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P.B. MINGLE & CO'S
ALMANAC
AND
GARDEN MANUAL
1901

Geddes Print, 716 Chestnut St. Phila.

103 Market St., Philadelphia.

TAKE NOTICE

Ladies and Gentlemen coming to the City, and finding themselves encumbered by Waterproofs, Overcoats, Satchels, &c., can leave such articles at our Store until their return home.

Also, Ladies shopping can have their bundles sent to the Store, taking them up as they go to the Ferries or Cars.

We shall be glad to accommodate our friends in this way.

Very respectfully,

P. B. MINGLE & CO.

1901.

	Sun.	Mon.	Tues.	Wed.	Thu.	Fri.	Sat.
JAN.	6	7	8	9	10	11	12
	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30	31		
FEB.						1	2
	3	4	5	6	7	8	9
	10	11	12	13	14	15	16
	17	18	19	20	21	22	23
	24	25	26	27	28		
MAR.						1	2
	3	4	5	6	7	8	9
	10	11	12	13	14	15	16
	17	18	19	20	21	22	23
	24	25	26	27	28	29	30
	31						
APR.		1	2	3	4	5	6
	7	8	9	10	11	12	13
	14	15	16	17	18	19	20
	21	22	23	24	25	26	27
	28	29	30				
MAY			1	2	3	4	
	5	6	7	8	9	10	11
	12	13	14	15	16	17	18
	19	20	21	22	23	24	25
	26	27	28	29	30	31	
JUNE						1	
	2	3	4	5	6	7	8
	9	10	11	12	13	14	15
	16	17	18	19	20	21	22
	23	24	25	26	27	28	29
	30						

STREETS OF PHILADELPHIA

No.	North.	No.	South.
	1 Market,		1 Market, Jayne
100	Arch, Cherry,	100	Chestnut,
200	Race, New,	200	Walnut,
300	Vine, Wood,	300	Spruce, Union
400	Callowhill,	400	Pine,
500	Buttonwood,	500	Lombard,
	Spring Garden	600	South,
600	Green Mt Vern	700	Bainbridge,
	Wallace	800	Catherine,
700	Fairmount,	900	Christian,
800	Brown,	1000	Carpenter,
900	Poplar,	1100	Washington,
1200	Girard Ave.,	1200	Federal,
1300	Thompson,	1300	Wharton,
1400	Master,	1400	Reed,
1500	Jefferson,	1500	Dickerson,
1600	Oxford,	1600	Tasker,
1700	Columbia Ave	1700	Morris,
1800	Montgomery,	1800	Moore,
1900	Berks,	1900	Mifflin,
2000	Norris,	2000	McKean,
2100	Diamond,	2100	Snyder,
2200	Susquehanna,	2200	Jackson,
2300	Dauphin,	2300	Wolf,
2400	York,	2400	Ritner,
2500	Cumberland,	2500	Porter,
2600	Huntingdon,	2600	Shunk,
2700	Leligh Ave.,	2700	Oregon Ave.
2800	Somerset,	2800	Johnson,
2900	Cambria,	2900	Bigler,
3000	Indiana,	3000	Pollock.

1901.

	Sun.	Mon.	Tues.	Wed.	Thu.	Fri.	Sat.
JULY	7	8	9	10	11	12	13
	14	15	16	17	18	19	20
	21	22	23	24	25	26	27
	28	29	30	31			
AUG.					1	2	3
	4	5	6	7	8	9	10
	11	12	13	14	15	16	17
	18	19	20	21	22	23	24
	25	26	27	28	29	30	31
SEP.		1	2	3	4	5	6
	7	8	9	10	11	12	13
	14	15	16	17	18	19	20
	21	22	23	24	25	26	27
	28	29	30				
OCT.			1	2	3	4	5
	6	7	8	9	10	11	12
	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30	31		
NOV.						1	2
	3	4	5	6	7	8	9
	10	11	12	13	14	15	16
	17	18	19	20	21	22	23
	24	25	26	27	28	29	30
DEC.		1	2	3	4	5	6
	7	8	9	10	11	12	13
	14	15	16	17	18	19	20
	21	22	23	24	25	26	27
	28	29	30	31

TO OUR PATRONS.

IN presenting our Seed Annual for 1901, we are reminded of Napoleon's famous maxim "always concentrate your forces, never divide them," which made him the conqueror of Europe. Concentration of mental power on one point means success. In business, a man devoting all his mind to one line of trade gains fortune. It is by such business application that P. B. Mingle & Co., has, for sixty-three years, been a great centre for the distribution of germinative farm seeds. We have a large, most intelligent, and liberal family of customers for which we cater. Our efforts are backed by integrity and zeal, knowing full-well that success cannot follow any false or elusive interpretation of *Business Ethics*. For FARM and GARDEN SEEDS we challenge any house to furnish better quality for the price, or greater promptness in filling orders.

Of course it must always remain true, that good germinative qualities cannot be expected in cheap seed ; and it may be set down as an axiom that cheap seed never pays, Yet good seed need not always be very high-priced, it is the aim of P. B. Mingle and Co. to so adjust the relations of seeds to cost and charges, that our customers shall invariably receive a full and fair return for the money expended.

Yours, truly,

P. B. MINGLE & CO.

EVERY MERCHANT

who gets, or wants to get the farmer's trade—the best trade in the world—must be quick to see and appreciate just the goods needed.

Most farmers keep cows and most cows have, at some time, one or more of the diseases that is easily cured by

KOW-KURE

THE GREAT COW MEDICINE

If you have Kow-Kure in stock you have one more hold on the farmer's trade, and a big one. If you have not it, **GET IT.** This merchant has it, he knows.

Morgantown, Pa., Nov. 21, 1900.

P. B. Mingle & Co., Dear Sirs:—

Please find check for 2 doz. small Kow-Kure. Ship as soon as you can, am entirely out. It beats anything, to bring good reports, that we ever had.

Yours respectfully,

S. Deichley.

If you will put Kow-Kure in stock the Association will do local advertising for you. We have handled thousands of packages of this medicine and advise you to try it.

P. B. MINGLE & CO., Phila. Pa.

EVERY - FARMER -

Who Keeps One or More Cows
Should Know That

KOW-KURE cures abortion (slinking).
KOW-KURE cures barrenness (failure to breed).

KOW-KURE prevents tuberculosis.
KOW-KURE removes retained afterbirth.
KOW-KURE cures scouring in cows and calves.

KOW-KURE cures bunches and swelling in bag.

KOW-KURE cures milk fever.
KOW-KURE enriches the blood.
KOW-KURE improves the appetite.
KOW-KURE increases the milk.
KOW-KURE is a medicine, not a food.
KOW-KURE is for cows only.
KOW-KURE has stood the test for ten years.

KOW-KURE is a complete success.

To know these facts and act upon them is to insure your dairy against profit-destroying diseases, and guarantee a uniform standard of excellent health.

Kow-Kure makes healthy cows and healthy cows pay.

Dairy Association,
Lyndonville, Vt.

Sayles, Pa., April 3, 1900,

Dear Sirs:—I have used Kow-Kure for the removal of afterbirth in cows and for scours in calves and it works nicely. I also know that it is a grand thing for a cow that is off its feed.

Yours truly,
D. B. Boyce.

Kow-Kure is put up in two sizes. Enough medicine in one package to treat one cow from five to eight weeks, according to the disease. Directions for use with every package. The price is 50 cents and \$1.00.

Made only by the Dairy Association, Lyndonville, Vt.

1901

1901

1st Month,

31 Days.

MOON'S PHASES.

☾ Full Moon . . . 4d. 7h. 13m. A.
 ☾ Last Quarter . . . 12d. 3h. 38m. A.

☾ New Moon . . . 20d. 9h. 38m. M.
 ☾ First Quarter . . 27d. 4h. 32m. M.

Jan. 6th—Day's Length: 9 hours, 26 minutes.

DAY OF YEAR	DAY OF MONTH	DAY OF WEEK	CALENDAR FOR NEW YORK CITY, PHILADELPHIA, Pennsylvania, Connecticut, New Jersey, Ohio, Indiana and Illinois.									
			Sun Rises.		Sun Sets.		Sun Slow.		Moon.		High Water Philadelphia	
			H	M.	H.	M.	M.		H	M.	H.	M.
1	1	Tu	7	23	4	44	4		3	51	10	20
2	2	W	7	23	4	45	4		4	55	11	35
3	3	Th	7	23	4	46	5		5	55	Even	33
4	4	Fr	7	23	4	47	5		Rises		1	21
5	5	Sa	7	23	4	48	6		5	53	2	8
6	6	1	7	23	4	49	6		6	57	2	53
7	7	M	7	23	4	50	6		7	59	3	35
8	8	Tu	7	23	4	51	7		8	59	4	15
9	9	W	7	23	4	52	7		9	58	4	54
10	10	Th	7	22	4	53	8		10	56	5	31
11	11	Fr	7	22	4	54	8		11	53	6	10
12	12	Sa	7	22	4	55	8		Morn		6	54
13	13	2	7	21	4	56	9		0	50	7	41
14	14	M	7	21	4	57	9		1	47	8	38
15	15	Tu	7	20	4	58	10		2	45	9	40
16	16	W	7	20	4	59	10		3	42	10	40
17	17	Th	7	20	5	0	10		4	36	11	40
18	18	Fr	7	19	5	1	11		5	27	Morn	8
19	19	Sa	7	19	5	3	11		6	16	0	34
20	20	3	7	18	5	4	11		Sets		1	21
21	21	M	7	18	5	5	11		6	43	2	6
22	22	Tu	7	17	5	6	12		7	52	2	54
23	23	W	7	17	5	7	12		9	2	3	39
24	24	Th	7	16	5	9	12		10	13	4	25
25	25	Fr	7	16	5	10	13		11	24	5	13
26	26	Sa	7	15	5	11	13		Morn		6	1
27	27	4	7	14	5	12	13		0	33	6	53
28	28	M	7	13	5	13	13		1	41	7	54
29	29	Tu	7	12	5	15	13		2	46	9	5
30	30	W	7	11	5	16	13		3	47	10	14
31	31	Th	7	10	5	17	14		4	41	11	19

Conjectures of the Weather.

The 1st—3rd, changeable; 4th—6th, clear and cold; 7th—8th, stormy;
 9th—11th, clear and pleasant; 12th—14th, cloudy and snow; 15th, 16th, cold;
 17th, 18th, variable; 19th—21st, cool and pleasant; 22nd—24th, snow; 25th—26th,
 clear and pleasant; 27th—28th, variable; 29th—31st, blustry.

PERMANENT PASTURE GRASS SEED.

Having given our attention to grasses for this purpose for many years, and after practical results and experience, we have succeeded in creating a mixture which we can highly recommend.

