stupid or too indolent to secure to themselves from such labor the remuneration that would result from skill and enterprise, and perseverance. These very persons get a living, somehow or other, from the soil; it may be a living without luxury or elegance, though favorable to health and muscular vigor; yet, were they depending for subsistence on many other occupations, and to manifest as little talent and application to judicious industry as they do on a farm, they would starve to death, or be compelled to take shelter in an almshouse. The mass of slanderers upon agriculture seem to imagine that getting a living upon a farm is not making money. They do not seem to consider that we do not eat silver and gold as we do beef-steaks, mutton-chops and potatoes. They do not seem to realize that money is valuable only as the representative of property that can be used in social and domestic economy—as the means by which we may obtain what we need for food, or apparel, or the other things wanted in life

What is the difference between the farmer and the mechanic in this respect? It is simply this. The former raises his own bread-stuffs and tubers, and the latter makes shoes, or chairs, or ploughs, or wagons; sells them for cash; then with the money so received purchases those very articles produced by the agriculturist. The process is, simply, an exchange of labor: the farmer works for the mechanic, and the latter works for the former, each depending on the other, in part at least, for what he wants. What is the difference between the farmer and the doctor? Very similar to that between the farmer and the mechanic. The one supplies the other with what he wants to eat, drink, and wear; and, in return, the last supplies the first with jalaps, and powders, and tincture, and liniments—and when there is occasion for it, pulling his teeth, cutting off diseased limbs, and restoring to its proper place a dislocated bone. And what is the difference between the farmer and the merchant? It is pretty much of the same sort as in the two cases named. The farmer supplies him with beef, pork, lamb, veal, and poultry for his table; and, with wool, cotton, and flax, for his apparel. In return, the merchant hands over to the farmer money with which he pays his taxes, and procures for his family such articles as he cannot raise upon his farm. And besides supplying his own wants, the merchant takes all the surplus produce of the farmer, and sells it out as wanted to others, either to those at home or shipping it to foreign countries, paying him in cash for it. Thus, as the merchant produces nothing himself, he is the mere pedlar of the farmer and the mechanic, and gets his living by selling the several commodities which they produce, at a higher price than he pays for them. The farmer and the mechanic had better pay the merchant for being the factor and pedlar of what they produce, than to spend their own time in doing it. He can do this better than they can; and they can earn more in their respective vocations than in doing this.

This exchange of labor between the farmer and the three classes of persons named, is one of the beautiful and beneficial features in civilized life and social economy. It is essentially the same between the farmer and every other class of persons. They are all living upon his labor, or are employed in completing the processes he has begun for sustaining the fabric of human society. Without him they could not subsist. If they were to fail of receiving his products, they all would cease to exist, or else they would be obliged to become farmers themselves. This is not mentioned to create odium against either class of persons in the community, but simply to show the relation between all classes, and the dependence severally of each upon any other one. It is strange, therefore, that it should ever have been imagined, that the occupation of the farmer is subordinate, or in any respect less reputable than that of any other persons. If a comparison were to be instituted, for which there is no occasion, the advantage would be the other way. It would be found that all others would be subordinate to him, and in some measure dependent upon him. So far as respectability is concerned, it may be proper to remark, that that depends not so much on the occupation as it does on the character and talents of the individual engaged in it. Any occupation, however respectable and elevated in itself, may be degraded and rendered comparatively disreputable, by a want of character and talents in the persons who have it in trust; and, on the other hand, an occupation that in itself is subordinate and seemingly without

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the elements of high consideration, may be elevated and rendered honorable when in the hands of those who have character and honorable position to associate with it.

NEW METHOD OF PRESERVING WHEAT.

A Mr. Adams, in a late number of *The Journal of the London Society of Arts*, has made a suggestion for a new kind of granary, by which he thinks that grain may be safely and effectually preserved for any number of years. The great difficulty now is the natural moisture contained in all grain, and which it is never entirely divested of, by exposure to the atmosphere at the common temperature, this being the cause of much of the sour, musty flour found in market.