If there is any land you wish to set in permanent pasture, we can supply you with a mixture of any description required or a special mixture admirably suited for this purpose at a very reasonable cost. We are headquarters for all kinds of grass seeds and can save you money on your purchases.

TWO CROPS IN ONE YEAR.

There are several crops that can be made to do service not only in covering the land, but in destroying weeds. Millet, which grows rapidly, crowds the weeds out, while Hungarian grass, which may be mowed two or three times and then plowed under, is the best cleaner of the soil of weeds that can be used. Buckwheat is a crop that will grow on the poorest sandy soil, and even if corn or oats are broadcasted and turned under when high enough they will be serviceable. While the cow pea may be regarded as the best crop for adding nitrogen to the soil in summer, yet there is nothing to prevent the growing of two crops on the same land for enriching the soil, as it may not be necessary for such crops to mature. They can be turned under at any stage of growth. It is maintained that the crops can add nothing to the soil other than the amount derived therefrom. This claim is true so far as the mineral elements are concerned, but there is a decided gain of nitrogen by the use of the leguminous plants. As the soil contains a large proportion of inert mineral matter, the plants gradually change it to an available condition and, though not adding mineral matter to the soil, they bring it within reach of succeeding crops. In winter the soil loses its fertility rapidly, especially if there is frequent freezing and thawing, with abundant rain, for which reason rye or crimson clover serve to prevent loss. It will, therefore, pay the farmers to grow crops on every square foot of ground, as they will be serviceable on the land if not profitable for market.

FALL-SOWN RED CLOVER.

In the southern half of the State one sees many fields of new red clover. It can be sown later than the crimson, and is surer to make a good sod. In the West we prefer a wheat crop the first harvest after the clover is sown, but here a clover hay crop and a more rapid growth of the clover plants for sake of the soil are preferable. Some of this fall-sown clover is now very small, and would not endure the severity of an Ohio winter, while other fields, seeded earlier, are covered with a mat of green. Other farmers are using rye for a winter crop, to be plowed under in the spring. They sow more rye because experience has taught that the rye sod in the spring increases the productive power of the land.

VINES.

It will be a risk at all times to plant a young tree or vine between old ones of the same kind. The manure that may be placed at the location for the young plant will be at once seized by the larger ones, as they will immediately send out roots for that purpose, the result being that the young plant is deprived of food and dies. It is also a mistake to set out a young tree in the place of an older one that has died, as disease may be in the ground, and also because the plant food necessary for the new tree has been used by the tree which formerly occupied the location.

Leaves make the best kind of bedding and are an important addition to the manure heap. When used in the stalls during very cold weather, they prevent draughts of air along the floors and retain warmth. They cost nothing but the labor of raking and hauling and a large supply should be stored away for winter use under cover, so as to have them dry.

1901
2nd Month,

1901
28 Days.

MOON'S PHASES.

☉ Full Moon . . . 3d. 10h. 30m. M. ☾ New Moon . . . 18d. 9h. 45m. A.
 ☾ Last Quarter . . 11d. 1h. 12m. A. ☾ First Quarter . . 25d. 1h. 38m. A.

Feb. 3rd—Day's Length: 10 hours, 14 minutes.

DAY OF YEAR	DAY OF MONTH	DAY OF WEEK	CALENDAR FOR NEW YORK CITY, PHILADELPHIA, Pennsylvania, Connecticut, New Jersey, Ohio, Indiana and Illinois.						
			Sun Rises.		Sun Sets.		Sun Slow.	Moon.	High Water Philadelphia
			H.	M.	H.	M.	M.	H. M.	H. M.
32	1	Fr	7	9	5	18	14	5 28	Morn
33	2	Sa	7	8	5	19	14	6 8	0 39
34	3	S	7	7	5	21	14	Rises	1 21
35	4	M	7	6	5	22	14	6 45	2 2
36	5	Tu	7	5	5	23	14	7 46	2 42
37	6	W	7	4	5	24	14	8 44	3 21
38	7	Th	7	3	5	25	14	9 42	3 58
39	8	Fr	7	2	5	27	14	10 39	4 36
40	9	Sa	7	1	5	28	14	11 35	5 16
41	10	S	7	0	5	29	14	Morn	5 56
42	11	M	6	59	5	30	14	0 32	6 40
43	12	Tu	6	58	5	31	14	1 29	7 30
44	13	W	6	56	5	33	14	2 23	8 31
45	14	Th	6	55	5	34	14	3 15	9 36
46	15	Fr	6	54	5	35	14	4 5	10 40
47	16	Sa	6	53	5	36	14	4 49	11 41
48	17	S	6	51	5	37	14	5 31	Even 34
49	18	M	6	50	5	39	14	Sets	1 20
50	19	Tu	6	48	5	40	14	6 42	2 6
51	20	W	6	47	5	41	14	7 56	2 54
52	21	Th	6	46	5	42	14	9 9	3 40
53	22	Fr	6	44	5	43	14	10 22	4 30
54	23	Sa	6	43	5	45	14	11 33	5 21
55	24	S	6	41	5	46	13	Morn	6 13
56	25	M	6	40	5	47	13	0 40	7 10
57	26	Tu	6	38	5	48	13	1 41	8 16
58	27	W	6	37	5	49	13	2 37	9 24
59	28	Th	6	36	5	50	13	3 26	10 27

Conjectures of the Weather.

The 1st—3rd, agreeable; 4th—6th, changeable; 7th, 9th, snow;
 10th—12th, clear and cold; 13th, 14th, windy and cold; 15th—17th, cloudy and snow;
 18th—20th, variable; 21st, 22nd, clear and cold; 23rd, 24th, changeable;
 25th, 26th, clear and cold; 27th, 28th, cloudy and windy

KAFFIR CORN.

One of the best articles for feeding pigeons, being round and hard, a splendid article for homing birds in long flies. It is becoming more popular every year. Not being hard to grow, can be cut three times a season, grows about 6 feet high in rich soil. The heads are long, narrow, and well filled with white grain. Produces two to four heads from a single stock. The whole stock, if cut down as soon as seed heads appear, at once starts a second growth from the roots. It also stands drought wonderfully. If growth is checked for want of moisture the plant waits for rain, and when it comes at once resumes its growth. On very thin and worn-out lands it yields paying crops of grain or forage, even in dry season when corn has utterly failed. The whole stock, as well as blades, makes excellent fodder, and all stock eat it greedily. Flour made from Kaffir Corn is excellent for batter cakes, muffins, etc. Sow in rows three feet apart; five pounds per acre.

CANADA PEAS.

Considerably used for feeding pigeons, being perfectly round and very hard. They are also used for fodder, when sown in oats and cut green they become very nutritious.

COW PEAS.

The Southern Cow Pea, (in reality a Bean), has been cultivated in the South for many years, but only in recent years has it been demonstrated that most all varieties are adapted to cultivation throughout nearly the entire United States. They now promise to become one of our most valuable farm products.

The yield of hay runs from 1 to 3 tons per acre. The Rhode Island experiment station reporting one year a yield per acre of 35,000 lbs., green vines making $5\frac{1}{2}$ tons dried hay. The yield of Peas range from 15 to 30 bushels per acre, occasionally as high as 50 bushels.

They have been grown by dairymen with very satisfactory results, following Winter Rye, which was cut green in June for dairy cows, then stubble turned under and sown to mixed Peas and Oats, furnishing a large amount of forage in August, when grass pastures usually short, and producing a supply of milk as abundant as in early summer months.

As a fertilizer they come next to Clover, to be plowed under when they commence to blossom; they will grow on land that will not produce Clover.

As a fertilizer crop it excels all others, absorbing from the air more Nitrogen than Clover and drawing from the subsoil large amounts of Potash and Phosphoric Acid, depositing these fertilizer elements in the surface soil just where needed for succeeding crops.

Cow Peas afford excellent midsummer pasturage, but the best way for using green is to cut and feed to stock.

1901

3rd Month,

1901

31 Days.

MOON'S PHASES.

☾ Full Moon . . . 5d. 3h. 4m. M.

☾ New Moon . . . 20d. 7h. 53m. M.

☾ Last Quarter . . . 13d. 8h. 6m. M.

☾ First Quarter . . 26d. 11h. 39m. A.

Mar. 3rd—Day's Length: 11 hours, 22 minutes.

CALENDAR FOR NEW YORK CITY, PHILADELPHIA, Pennsylvania, Connecticut, New Jersey, Ohio, Indiana and Illinois.												
DAY OF YEAR	DAY of MONTH	DAY OF WEEK	Sun Rises.		Sun Sets.		Sun Slow.	Moon.		High Water Philadelphia		
			H.	M.	H.	M.	M.	H.	M.	H.	M.	
60	1	Fr	6	34	5	51	13		4	8	10	56
61	2	Sa	6	33	5	52	12		4	44	11	49
62	3	9	6	31	5	53	12		5	18	Even	36
63	4	M	6	30	5	54	12		Rises		1	13
64	5	Tu	6	28	5	56	12			6	34	1
65	6	W	6	27	5	57	12		7	31	2	28
66	7	Th	6	25	5	58	11		8	29	3	5
67	8	Fr	6	23	5	59	11		9	26	3	43
68	9	Sa	6	22	6	0	11		10	22	4	23
69	10	10	6	20	6	1	11		11	18	5	5
70	11	M	6	19	6	2	10		Morn		5	49
71	12	Tu	6	17	6	3	10			0	12	6
72	13	W	6	15	6	4	10		1	4	7	28
73	14	Th	6	14	6	5	9		1	53	8	31
74	15	Fr	6	12	6	6	9		2	39	9	36
75	16	Sa	6	11	6	7	9		3	21	10	39
76	17	11	6	9	6	8	9		3	59	11	38
77	18	M	6	7	6	9	8		4	36	Morn	
78	19	Tu	6	6	6	10	8		5	11		0
79	20	W	6	4	6	12	8		Sets		1	19
80	21	Th	6	3	6	13	7			8	0	2
81	22	Fr	6	1	6	14	7		9	14	2	56
82	23	Sa	5	59	6	15	7		10	25	3	48
83	24	12	5	58	6	16	6		11	31	4	41
84	25	M	5	56	6	17	6		Morn		5	34
85	26	Tu	5	55	6	18	6			0	31	6
86	27	W	5	53	6	19	6		1	24	7	25
87	28	Th	5	51	6	20	5		2	7	8	27
88	29	Fr	5	50	6	21	5		2	45	9	29
89	30	Sa	5	48	6	22	5		3	19	10	25
90	31	13	5	47	6	23	4		3	49	11	16

Conjectures of the Weather.

The 1st—3rd, pleasant; 4th—6th, windy and snow; 7th—8th, changeable;
 9th—11th, clear and cold; 12th—14th, blustry; 15th, 16th, pleasant and cool;
 17th, 18th, variable; 19th—21st, moderate; 22nd—24th, snow;
 25th—26th, clear and windy; 27th—28th, variable; 29th—31st, pleasant.

USEFUL TABLES.

TABLE SHOWING THE WEIGHT OF VARIOUS ARTICLES.

Barley.....	per bushel, 48 lbs.	Oats.....	per bushel, 32 lb ^s
Beans.....	per bushel, 60 lbs.	Onions.....	per bushel, 57 lb ^s
Buckwheat.....	per bushel, 48 lbs.	Osage Orange.....	per bushel, 33 lb ^s
Broom Corn.....	per bushel, 46 lbs.	Orchard Grass.....	per bushel, 12 lb ^s
Blue Grass.....	per bushel, 14 lbs.	Peas.....	per bushel, 60 lbs
Clover Seed.....	per bushel, 60 lbs.	Potatoes, Irish.....	per bushel, 60 lbs
Corn, shelled.....	per bushel, 56 lbs.	Red Top Seed.....	per bushel, 10 lbs
Corn, on the ear.....	per bushel, 70 lbs.	Rye.....	per bushel, 56 lbs
Flax Seed.....	per bushel, 56 lbs.	Sweet Potatoes.....	per bushel, 55 lbs
Hemp Seed.....	per bushel, 40 lbs.	Timothy Seed.....	per bushel, 45 lbs
Hungarian Grass Seed.....	per bushel, 48 lbs.	Top Onions.....	per bushel, 28 lbs
Millet.....	per bushel, 50 lbs.	Turnips.....	per bushel, 55 lbs
German Millet.....	per bushel, 50 lbs.	Wheat.....	per bushel, 60 lbs

QUANTITY OF SEED USUALLY SOWN UPON AN ACRE.

Barley, broadcast.....	2 to 3 bushels	Onion, for sets in drills.....	30 pounds
Beans, Dwarf, in Drills.....	1½ bushels	Onion sets, in drills,.....	6 to 12 bushels
Beans, Pole, in hills.....	10 to 12 quarts	Parsnips, in drills.....	4 to 6 pounds
Beets, in drills.....	5 to 6 pounds	Peas, in drills.....	1½ bushels
Broom Corn, in hills.....	8 to 10 quarts	Peas, broadcast.....	3 bushels
Buckwheat.....	1 bushel	Potatoes, cut tubers.....	10 bushels
Cabbage in beds to transplant½ pound		Pumpkin, in hills.....	4 to 6 pounds
Carrots in drills.....	3 to 4 pounds	Radish, in drills.....	8 to 10 pounds
Chinese Sugar Cane.....	12 quarts	Rye, broadcast.....	1½ to 2 bushels
Corn, in hills.....	8 to 10 quarts	Sage, in drills.....	8 to 10 pounds
Corn, for soiling.....	3 bushels	Salsify, in drills.....	8 to 10 pounds
Cucumber, in hills.....	2 pounds	Spinach, in drills.....	10 to 12 pound
Flax, broadcast.....	1½ bushels	Squash, bush varieties in hills.....	4 to 6 pounds
Hemp.....	1½ bushels	Squash, Run'g " in hills.....	3 to 4 pounds
Mustard, broadcast.....	½ bushel	Tomato, to transplant.....	¼ pound,
Melon, Musk, in hills.....	2 to 3 pounds	Turnip, in drills.....	½ to 2 pounds
Melon, Water, in hills.....	4 to 5 pounds	Turnip, broadcast.....	3 to 4 pounds
Oats, broadcast.....	2 to 3 bushels	Vetches, broadcast.....	2 to 3 bushels
Onion, in drills.....	5 to 6 pounds	Wheat, broadcast.....	1½ to 2 bushels

GRASS SEEDS TO THE ACRE.

White Clover.....	10 pounds	Blue Grass.....	1½ to 3 bushels
Red Clover.....	10 to 15 pounds	Rye Grass.....	1½ to 2 bushels
Lucerne Clover.....	10 to 15 pounds	Orchard Grass.....	1½ to 2 bushels
Alsike Clover.....	4 to 6 pounds	Red Top Grass.....	1½ to 2 bushels
Timothy.....	12 pounds	Mixed Lawn Grass.....	2 to 3 bushels
Hungarian Grass.....	1 bushel	Millet.....	1 bushel

NUMBER OF PLANTS TO THE ACRE.

DISTANCE APART.	NO. OF PLANTS.	DISTANCE APART.	NO. OF PLANTS
1 foot by 1 foot.....	43,560	6 feet by 6 feet.....	1,210
1½ " 1½ ".....	19,360	8 " 8 ".....	680
2 " 1 ".....	21,780	10 " 10 ".....	435
2 " 2 ".....	10,890	12 " 12 ".....	302
2½ " 2½ ".....	6,969	15 " 15 ".....	193
3 " 2 ".....	7,260	18 " 18 ".....	134
3 " 3 ".....	4,840	20 " 20 ".....	103
4 " 4 ".....	2,722	25 " 25 ".....	70
5 " 5 ".....	1,742	30 " 30 ".....	84

NUMBER OF PLANTS PRODUCED FROM AN OUNCE OF SEED.

	PLANTS.		PLANTS.
Asparagus.....	about 500	Kale.....	about 2,000
Broccoli.....	" 2,000	Leek.....	" 1,000
Cabbage.....	" 2,000	Lettuce.....	" 3,000
Cauliflower.....	" 2,000	Pepper.....	" 2,000
Celery.....	" 3,000	Tomato.....	" 3,000
Egg Plant.....	" 1,000	Sage.....	" 1,000
Endive.....	" 3,000	Thyme.....	" 5,000

1901
4th Month,

1901
30 Days.

MOON'S PHASES.

☾ Full Moon . . . 3d. 8h. 20m. A.
☾ Last Quarter . . 11d. 10h. 57m. A.

☾ New Moon . . . 18d. 4h. 37m. A.
☾ First Quarter . . 25d. 11h. 15m. M.

Apr. 7th—Day's Length : 12 hours, 55 minutes.

DAY OF YEAR	DAY of MONTH	DAY OF WEEK	CALENDAR FOR NEW YORK CITY, PHILADELPHIA, Pennsylvania, Connecticut, New Jersey, Ohio, Indiana and Illinois.						
			Sun Rises.		Sun Sets.		Sun	Moon.	High Water Philadelphia
			H.	M.	H.	M.	M.	H. M.	H. M.
91	1	M	5	45	6	24	4	4 17	Even 2
92	2	Tu	5	43	6	25	4	4 43	0 42
93	3	W	5	42	6	26	3	Rises	1 18
94	4	Th	5	40	6	27	3	7 18	1 54
95	5	Fr	5	39	6	28	3	8 15	2 34
96	6	Sa	5	37	6	29	3	9 11	3 14
97	7	14	5	35	6	30	2	10 7	3 55
98	8	M	5	34	6	31	2	10 59	4 39
99	9	Tu	5	32	6	32	2	11 48	5 24
100	10	W	5	31	6	33	1	Morn	6 10
101	11	Th	5	29	6	34	1	0 34	7 1
102	12	Fr	5	27	6	35	1	1 16	7 58
103	13	Sa	5	26	6	36	1	1 54	9 2
104	14	15	5	24	6	37	0	2 30	10 5
105	15	M	5	23	6	38	0	3 4	11 5
106	16	Tu	5	21	6	39	Ft	3 38	Morn
107	17	W	5	20	6	40	0	4 14	0 3
108	18	Th	5	18	6	41	1	Sets	0 55
109	19	Fr	5	17	6	42	1	8 2	1 44
110	20	Sa	5	15	6	43	1	9 13	2 37
111	21	16	5	14	6	44	1	10 17	3 31
112	22	M	5	13	6	45	1	11 15	4 26
113	23	Tu	5	11	6	46	2	Morn	5 19
114	24	W	5	10	6	47	2	0 3	6 10
115	25	Th	5	8	6	48	2	0 44	7 1
116	26	Fr	5	7	6	49	2	1 19	7 54
117	27	Sa	5	6	6	50	2	1 52	8 50
118	28	17	5	5	6	51	3	2 21	9 44
119	29	M	5	3	6	51	3	2 48	10 35
120	30	Tu	5	2	6	52	3	3 15	11 22

Conjectures of the Weather.

The 1st—3rd, changeable ; 4th—6th, showers ; 7th, 9th, clear and cool ;
10th—12th, agreeable ; 13th, 14th, warm and rain ; 15th—17th, clear and warm ;
18th—20th, showers ; 21st, 22nd, pleasant ; 23rd, 24th, changeable ;
25th, 26th, clear and warm ; 7th, 28th, thunder ; 29th, 30th, pleasant.

For hog pasture turn in just as the peas are ripening, hogs will then eat both vines and peas, and will put on fat rapidly.

For hay, cut when the last pods are formed, wilt, rake into winrows, leave one or two days, then put in small cocks a week or ten days till thoroughly cured.

Do not forget the Southern Cow Pea belongs to the Bean family and must not be planted until the ground is warm, in this latitude about May 10, from then to the last of June or even later if wanted for green feed.

Plow the ground deep and harrow well, sow broad cast $1\frac{3}{4}$ bu. per acre or drill 16 to 18 inches apart, $1\frac{1}{4}$ bu. per acre.

They will grow well on almost all soils not too wet.

DWARF ESSEX RAPE.

This plant is extensively grown for forage, especially for sheep and for green manure, for which purpose there is perhaps no better plant adapted where a quick, rank growth is desired. Rape seed may be broadcasted, and it may be seeded in the corn field when the corn is "laid by." Rape is revolutionizing the sheep industry in this country, and it is also excellent for hogs and all kinds of poultry. It will be an advantage to test it on a small plot this year. Farmers who raise much stock and desire to get young cattle, sheep or lambs into favorable condition to be sold advantageously in the fall, can do it most cheaply by growing this Rape. Prepare the ground as for turnips and sow in June or July, with a turnip drill, in rows $2\frac{1}{2}$ feet apart, at the rate of 3 lbs. of seed per acre, or broadcast at the rate of 6 lbs. to the acre. Our stock is the true Essex Dwarf, and not the worthless annual.

Handling Milk:—Never allow milk to enter the milk supply if it comes from an animal suffering from any diseased udder; never allow any person having any contact with or recovering from typhoid fever, scarlet fever, or diphtheria to have anything to do with the dairy; always insist upon cleanliness in dairy matters; the application of cold to the milk prevents bacterial growth. Milk is an excellent medium for the growth and development of germs. Most of the bowel troubles in children are directly traceable to milk coming from cows with inflamed or diseased udders.

Milk Strippings—taken immediately after milking before it has parted with any of the animal heat, is the most valuable thing known to build up a person who is thin and emaciated from any disease.

For Poison Ivy the following prescription is most valuable: Acid Carbohc, half an ounce; ol. Sassafrass and ol. Juniper, each one drachm; Berzoated Zinc oxide ointment, one ounce. Apply two to four times daily.