The following are Mr. Adam's observations upon the subject:—

"There does not seem to be any difficulty in the matter, if we divest ourselves of preconceived ideas of the notion that a granary or grain receptacle must necessarily be a building with a floor or windows more or less multiplied in altitude. We may reason by analogy as to what is the cheapest and most effective means of securing perishable commodities from the action of the atmosphere and vermin. In England we put our flour in sacks. Brother Jonathan puts his in barrels, which does not thoroughly answer. * * * If Brother Jonathan wishes really to preserve his flour or his 'crackers' undamaged, he makes them thoroughly dry and cool, and hermetically seals them in tin cans. This also is a common process to prevent goods from being damaged at sea.

"There can be no doubt that if we were to put dry wheat in an hermetically tinned case, it might be kept as long as the famed 'mummy wheat' of Egypt. This will readily be admitted, but the expense would be queried. Let us examine into this. A canister is a metallic reservoir; so is a gasometer; so is an iron water-tank in a ship, at a railway station, or elsewhere; and a cubic foot of water-tank on a very large scale will be found to cost very much less than a cubic foot of canister on a small scale. And if a bushel of wheat be more valuable than a bushel of water, it will clearly pay to put wheat in huge canisters of iron. The wheat canister, in short, should be a wrought or cast metal tank of greater or less size, according to the wants of the owner, whether for the farmer's crop or the grain-merchant's stock.

"This tank should be constructed of small parts, connected by screw-bolts, and consequently easily transported from place to place. The internal parts should be galvanized, to prevent rust, and the external part also, if desired. It should be hermetically tight at all the points, and the only opening should be what is called a man-hole—that is to say, a canister-top where the lid goes on, large enough to admit a man. When filled with grain, the top should be put on, the fitting of the edge forming an air-tight joint. Wheat put dry into such a vessel, and without any vermin, would remain wheat any number of years. But an additional advantage to such a reservoir would be an air-pump, by the application of which, for the purpose of exhaustion, any casual vermin would be killed. If the grain were moist, the same air-pump might be used to draw or force a current of warm air through it, to carry off the moisture. By this process, and consequently keeping out the air, the grain might be preserved for any length of time. As the reservoir would be perfectly air-tight and water-tight, it might be buried in the

ground with perfect safety; and thus cellars might be rendered available for granaries, economizing space of comparatively little value. The grain would be easily poured in from the surface; and to discharge it, an Archimedean screw should be used. The size of the reservoir should be proportioned to the locality, and it should hold a specified number of quarters, so as to serve as a measure of quantity, and prevent the expense of meterage. * * * If constructed above the ground, a stair or ladder must communicate with the upper part, and the lower part must be formed like a hopper, for the purpose of discharge. For many farm localities this arrangement might be best, and wheat might be thrashed into grain direct from the field and stored. * * * Granaries of this description would occupy less than one-third the cubic space of those of the ordinary description, and their cost would be less than one-fifth. * * * With this security for storing safely, a farmer would have less hesitation in sowing great breadths of land. He would not be driven to market under an average value, and might choose his own time for selling. The fear of loss being dispelled, people would buy with less hesitation, and the great food stores of the community would, by a wholesome competition, insure the great mass of the community against a short supply. But as long as uncertainty shall prevail in the storage of grain, so long will it be a perilous trade to those engaged in it, and so long will the food of the community be subject to a very irregular fluctuation of prices. There is nothing difficult in this proposition. It is merely applying existing arrangements to unusual cases. There needs but the practical example to be set by influential people, and the great mass will travel in the same track. To the wealthy agriculturist it will be but the amplification of the principle of the tin-lined corn-bin, that keeps out the rat from the oats of the stable. * * * Were this mode of preserving grain to become general, the facility of ascertaining stock and crops after reaping would be very great. The granaries being measures of quantity, no hand-measuring would be needed, and the effects of wet harvest weather might be obviated."

GUANO.

At a meeting of the Society of Arts, some interesting statistics relative to guano were presented by Mr. Horace Green.

Guano is generally understood to have been brought to the notice of Europeans by Humboldt in 1804. It was first brought to England as merchandise in 1830. It had, however, been used in Peru for 600 years. Of this excrementitious matter voided by sea-birds, a very large proportion was decomposed before the guano of commerce was extracted from its beds, and more still before its arrival in port. Proof of the rapid depreciation of guano in keeping might be found in the analyses of the dung of birds by Sir Humphrey Davy and M. Coindet. Coindet found in recent excrement 8.61 of pure ammonia, and of ammonia in the form of its equivalent of uric acid 35.20, making a total of 43.81 per cent. Davy found that the soluble matter of the dung of pigeons decreased from 23 per cent. in the recent excrement to 16 per cent. in that of six months old, and to eight per cent. after fermentation. It appeared that in five years (1845-50) nearly 650,000 tons of guano had been brought almost round the world for the stimulation of the soils of this country; but it was generally believed that the zenith of supply from Peru was

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past. From the mean of many analyses of different varieties, it was stated that the amount of ammonia was, in Saldanha Bay, 1.68 per cent.; in Patagonia, 2.55 per cent.; in Cape and Algoa Bay, 2.00 per cent.; and in the New Islands, 1.96 per cent.; but in phosphate of lime, which was the next most important element, the guanos were richer as they were poorer in ammonia. The mean amount of phosphate of lime was, in Saldanha Bay, 55.40 per cent.; in Patagonia, 44.00 per cent.; in Cape and Algoa Bay, 20.00 per cent.; and in the New Islands, 62.80. The question, however, arose, whether or not large quantities of such manures could be sold at a price which should not exceed the home cost of super-phosphate of lime. Reference was then made to the Guano Substitute Prize of £1000., and the Gold Medal, which were offered by the Royal Agricultural Society for the discovery of a manure equal in its fertilizing properties to Peruvian guano, and which could be sold at a price not exceeding £5 per ton; and it was contended that, as, according to the composition of guano as given by Professor Way, and the known value of these several articles in the markets of commerce, the value of a ton of such material would be upwards of £12, it was not at all probable that any one would dispose of it for £5. The author then proceeded to describe the fisheries guano of Mr. Pettit, and gave the results of several analyses, from which it was deduced that, according to the scale before alluded to, the mean value of the samples tested was £9 7s. 7d. per ton. The manufacture of this guano on a large scale would be carried on by a process of the following nature: A given weight of fishy matter was placed in a large tank, and sulphuric acid of commerce added to the mass. The action of the acid was so powerful as speedily to reduce the organic matter to a soft pulpy consistency, resembling in appearance the fecal matter of birds. This pasty mass being placed in a centrifugal drying machine, and the superabundant moisture forcibly driven off, the partially dry matter was now submitted to a heat not exceeding 212° Fahrenheit, and afterwards pulverized in a suitable manner. In this process the oily matter of the fish separated itself and swam upon the surface of the liquid; hence it could be easily separated, and formed an important item in the economy of the manufacture—since, taking all kinds of fishy matter, we obtained an average of three per cent. of oil, worth £25 per ton, or three-fourths of the whole expense of the raw material. Another process might in some cases be adopted with advantage, especially with cartilaginous fish. As to the supply of the raw material, it was believed, from the testimony of many persons on the coasts, that an ample supply of refuse fish would be obtained at an average price of £1 per ton; and taking 60 tons of this weekly, the cost of manufacture and incidental expenses would be £10,643 per annum. From this there would result 33 tons of oil, which, at £25 per ton, would give £2,325, and 1,653 tons of guano, at £7 per ton, or £11,571, making together £13,896 as the amount of sales, or a profit of £3,253.

It was stated that some years ago an inquiry was instituted as to whether the offal and refuse fish of Newfoundland could not be prepared into a manure at a cheaper rate than that already in the market, when it was found that there were difficulties in the way, which led to the abandonment of the idea.

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