For fattening hogs Kansas farmers use Kafir-corn, soja beans, Indian corn and combinations of these. From the average of these grains it took 528 lbs. of grain to produce 100 lbs. of gain.

1901

5th Month,

1901

31 Days.

MOON'S PHASES.

☾ Full Moon . . . 3d. 1h. 19m. A.

☾ New Moon . . . 18d. 0h. 37m. M.

☾ Last Quarter . . 11d. 9h. 38m. M.

☾ First Quarter . . 25d. 0h. 39m. M.

May 5th—Day's Length: 14 hours, 1 minute.

DAY OF YEAR	DAY of MONTH	DAY OF WEEK	CALENDAR FOR NEW YORK CITY, PHILADELPHIA, Pennsylvania, Connecticut, New Jersey, Ohio, Indiana and Illinois.						
			Sun Rises.		Sun Sets.		Sun	Moon.	High Water Philadelphia
			H.	M.	H.	M.	Fast M.	H. M.	H. M.
121	1	W	5	1	6	53	3	3 44	Morn
122	2	Th	5	0	6	54	3	4 14	0 28
123	3	Fr	4	59	6	55	3	Rises	1 8
124	4	Sa	4	57	6	56	3	8 2	1 45
125	5	18	4	56	6	57	3	8 54	2 29
126	6	M	4	55	6	58	3	9 45	2 12
127	7	Tu	4	54	6	59	4	10 32	3 55
128	8	W	4	53	7	0	4	11 14	4 41
129	9	Th	4	51	7	1	4	11 53	5 27
130	10	Fr	4	50	7	2	4	Morn	6 12
131	11	Sa	4	49	7	3	4	0 29	7 1
132	12	19	4	48	7	4	4	1 3	7 57
133	13	M	4	47	7	5	4	1 36	9 0
134	14	Tu	4	46	7	6	4	2 10	10 4
135	15	W	4	45	7	7	4	2 45	11 7
136	16	Th	4	44	7	8	4	3 24	Even 8
137	17	Fr	4	43	7	9	4	4 8	1 3
138	18	Sa	4	42	7	10	4	Sets	1 54
139	19	20	4	42	7	11	4	8 58	2 49
140	20	M	4	41	7	12	4	9 54	3 42
141	21	Tu	4	40	7	13	4	10 40	4 33
142	22	W	4	39	7	14	4	11 19	4 52
143	23	Th	4	39	7	15	3	11 52	5 7
144	24	Fr	4	38	7	15	3	Morn	6 52
145	25	Sa	4	38	7	16	3	0 22	7 39
146	26	21	4	37	7	17	3	0 51	8 31
147	27	M	4	36	7	18	3	1 18	9 25
148	28	Tu	4	36	7	19	3	1 46	10 15
149	29	W	4	35	7	19	3	2 15	11 7
150	30	Th	4	35	7	20	3	2 46	11 51
151	31	Fr	4	34	7	21	3	3 20	Morn

Conjectures of the Weather.

The 1st—3rd, clear and warm; 4th—6th, variable; 7th, 8th, clear and pleasant;
 9th—11th, cloudy and thunder; 12th—14th, pleasant; 15th—16, variable;
 17th—18th, clear and balmy; 19th, 21st, changeable; 22nd, 24th, warm;
 25th, 26th, thunder; 27th, 28th, clear; 29th, 31st.

The most economical feed was 2-3 corn meal and 1-3 soja bean meal. Kafir corn meal 2-3, soja beans 1-3 gave about the same results.

Pigs fed soja bean required 411 lbs. of grain for 100 lbs. of gain. Those not fed on soja bean required 564 lbs. of feed, an increase of 37 per cent.

Smut on Feed Grain:—These spores of smut are carried from one season to the next on seed grain, oats and wheat. Place the seed grain to be treated in a common gunny sack and submerge for 15 minutes in water kept at a temperature of 132 to 134 deg. Farenheit.

Some farmers who broadcasted cow peas this past season sowed oats with the peas. As the cow pea is really a bean and supports are not required, the oats are injurious, as the cow pea will thrive much better when given the land alone.

If melons are backward sprinkle a little nitrate of soda around each hill. Do not place the nitrate close to the main stem or on the plants, but scatter it over a wide surface. A tablespoonful is sufficient to induce rapid growth, it being very soluble is readily carried to the rootlets. The roots of melons spread underground as much as the vines on the surface.

The yield of CORN will depend largely upon the cultivation given. The roots of corn feed near the surface, and if the cultivation is shallow the roots will come as close to the surface as possible. Cultivation should be deep as long as rain is abundant, but when the season is dry the surface should be simply stirred in order to retain the moisture already existing. Corn should never be "laid by" as long as a horse hoe can be used between the rows, as it is often after the corn is laid by that the weeds get ahead. A good yield can be obtained only by clean cultivation.

To remove iron rust from muslin or white goods, thoroughly saturate the spots with lemon juice and salt, expose to the sun. Usually more than one application is required.

Growing cucumber pickles, make hills deep and rich, using well rotted manure and have the ground fine. All weeds must be kept out of the hills. Place hills six feet apart each way, allowing not over three plants to each hill. The young cucumbers should be cut off the vines daily (never pull them), and should not be allowed to exceed two inches in length. If any are allowed to mature and produce seed, the vine will then yield but few more.

Breaking a stable-kicking horse:—Put a gunny sack half filled with sand, hang on level with horse's rump, hanging from the ceiling. There will be a battle royal but the bag will come out best man—and Mr. Horse will be completely cowed. Let bag remain one week.

Red Ants:—Walnut leaves or Pennyroyal will drive them away from the pantry.

Freezing does not hinder the process of vinegar making in cider, but after the vinegar is once made, freezing should not be permitted.

1901

1901

6th Month,

30 Days.

MOON'S PHASES.

☾ Full Moon 2d. 4h. 53m. M.
 ☾ Last Quarter 9d. 5h. 0m. A.

☾ New Moon 16d. 8h. 33m. M.
 ☾ First Quarter 23d. 3h. 59m. A.

June 2nd—Day's Length: 14 hours, 49 minutes.

CALENDAR FOR NEW YORK CITY, PHILADELPHIA, Pennsylvania, Connecticut, New Jersey, Ohio, Indiana and Illinois.										
DAY OF YEAR	DAY of MONTH	DAY OF WEEK	Sun Rises.		Sun Sets.		Sun	Moon.		High Water Philadelphia
			H.	M.	H.	M.	Fast M.	H.	M.	H. M
152	1	Sa	4	34	7	22	2	4	0	Morn 41
153	2	22	4	33	7	22	2	Rises		1 22
154	3	M	4	33	7	23	2	8	31	2 6
155	4	Tu	4	32	7	23	2	9	14	2 50.
156	5	W	4	32	7	24	2	9	54	3 35
157	6	Th	4	32	7	25	2	10	31	4 20
158	7	Fr	4	32	7	25	1	11	5	5 5
159	8	Sa	4	31	7	26	1	11	38	5 49
160	9	23	4	31	7	26	1	Morn		6 36
161	10	M	4	31	7	27	1	0	9	7 28
162	11	Tu	4	31	7	27	1	0	43	8 30
163	12	W	4	31	7	28	1	1	19	9 37
164	13	Th	4	31	7	28	0	2	0	10 45
165	14	Fr	4	31	7	29	0	2	45	11 50
166	15	Sa	4	31	7	29	Sl.	3	37	Even 49
167	16	24	4	31	7	29	0	Sets		1 40
168	17	M	4	31	7	30	1	8	29	2 33
169	18	Tu	4	31	7	30	1	9	12	3 22
170	19	W	4	31	7	31	1	9	49	4 8
171	20	Th	4	31	7	31	1	10	22	4 52
172	21	Fr	4	31	7	31	1	10	52	5 34
173	22	Sa	4	31	7	31	2	11	20	6 15
174	23	25	4	32	7	32	2	11	48	6 57
175	24	M	4	32	7	32	2	Morn		7 44
176	25	Tu	4	32	7	32	2	0	17	8 37
177	26	W	4	32	7	32	2	0	48	9 34
178	27	Th	4	33	7	32	3	1	22	10 28
179	28	Fr	4	33	7	32	3	1	59	11 23
180	29	Sa	4	34	7	32	3	2	40	Morn
181	30	26	4	34	7	32	3	3	27	0 16

Conjectures of the Weather.

The 1st—3rd, changeable; 4th—6th, showers; 7th—9th, clear and cool;
 10th—12th, agreeable; 13th, 14th, warm and rain; 15th—17th, clear and warm;
 18th—20th, showers; 21st, 22d, pleasant; 23d, 24th, changeable;
 25th—26th, clear and warm; 27th—28th, thunder; 29th, 30th, pleasant.

Through a study of the influence of feed and environment on the composition of milk and butter has shown that the influence of cotton seed meal as a food has been pointed out. Strange as it seems the feeding of milch cows with cotton seed meal produces butter which has a higher melting point than butter produced by the ordinary foods.

Cabbage Worms:—A mixture of equal parts of air-slaked lime, salt and wood ashes. This sifted through a meal sieve and well mixed. It kills quicker if it rains soon after it is put on.

Worms in Flower Pots are sources of uneasiness if not always of injury. They can easily be removed by saturating the soil with lime water, the clear water from slaked lime.

Leeks are usually greatly benefited by lime.

Sterilizing Hothouse Soil:—To prevent the various fungous diseases which destroy seedlings and cuttings an application of a solution of copper sulphate and ammonia is thought to be effective.

Sweet Potatoes:—The small and unsalable potatoes are just as valuable for the fattening of hogs as those that are of marketable size. Sweet potatoes contain a large proportion of sugar, and are, therefore, very suitable for the fattening of stock. They should be cooked and bran added. Being very wholesome, they may be fed liberally.

The Grain Weevil:—Bisulphide of Carbon. This is sure death to all insect life. It is highly inflammable and proper care must be exercised in its use. To rid a granary of weevil, the place must be made perfectly air-tight. Then place the bisulphide in open vessels on the top of the grain, and close the door for at least 24 hours. This will kill every weevil and not injure the grain in any way. A specially strong form "fuma" is made for the purpose.

Farm life is what you make it, with great possibilities for health, happiness and good living.

Berkshires will cut more lean meat than any other breed of hogs.

Soil for roses should be rich. Dig fine old manure into the soil and use freely as a mulch on the surface. In planting set deep, well down to the branches, and lightly spade in old manure each fall. For winter tie up with a wrap of straw as high as the main shoots.

Cattle:—In thickly peopled sections cattle are raised chiefly for dairy purposes. It is estimated that there are 16,000,000 milch cows in the United States.

Land never wears out if properly handled and one of the most profitable methods of handling a farm is running a dairy or raising stock that consumes the product raised and returns it to the land in the way of a fertilizer, while the finished product is allowed to walk off to market.

1901
7th Month,

1901
31 Days.

MOON'S PHASES.

☾ Full Moon . . . 1d. 6h. 17m. A. ☾ New Moon . . . 15d. 5h. 10m. A.
☾ Last Quarter . . . 8d. 10h. 20m. A. ☾ First Quarter . . . 23d. 8h. 58m. M.
Full Moon, 31d. 5h. 34m. Morn.

July 7th—Day's Length: 14 hours, 53 minutes.

DAY OF YEAR	DAY of MONTH	DAY OF WEEK	CALENDAR FOR NEW YORK CITY, PHILADELPHIA, Pennsylvania, Connecticut, New Jersey, Ohio, Indiana and Illinois.						
			Sun Rises.		Sun Sets.		Sun	Moon.	High Water Philadelphia
			H.	M.	H.	M.	Slow M.	H. M.	H. M.
182	1	M	4	35	7	32	3	Rises	1 3
183	2	Tu	4	35	7	32	4	7 55	1 44
184	3	W	4	36	7	31	4	8 33	2 30
185	4	Th	4	36	7	31	4	9 8	3 14
186	5	Fr	4	37	7	31	4	9 41	3 58
187	6	Sa	4	38	7	31	4	10 14	4 42
188	7	27 M	4	38	7	31	5	10 46	5 28
189	8	M	4	39	7	30	5	11 21	6 15
190	9	Tu	4	39	7	30	5	11 57	7 7
191	10	W	4	40	7	30	5	Morn	8 8
192	11	Th	4	41	7	30	5	0 39	9 19
193	12	Fr	4	41	7	29	5	1 28	10 28
194	13	Sa	4	42	7	29	5	2 23	11 37
195	14	28	4	42	7	28	6	3 34	Even 36
196	15	M	4	43	7	28	6	Sets	1 24
197	16	Tu	4	44	7	27	6	7 46	2 11
198	17	W	4	45	7	27	6	8 21	2 56
199	18	Th	4	45	7	26	6	8 52	3 38
200	19	Fr	4	46	7	26	6	9 22	4 19
201	20	Sa	4	47	7	25	6	9 50	5 0
202	21	29	4	48	7	24	6	10 18	5 38
203	22	M	4	49	7	23	6	10 48	6 19
204	23	Tu	4	50	7	23	6	11 20	7 2
205	24	W	4	51	7	22	6	11 55	7 54
206	25	Th	4	52	7	21	6	Morn	8 53
207	26	Fr	4	53	7	20	6	0 36	9 53
208	27	Sa	4	54	7	19	6	1 22	10 52
209	28	30	4	54	7	18	6	2 13	11 48
210	29	Mo	4	55	7	17	6	3 8	0 14
211	30	Tu	4	56	7	16	6	4 8	1 1
212	31	W	4	57	7	15	6	Rises	1 14

Conjectures of the Weather.

The 1st—3rd, clear and warm ; 4th—6th, thunder ; 7th, 9th, clear and pleasant ;
10th—12th, changeable ; 13th, 14th, warm and rain ; 15th—17, balmy ;
18th—20, thunder ; 21st 22d, pleasant ; 23d, 24th, changeable ;
25th, 26th, sultry and warm ; 27th, 28th, thunder ; 29th, 31st, pleasant.

A Railway Surgeon's Remedy for Black Eye. Take Tinct. Capsicum mixed with equal bulk of mucilage or gum arabic, with a few drops of glycerine. Paint all over bruised surface and allow this to dry, 3 coats should be applied. Do this as soon as injury is inflicted. This treatment invariably prevents blacking of the bruised tissue.

Driving Nails in Seasoned Timber:—Have a small quantity of oil nearby and dip the nail before driving, and it will never fail to go. In mending carts and plows this is of great advantage, for they are generally made of oak wood. Use this method with all kinds of hard woods.

Flax-seed:—About 95 per cent. of the flax-seed crop of the world is produced in the United States, Russia, India and Argentina.

Onion Thrips:—This insect is known as the white blast, from the fact that the tops are prematurely whitened, and become wrinkled and shriveled. The insect passes the winter months in matted grass, among old weeds and other rubbish, as also among cull onions and refuse left over in the field in the fall. Burn all dry grasses and weeds along onion plantations, and you will destroy myriads of the pest and prevent breeding. In case of drought they are more dangerous, not so in wet weather. A spray of 1 lb. of whale oil soap dissolved in 8 gallons of water will destroy the pest, use on first appearance of the insects in the fields. (Ohio Expr. Station.)

Milk a heifer longer the first year than any other time so as to form the habit of persistent milking. Feed her well.

Tomatoes designed for cold storage should be picked when just beginning to ripen.

Manure well rotted should be applied to the soil only a short time before the seed is planted.

Many of the pasture fields are grazed too close to the ground. When a herd of cows have free access to pasture they really cut the grass down many times, and much closer than is usually done with the mower. No plants will thrive if not given an opportunity to make growth, and the grass on some pastures is killed by continually checking the growth, while the feet of the animals greatly damage the grass, as the smaller the supply the more trampling by the stock.

Digestibility of Corn Fodder (Ill. Expr. Station).—When ears are ground into corn and cob meal, corn fodder shows a higher percentage of digestibility than any other good coarse foodstuff, being 8 per cent. higher than timothy hay and 14 per cent. more than clover hay. Digestibility is increased 6 per cent. by grinding the ears, and the value of the ears alone is increased nearly 20 per cent.

Glaze on Laundered Shirt:—The glaze on a laundered shirt front is more the result of knack and practice than of any particular secret. Wax, turpentine, gum arabic or borax can be added to the starch with good effect. A good plan when

1901

8th Month,

1901

31 Days.

MOON'S PHASES.

☾ Last Quarter . . . 7d. 3h. 2m. M.

☾ First Quarter . . 22d. 2h. 52m. M.

☾ New Moon . . . 14d. 3h. 27m. M.

☾ Full Moon . . . 29d. 3h. 21m. A.

Aug. 4th—Day's Length: 14 hours, 11 minutes.

DAY OF YEAR	DAY OF MONTH	DAY OF WEEK	CALENDAR FOR NEW YORK CITY, PHILADELPHIA, Pennsylvania, Connecticut, New Jersey, Ohio, Indiana and Illinois.					
			Sun Rises.	Sun Sets.	Sun ..	Moon.	High Water Philadelphia	
213	1	Th	H 4	M. 58	7 14	Slow M. 6	H. 7	M. 42
214	2	Fr	4	58	7 13	6	8 16	Morn 2 51
215	3	Sa	4	59	7 12	6	8 50	3 36
216	4	31	5	0	7 11	6	9 23	4 22
217	5	M	5	1	7 10	6	10 0	5 10
218	6	Tu	5	2	7 9	6	10 40	5 57
219	7	W	5	3	7 8	6	11 26	6 51
220	8	Th	5	4	7 7	5	Morn 7	54
221	9	Fr	5	5	7 6	5	0 17	9 6
222	10	Sa	5	6	7 5	5	1 15	10 17
223	11	32	5	7	7 3	5	2 16	11 21
224	12	M	5	8	7 2	5	3 20	Even 18
225	13	Tu	5	9	7 0	5	4 25	1 5
226	14	W	5	10	6 59	5	Sets 7	1 44
227	15	Th	5	11	6 58	4	7 22	2 27
228	16	Fr	5	12	6 56	4	7 51	3 5
229	17	Sa	5	13	6 55	4	8 20	3 44
230	18	33	5	14	6 53	4	8 49	4 24
231	19	M	5	15	6 52	4	9 20	5 4
232	20	Tu	5	16	6 51	3	9 54	5 45
233	21	W	5	17	6 49	3	10 32	6 28
234	22	Th	5	18	6 48	3	11 14	7 16
235	23	Fr	5	19	6 46	3	Morn 8	15
236	24	Sa	5	20	6 45	2	0 3	9 18
237	25	34	5	21	6 44	2	0 55	10 19
238	26	M	5	22	6 42	2	1 54	11 18
239	27	Tu	5	22	6 41	1	2 56	Morn
240	28	W	5	23	6 39	1	4 1	0 13
241	29	Th	5	24	6 38	1	Rises 6	1 0
242	30	Fr	5	25	6 36	1	6 47	1 43
243	31	Sa	5	26	6 35	0	7 23	2 29

Conjectures of the Weather.

The 1st—3rd, warm; 4th—6th, cloudy and thunder; 7th, 8th, sultry;
 9th—11th, clear and pleasant; 12th—14th, changeable; 15th, 16th, warm and thunder;
 17th, 18th, variable; 19th, 21st, warm; 22d—24th, sultry; 25th, 26th, clear
 and warm; 27th, 28th, variable; 29th, 31st, pleasant.

the shirt front has been ironed is to rub it all over with a piece of damp white castile soap and iron it over again. It is to the pressure of the iron that the gloss is in a great measure due.

Potato Scab:—Scab in potatoes is caused by a fungus which lives on the tubers and also in the soil. Sound potatoes in scab-free soil furnish immunity against the disease. Soaking the seed potato in a solution of corrosive sublimate, two ounces of the sublimate to 16 gallons water, kills the fungus—use with sprayer. It has also been discovered that flour of sulphur scattered lightly in the furrows will produce sound potatoes.

One tablespoonful of coal oil put into a barrel of rainwater full of "wiggle tails," stirred thoroughly, will destroy them all within an hour, rendering the water even to the taste sweet and pure. A gobletful of the oil will purify an entire cistern.

Milk is never affected by bad odors while throwing off steam in cooling. It is after cooling that odors from stable are absorbed.

Cabbage, turnips or onions fed to cows directly after milking will not affect the milk.

A shallow pan of milk is an excellent disinfectant.

In attempting to trace an epidemic of diphtheria a few decaying potatoes in a damp cellar has satisfied many a board of health that the monster had been run to cover.

A tablespoonful of spts. turpentine boiled with your white clothes will aid the whitening process.

Dehorning Calves:—B. H. M. says: I dehorn all my calves when about one week old with a strong solution of potash, and think it much better than raising horns and then cutting them off. Have the potash as strong as can be, by putting a small amount of water in a cup and putting in more potash than will dissolve. Apply thoroughly to embryo horn with small swab. Don't get any in the calf's eye, or on his ear, or on your own fingers.

To keep calves from scouring when fed on sour milk give one teaspoonful of soda stirred in pail of milk.

For hog pasture nothing is better than blue grass, white clover and cow peas.

Frozen Plants:—Whenever house-plants are accidentally frozen, they should be placed in a dark place and then sprinkled with cold water. Geraniums, fuschias, and similar kinds of plants may often be saved if care is given in thawing them out, even if frozen quite hard. The same thing applies to dormant plants, viz.: Grape vines and trees that become frozen while being carried from one section of country to another. When plants are in this condition place them in the cellar and sprinkle with cold water and allow to remain undisturbed until thawed. Burying in earth will do equally well. Hardy plants, when well packed in damp moss, seldom receive any injury from frost.

1901

9th Month,

1901

30 Days.

MOON'S PHASES.

☾ Last Quarter . . . 5d. 8h. 27m. M.

☽ First Quarter . . . 20d. 8h. 33m. M.

☾ New Moon . . . 12d. 4h. 18m. M.

☾ Full Moon . . . 28d. 0h. 36m. M.

Sept. 1st—Day's Length: 13 hours, 6 minutes.

DAY OF YEAR	DAY of MONTH	DAY OF WEEK	CALENDAR FOR NEW YORK CITY, PHILADELPHIA, Pennsylvania, Connecticut, New Jersey, Ohio, Indiana and Illinois.								
			Sun Rises.		Sun Sets.		Sun	Moon.	High Water Philadelphia		
			H.	M.	H.	M.	Fast M.	H.	M.	H.	M.
244	1	35	5	27	6	33	0	8	0	3	15
245	2	M	5	28	6	32	0	8	39	4	4
246	3	Tu	5	29	6	30	1	9	24	4	55
247	4	W	5	30	6	28	1	10	14	5	46
248	5	Th	5	31	6	27	1	11	10	6	41
249	6	Fr	5	32	6	25	2	Morn		7	43
250	7	Sa	5	33	6	24	2	0	10	8	53
251	8	36	5	34	6	22	2	1	12	9	59
252	9	M	5	35	6	20	3	2	16	10	59
253	10	Tu	5	36	6	19	3	3	18	11	52
254	11	W	5	36	6	17	3	4	21	Even	38
255	12	Th	5	37	6	16	4	5	21	1	17
256	13	Fr	5	38	6	14	4	Sets		1	54
257	14	Sa	5	39	6	12	4	6	50	2	33
258	15	37	5	40	6	11	5	7	22	3	12
259	16	M	5	41	6	9	5	7	55	3	51
260	17	Tu	5	42	6	8	5	8	30	4	32
261	18	W	5	43	6	6	6	9	10	5	15
262	19	Th	5	44	6	4	6	9	55	5	38
263	20	Fr	5	45	6	2	6	10	45	6	46
264	21	Sa	5	46	6	1	7	11	40	7	38
265	22	38	5	47	5	59	7	Morn		8	41
266	23	M	5	48	5	57	8	0	38	9	43
267	24	Tu	5	49	5	55	8	1	40	10	44
268	25	W	5	50	5	54	8	2	46	11	41
269	26	Th	5	51	5	52	9	3	55	Morn	
270	27	Fr	5	52	5	51	9	5	6	0	33
271	28	Sa	5	53	5	49	9	Rises		1	18
272	29	39	5	54	5	47	10	6	36	2	6
273	30	Mo	5	55	5	46	10	7	19	2	56

Conjectures of the Weather.

The 1st—3rd, clear and pleasant; 4th—6th, cloudy and thunder; 7th, 8th, changeable; 9th—11th, warm; 12th,—14th, sultry; 15th, 16th, clear and balmy; 17th, 18th, variable; 19th, 21st, pleasant; 22d—24th, sultry; 25th, 26th, clear and pleasant; 27th, 28th, variable; 29th, 30th, balmy.

The more concentrated the products of the farm the lower the cost of transportation to market. The greatest profits of the farm are in eggs and butter. These are not bulky and can be shipped to any distance. Wool is another article of profit. Eggs are concentrated products and cost but little when fowls are at large, as the various kinds of poultry destroy many insects and also consume many substances that are of but little value.

“Deep Setting” Creaming.—This process consists in putting milk into deep, narrow vessels and cooling to about 40 deg. F. After 12 to 24 hours practically all the fat of the milk will be in the creamy layer, the skimmed milk often containing less than a fifth of one per cent. fat. Milk bottled and kept at 45 deg. F. for 30 hours before delivery is subjected to the conditions necessary for successful “deep setting” creaming and in a quart bottle there should be between three and four inches depth of cream, measuring about six fluid ounces. In the “deep setting” process of creaming, about ten per cent. of the total fat is left in the skimmed milk, so nine-tenths of the fat is in the creamy layer.

To Dry up Cows:—It is often necessary to take away all the grain food. They should have a short rest before calving.

Two cubic feet of sound, dry corn in the ear will make a bushel shelled.

To find the amount of hay in a mow, allow 512 cubic ft. for a ton, and it will come out very near correct.

Bed rooms should be on the sunny side of the house, so that light and air can pass freely through them the most of the day.

Bedding in the stalls is not intended solely for providing the animals with soft material on which to sleep. If leaves or cut straw are used the bedding prevents draughts of air along the floor, and the more of the materials used the more comfortable the stalls. Acting as absorbants they also keep the floors dry and prevent loss of some of the valuable constituents of the droppings.

To Prevent Oil Lamps Smoking.—If you will first soak the wick in strong vinegar, and then thoroughly dry, the smoking annoyance will be prevented.

On heavy soils manure should be applied at a greater depth than on light ones.

Cement for Household Use:—Take new milk, half a pint, and curdle with sharp vinegar; separate the whey, and mix the curd with the whites of five eggs, beat well; add fine quick lime, and mix till you have a ductile paste or putty. It will stop cracks and is fire and water proof.

Some farmers prefer to spread their manure in the fall before the ground becomes frozen. If this be done the ground should be plowed and the manure spread on the surface, following with a roller. The matter of spring or fall plowing depends, however, upon the soil and the liability of loss by washing from rains.

1901

1901

10th Month,

31 Days.

MOON'S PHASES.

☾ Last Quarter . . . 4d. 3h. 52m. A.

☾ First Quarter . . . 20d. 0h. 57m. M.

☾ New Moon . . . 12d. 8h. 11m. M.

☾ Full Moon . . . 27d. 10h. 6m. A.

Oct. 6th—Day's Length: 11 hours, 35 minutes.

DAY OF YEAR	DAY OF MONTH	DAY OF WEEK	CALENDAR FOR NEW YORK CITY, PHILADELPHIA, Pennsylvania, Connecticut, New Jersey, Ohio, Indiana and Illinois.								
			Sun Rises.		Sun Sets.		Sun	Moon.	High Water Philadelphia		
			H.	M.	H.	M.	Fast M.	H.	M.	H.	M.
274	1	Tu	5	56	5	44	10		8 9	Morn	
275	2	W	5	57	5	43	11		9 4	3 48	
276	3	Th	5	58	5	41	11		10 4	4 42	
277	4	Fr	5	59	5	39	11		11 6	5 37	
278	5	Sa	6	0	5	38	11	Morn		6 31	
279	6	40	6	1	5	36	12		0 9	7 27	
280	7	M	6	2	5	35	12		1 13	8 30	
281	8	Tu	6	3	5	33	12		2 15	9 33	
282	9	W	6	4	5	31	13		3 16	10 27	
283	10	Th	6	5	5	30	13		4 15	11 19	
284	11	Fr	6	6	5	28	13		5 11	Even 6	
285	12	Sa	6	7	5	27	13	Sets		0 46	
286	13	41	6	8	5	25	14		5 54	1 23	
287	14	M	6	9	5	23	14		6 30	2 2	
288	15	Tu	6	10	5	22	14		7 9	2 41	
289	16	W	6	11	5	20	14		7 52	3 23	
290	17	Th	6	12	5	19	15		8 39	4 5	
291	18	Fr	6	13	5	17	15		9 30	4 48	
292	19	Sa	6	14	5	16	15		10 26	5 33	
293	20	42	6	15	5	14	15		11 26	6 18	
294	21	M	6	17	5	13	15	Morn		7 7	
295	22	Tu	6	18	5	11	15		0 28	8 2	
296	23	W	6	19	5	10	16		1 33	9 5	
297	24	Th	6	20	5	9	16		2 41	10 6	
298	25	Fr	6	21	5	8	16		3 51	11 7	
299	26	Sa	6	22	5	6	16		5 4	Morn 4	
300	27	43	6	23	5	55	16	Rises		0 57	
301	28	M	6	24	5	54	16		5 57	1 46	
302	29	Tu	6	25	5	53	16		6 52	2 40	
303	30	W	6	26	5	51	16		7 51	3 35	
304	31	Th	6	28	5	50	16		8 55	4 30	

Conjectures of the Weather.

The 1st—3rd, clear and cool; 4th—6th, variable; 7th, 9th, clear and pleasant;

10th—12th, changeable; 13th, 14th, cool and cloudy; 15th, 17th, balmy;

18th, 20th, changeable; 21st, 22d, pleasant; 23d, 24th, clear; 25th, 26th, cloudy and rain; 27th, 28th, changeable; 29th, 31st, fair and cool.

If a domestic animal dies of consumption, rinder pest, hog-cholera, chicken-cholera, or any similar disease, the best and safest way to get rid of the body, instead of burying it, is to burn it! The carcass of even a large animal can be effectually burned without a disagreeable odor by thickly covering it and the ground around with rosin, over which should be piled sufficient wood and fired. Pernicious or septic fever has been propagated among cattle by the worms bringing to the surface septic matter which, drying, is blown over the surrounding grass, and when inhaled or taken into the stomach gives rise to this dread disease. Do not bury dead animals in any locality where pasturage may be affected.

Barley Water:—Is prepared by adding a tablespoonful of barley to one pint of scalding hot water, allowing it to stand for an hour or so, and then straining. In infantile diarrhoea it is often all that is required to effect a cure. Oatmeal made in the same manner is a most efficient laxative for infants, as the cereal is for adults.

Forty thousand tons of cucumbers are eaten yearly in the United States and affords an excuse for the employment of one million gallons of vinegar.

"I saw you carrying home a couple of nice looking cucumbers last night, Brown; how much did they cost you?"

"I don't know yet. The doctor is up at the house now."

Every farm should have a small flock of sheep as scavengers. There are so many things that sheep will consume that they are considered necessary adjuncts to farming if the waste materials are to be utilized. A well managed flock will pay a large dividend on the capital invested the first year.

Formaldehyde as a Milk Preservative. (American Health Asso.): Makes the following conclusions:

1. Used as a preservative it tends at least to impair the nutritive value of milk.
2. It tends to interfere with the digestive processes. In either case it is only a question of dosage, and the limit of safety is difficult to determine.
3. By inhalation it is much less dangerous than other gaseous agents used as disinfectants, the results of tests on animals, and one accidental poisoning of a human being indicate that formaldehyde taken into the digestive system may produce dangerous and even fatal results.
4. It would be unwise and unsafe to encourage or to suffer the use of formaldehyde in the public milk supply, even under any possible restrictive regulations.
5. In every State there should be a law prohibiting, with effective penalties, the use in milk of any chemical preservative whatsoever.

Tobacco:—One-fourth of the world's annual product of tobacco is raised in the United States.

Girl.—Mother, there was a mouse in the milk-pail.

Mother.—Well! didn't you take it out?

Girl.—No, I threw the cat in.

1901

11th Month,

1901

30 Days.

MOON'S PHASES.

☾ Last Quarter . . . 3d. 2h. 24m. M.

☾ First Quarter . . . 19d. 3h. 23m. M.

☾ New Moon . . . 11d. 2h. 34m. M.

☾ Full Moon . . . 25d. 8h. 17m. A.

Nov. 3rd—Day's Length: 10 hours, 25 minutes.

DAY OF YEAR	DAY of MONTH	DAY OF WEEK	CALENDAR FOR NEW YORK CITY, PHILADELPHIA, Pennsylvania, Connecticut, New Jersey, Ohio, Indiana and Illinois.						
			Sun Rises.	Sun Sets.	Sun	Moon.	High Water Philadelphia		
			H. M.	H. M.	Fast M.	H. M.	H. M.	H. M.	
305	1	Fr	6 29	4 58	16	10 0		5 23	
306	2	Sa	6 30	4 57	16	11 5		6 14	
307	3	44	6 31	4 56	16	Morn		7 5	
308	4	M	6 32	4 55	16	0 8		7 57	
309	5	Tu	6 34	4 54	16	1 10		8 56	
310	6	W	6 35	4 53	16	2 8		9 49	
311	7	Th	6 36	4 52	16	3 6		10 40	
312	8	Fr	6 37	4 51	16	4 3		11 29	
313	9	Sa	6 38	4 50	16	4 59		Even	
314	10	45	6 40	4 49	16	5 56		0 56	
315	11	M	6 41	4 48	16	Sets		1 34	
316	12	Tu	6 42	4 47	16	5 49		2 16	
317	13	W	6 43	4 46	16	6 35		2 58	
318	14	Th	6 44	4 45	16	7 26		3 40	
319	15	Fr	6 45	4 44	15	8 21		4 24	
320	16	Sa	6 46	4 43	15	9 18		5 8	
321	17	46	6 47	4 42	15	10 17		5 51	
322	18	M	6 48	4 41	15	11 19		6 37	
323	19	Tu	6 49	4 41	15	Morn		7 27	
324	20	W	6 51	4 40	14	0 23		8 26	
325	21	Th	6 52	4 40	14	1 30		9 30	
326	22	Fr	6 53	4 39	14	2 38		10 33	
327	23	Sa	6 54	4 38	14	3 50		11 38	
328	24	47	6 55	4 38	13	5 2		Morn	
329	25	M	6 57	4 37	13	6 15		0 37	
330	26	Tu	6 58	4 37	13	Rises		1 29	
331	27	W	6 59	4 36	12	6 35		2 26	
332	28	Th	7 0	4 36	12	7 43		3 21	
333	29	Fr	7 1	4 36	12	8 50		4 12	
334	30	Sa	7 2	4 35	11	9 55		5 2	

Conjectures of the Weather.

The 1st—3rd, clear and cold; 4th—6th, cloudy and snow; 7th, 8th, windy;
 9th—11th, changeable; 12th,—14th, cold and stormy; 15th, 16th, clear and cold;
 17th, 18th, snow; 19th, 21st, pleasant; 22d—24th, variable; 25th, 26th, clear and
 pleasant; 27th, 28th, stormy; 29th, 30th, variable;

ILLUSTRATED CATALOGUE

WITH GENERAL DIRECTIONS FOR CULTIVATION.

The Terms and Prices of Vegetable Seeds will be found in the Retail Price List in last part of Catalogue.

Conover's Colossal.

ASPARAGUS.

Soak the seed twenty-four hours in warm water, and sow in drills, one foot apart. When the plants are well up, thin to three or four inches in the row, and give frequent and thorough cultivation during the summer. The second season prepare a bed by deep spading or trenching, working in a large quantity of well rotted manure. Dig trenches four feet apart and twelve to sixteen inches deep, and spade in at least four inches of well rotted manure in the bottom. Set the plants in the trench eighteen inches apart, covering them with about two inches of fine soil. After the plants are up, gradually fill up the trenches, and give frequent and thorough cultivation. The second season, early in the spring, spade in a heavy dressing of manure and about two quarts of salt to the square rod. Cultivate well. The next season it may be cut for the table two or three times, taking care to cut *all* as fast as it appears. After the final cutting, spade in a liberal dressing of fine manure and sow one quart of salt to the square rod. The next season, and ever after that, the bed should give a full crop, but should be annually manured after the last cutting and well cultivated through the remainder of the summer. The tops should not be cut until dead ripe.

Conover's Colossal.—A mammoth variety of vigorous growth, sending up from fifteen to forty sprouts from one to two inches in diameter. Color deep green, and crown very close.

Golden Wax Bean.

Golden Wax Bean.—This bean has long been and still continues the standard wax variety for general use, and while many varieties have been introduced claiming to be superior in some respects and aiming to replace it, they have all sooner or later been forced to the rear as not possessing as many good qualities in as high degree. Vines medium size, erect, moderately spreading, hardy and productive, with small, smooth leaves, and small white blossoms, pods are long, nearly straight, broad, flat, golden yellow, very fleshy and wax-like, with short, fleshy, green point, cooking quickly as snaps, shelling well when green, and of the highest quality in both conditions. Beans medium size, oval, white, more or less covered with two shades of purple red.

BEANS—Dwarf, Bush, or Snap.

Under this head are classed all the low growing sorts. They are so extremely sensitive of frost and cold, that it is useless to plant them before the ground has become warm and light. Stir the ground often, but only when dry, because earth scattered on the leaves when they are wet with dew or rain, will cause them to rust, and greatly injure the crop.

Round Yellow Six Weeks.—One of the best green pod Beans, while this variety does not differ from the Early Yellow Kidney Six Weeks in size or general appearance of the vine, the pods are shorter, very much thicker, more fleshy, while retaining the vigor and hardiness of the old sort, it is fully one week earlier. Dry Bean, color of ordinary six weeks, but it is much shorter, almost round.

Early China Red Eye.—Early, and can be used either as a string or shelled Bean.

1901

12th Month,

1901

31 Days.

MOON'S PHASES.

☾ Last Quarter . . . 2d. 4h. 49m. A.

☾ First Quarter . . 18d. 3h. 35m. A.

☾ New Moon . . . 10d. 9h. 53m. A.

☾ Full Moon . . . 25d. 7h. 16m. M.

Dec. 1st—Day's Length: 9 hours, 32 minutes.

DAY OF YEAR	DAY OF MONTH	DAY OF WEEK	CALENDAR FOR NEW YORK CITY, PHILADELPHIA, Pennsylvania, Connecticut, New Jersey, Ohio, Indiana and Illinois.									
			Sun Rises.		Sun Sets.		Sun		Moon.		High Water Philadelphia	
			H.	M.	H.	M.	Fast M.		H.	M.	H.	M.
335	1	48	7	3	4	35	11		10 58		5	43
336	2	Mo	7	4	4	35	11		Morn		6	33
337	3	Tu	7	5	4	35	10		0 0		7	20
338	4	W	7	6	4	35	10		0 59		8	11
339	5	Th	7	7	4	34	9		1 57		9	6
340	6	Fr	7	8	4	34	9		2 55		9	59
341	7	Sa	7	9	4	34	9		3 52		10	51
342	8	49	7	10	4	34	8		4 48		11	42
343	9	M	7	11	4	34	8		5 41		Even	28
344	10	Tu	7	11	4	31	7		6 34		1	10
345	11	W	7	12	4	34	7		Sets		1	52
346	12	Th	7	13	4	34	6		6 15		2	36
347	13	Fr	7	14	4	34	6		7 11		3	18
348	14	Sa	7	14	4	35	5		8 10		4	0
349	15	50	7	15	4	35	5		9 11		4	43
350	16	M	7	15	4	36	4		10 14		5	27
351	17	Tu	7	16	4	36	4		11 17		6	10
352	18	W	7	17	4	36	3		Morn		6	57
353	19	Th	7	17	4	37	3		0 22		7	54
354	20	Fr	7	18	4	37	2		1 30		9	0
355	21	Sa	7	18	4	38	2		2 39		10	9
356	22	51	7	19	4	38	1		3 50		11	17
357	23	M	7	19	4	39	1		5 0		Morn	
358	24	Tu	7	20	4	39	0		6 9		0	22
359	25	W	7	20	4	40	Sl.		Rises		1	16
360	26	Th	7	21	4	40	1		6 25		2	9
361	27	Fr	7	21	4	41	1		7 34		3	0
362	28	Sa	7	21	4	42	2		8 41		3	48
363	29	52	7	21	4	42	2		9 45		4	33
364	30	M	7	22	4	43	3		10 47		5	18
365	31	Tu	7	22	4	43	3		11 48		5	59

Conjectures of the Weather.

The 1st—3rd, clear and cold; 4th—6th, variable; 7th, 9th, cloudy and snow;
10th—12th, changeable; 13th, 14th, cold and cloudy; 15th, 17th, fair and cool;
18th, 20th, changeable; 21st, 22d, stormy; 23d, 24th, clear; 25th, 26th, cloudy
and snow; 27th, 28th, changeable; 29th, 31st, windy.

W Ivory Pod Wax.—New variety, earlier than German Black Wax; long, stringless tender white pods of rich, creamy flavor.

Early Mohawk.—This sort is so much hardier than the others that it can be planted earlier and often in this way, will furnish beans fit for use before any other kind. Vines large, stout, with large coarse leaves which will stand a slight frost; blossoms large, purple; pods long straight, coarse, with long tapering point. Beans long, kidney shaped, variegated with drab-purple and brown.

Refugee, or Thousand to One.—Vines large, spreading, exceedingly hardy, with small, smooth leaves and large lilac flowers, very late, and esteemed for late planting and for use as pickles; pods long, cylindrical, green, becoming white, streaked with purple, of good quality as snaps; beans long, light-drab, dotted and splashed with purple.

W Wardwell's Kidney Wax.—The vines of this variety are very large, strong growing, but are peculiarly liable to blight, but when healthy, yields a large crop of long, nearly straight, handsome, very white and wax-like pod. They are of good quality and on this account, as well as their beauty of form and color, are easily sold. They ripen about the same time as the Golden Wax. The dry beans are large, kidney shaped, white with dark markings about the eye. Market gardeners find this a profitable variety owing to the large size and handsome color of the pods.

W Currie's Rust Proof Wax.—This variety is claimed to be absolutely rust proof, and is as nearly rust proof as any good wax podded bean can be, vine vigorous and productive, about the same as Kidney Wax. Dry beans bluish-black.

German Wax Black Seeded.—We are so thoroughly satisfied with this improved strain of Black wax that we have discarded the old strains altogether, this being more vigorous growing, far more productive, with a longer, whiter, more fleshy pod and unsurpassed in flavor, vines medium sized, very vigorous and hardy, withstanding rust exceedingly well. Flowers reddish white or purple. Pods medium length, borne well up among the foliage, curved, cylindrical, thick, fleshy, and of a clear, waxy-white color, with long, slightly curved point; remain a long time in condition for use as snaps. Beans small, oblong, jet black. No one can afford to plant the old strain, as this is much better in every respect.

White Seeded Valentine.—All the characteristics of the Red Valentine, with white seeds.

W Crystal White Wax.—New variety, long round pods, greenish white, transparent stringless, crisp, tender and slow to harden.

W German Wax (White Seeded). Ripe beans, clear white; large, handsome pods beautiful white wax color.

ROYAL DWARF WHITE KIDNEY—One of the best late kinds; as a winter bean it has no superior.

Large White Marrow.—Excellent quality, either shelled green or dry.

Dwarf, White Navy.—Seeds small, round and oval, used exclusively for field culture.

BEANS—Pole or Running.

These require a warm, mellow soil, and should not be planted until settled, warm weather. Form hills three and a half feet apart, by forking in a shovelful of fine manure; set the poles and plant to six to eight beans, and after the beans commence to run, thin to four plants to the hill. Start any that fail to climb around the pole in the same direction as the others (they will go in no other.) Fasten by sticking the end in a cut notch in the pole.

Improved Extra Large Lima.—Very superior quality, seed much larger than the ordinary large Lima, of greenish tinge; tender and sweet.

Large Lima.—One of the best pole beans for use, shelled either green or dry.

Indian Chief, or Tall Wax.—Pods of a fine waxen semi-transparent White color, crisp, tender and succulent.

Small White Lima, Carolina.—Similar to large Lima in flavor, beans much smaller but more productive.

White Dutch Case Knife.—The earliest variety of Pole Bean, excellent flavor, and good green or dry.

Horticultural.—The old favorite, used green or dry. The dry beans are very superior for cooking.

White Crease Buck.—Extremely early, very popular in the South.

BEET.

All the varieties succeed best on a deep, rich, sandy loam. For early beets, sow as soon as the ground will admit, in drills fourteen inches apart, and thin to six inches in the row. For winter, sow about the middle of spring. Soak the seed twenty-four hours in luke-warm water before planting, and sow in freshly prepared ground.

The Sugar and Mangel Wurzel varieties are grown for feeding stock and should be sown from April to June in drills two feet apart, and afterwards thinned out to stand one foot apart in the rows; keep them well cultivated and you will have an abundant crop.

Extra Early Bassano.—This is the largest of the Earliest varieties, and reaches a size fit for the table amongst the first; will not keep well during the winter. Flesh coarse grained, but tender and sweet.

Extra Early Egyptian Blood Turnip.

Extra Early Egyptian Blood Turnip.—This matures quicker than any other sort. Roots of fine form, medium size, smooth and dark in color, flesh dark red, fine grained, crisp and tender.

Early Blood Turnip.—Tops small, roots blood red, turnip shaped and very tender.

Bastian's Early Turnip.—One of the best for the market gardener or for family use, early, quick growth, good shape, and bright red color.

Half Long Blood.—One of the very best, unsurpassed for its winter keeping qualities.

Improved Long Dark Blood.—The best winter variety, but apt to be tough when sown too early.

Swiss Chard.—Tops used for Greens.

White Silesian Sugar.—Grown extensively or feeding stock; also for extraction of sugar.

Imperial White Sugar Beet.—A greatly improved variety of the White Silesian.

Giant Long Red Mangel Wurzel.

Giant Long Red Mangel Wurzel.—Very large, growing well out of the ground, top small for its size, straight, smooth, and of fine scarlet color.

Long Red Mangel Wurzel.—A large, long variety, for stock feeding, color light red.

Yellow Globe Mangel Wurzel.—Large, round, orange colored variety, of excellent quality, which keeps better than the long red, producing better crops on shallow soil.

Yellow Ovoid Mangel Wurzel.

Yellow Ovoid Mangel Wurzel.—Root ovoid, intermediate between the long and globe varieties, flesh solid, usually white, zoned with yellow; hardy, vigorous and productive.

Red Globe Mangel Wurzel.—Similar to Yellow Globe, except in color, which is light red or pink.

BRUSSELS SPROUTS.

This is a very desirable vegetable, though very little known in this country. It grows two or three feet high and produces from the sides of the stock numerous little sprouts somewhat resembling cabbages; they are used for Fall and Winter Greens. It can only be grown to perfection in a good soil and with a long season to complete its growth. The seed should be sown in March or April, in a frame and transplant into the open ground and cultivate as cabbage. The plants should be watered and shaded for a week or ten days to give them a good start.

CABBAGE.

There is no vegetable which may be cultivated with more certainty of success than this and few if any that are so generally useful, as it may be made to follow other crops, and will give *some* return, no matter how poor the soil or how negligent the cultivation, while it responds so readily to better care, that it claims a place in the finest garden, and the attention of the most skillful gardener.

The requisites for complete success *First*, good seed; there is no vegetable where the seed has more influence on the quality of the product than this, and the gardeners should invariably select the best procurable. *Second*, rich, well prepared ground. *Third*, frequent and thorough cultivation.

For Cabbages, the ground must be highly manured, deeply dug or ploughed, and thoroughly worked to insure good full sized heads. A heavy, moist and fresh loam is most suitable. The early sorts should be sown very early, in hot-beds, hardened off, and transplanted eighteen to twenty-four inches apart, early in the spring. In the south, sow from the middle of September to middle of October, and transplant into cold frames to preserve through winter, setting into open ground as early as possible. In transplanting, *they must be set in the ground up to the first leaf no matter how long the stem may be.*

All through the season the ground should be cultivated *as often as possible*, as success will depend largely upon faithfulness in this particular.

The late autumn winter varieties may be sown in a seed bed, from the middle to the last of spring, and transplanted when about six inches high, three feet apart each way. Shade and water the late sowings in dry weather to get them up. It is important that the plants should stand thinly in the seed bed, or they will run up weak and slender, and be likely to make long stems.

Cabbage should be hoed every week, and the ground stirred deeper as they advance in growth, drawing up a little earth to the plants each time, until they begin to head, when they should be well dug between and hilled up. After they are partly headed, it is the practice of some gardeners to lay them over on one side. Loosening the roots will sometimes retard the bursting of full grown heads.

To preserve cabbages during the winter, pull them on a dry day, and then turn them over on the heads a few hours to drain. Set them out in a cold cellar, or bury them with the head downwards, in long trenches, in a dry situation. In the Middle States, bury the head and part of the stem in the open ground, and place over them a light covering of straw and boards to protect them in severe weather.

Early Jersey Wakefield.—Heads very compact, of medium size, varying from nearly round to conical. An early, sure heading sort, very popular with eastern market gardeners.

Early York.—Heads small, heart-shaped, firm and tender; of very dwarf growth, and may be transplanted fifteen or eighteen inches apart.

Early Large York. *Early Winningstadt.*

Early Large York.—Succeeds the Early York, and is equally desirable. It is of large size, about ten days later, more robust, and bears the heat better.

Early Sugar Loaf.—A compact growing variety, and the plants may be set as close as sixteen inches each way, early, but is more affected by the heat than other varieties.

Early Winningstadt.—One of the best for general use, being a sure header, and will grow a hard head under circumstances where most sorts would fail. Heads of regular conical shape, very hard, and keep well winter and summer.

Early Dwarf, Flat Dutch.—Heads of medium size, solid, flat, grows low on stump, and is of good flavor.

Fottler's Early Drumhead.—An excellent second early sort, withstands heat, and heads low on stump.

Premium Flat Dutch. *Premium Drumhead.*

Premium Large Late Flat Dutch.—Superior to any late cabbage in cultivation. Our stock has been grown for us from carefully selected heads, and is equal to any other strain of this popular variety.

Red Dutch for Pickling.—An esteemed sort for pickling; it forms very hard, oblong heads, round at the top, and when pure, of a dark red or purple color.

Improved American Savoy.

Premium Large Drumhead.—A large fall or winter variety broad, flat or round head short stump, tender and good flavored, and is an excellent keeper.

Improved Drumhead Savoy.—The best of all Savoys for general market or home use. It has a short stump, grows to a large size, is compact and solid, and closely approaches the Cauliflower in delicacy and flavor.

CARROT

The Carrot succeeds best on a light, sandy loam, made rich by manuring the previous year. In freshly manured land, the roots often grow prolonged and ill-shaped. It is better to sow as early in the spring as the ground can be made ready, but if planting is necessarily delayed until late in the season, soak the seed twenty-four hours in tepid water, dry by mixing in sifted ashes or plaster, and sow on freshly prepared soil.

Earliest Short Horn (*for forcing*).—The earliest variety in cultivation, used mostly by market gardeners for forcing.

Large White Belgian.

Early Scarlet Horn.—The best early variety, flesh deep orange, fine grained, agreeable flavor, and grows well on shallow soil.

Danvers.—Medium length, very large and heavy yielder, rich dark orange color, smooth and handsome.

Early Half Long Scarlet (*Stump Root*).—A popular early variety, medium size; flesh bright scarlet, brittle and of good flavor.

Improved Long Orange.—The well known standard; roots long, thickest near the crown, tapering regularly to a point, color deep orange. The best for field crop and table use.

New Red Coreless—Resembling Danver's half long—Free from any hearts or pith.

Large White Belgian.—Grows one-third above the ground; root pure white, green above ground, with small top; raised exclusively for stock.

Improved Long Orange

CAULIFLOWER

Sow for early about middle September, in a bed of rich clean earth. In about four or five weeks afterwards the plants should be pricked out into another bed, at a distance of four inches from each other every other way: these should be encompassed with garden frames, covered with glazed sashes, and boards or shutters. The beds must be so secured, and the tops of the beds so covered as to keep out all frosts, giving them light and air every mild day throughout the winter; transplant in April into a bed of the richest earth in the garden, at a distance of two feet and a half each way. Keep them well hoed, and bring the earth gradually up to the stems. The late variety matures in the autumn, and is sown and managed similarly to winter cabbage, but is not so certain to succeed in this climate.

Early White Snowball.—The most highly flavored variety grown, and always sure to head.

Lenormand's Short Stem.—The best late variety; large, well-formed heads, extra quality, and the best late variety in cultivation.

Lenormand's Short Stem

CELERY

Sow the seed, which is very slow to come up, early in the spring, in rich, mellow ground, in a situation where it can be protected from the parching heat of the summer sun: water freely in dry weather. When the plants are five or six inches high transplant a portion

in trenches well manured; the dwarf varieties three feet and the tall four feet between the rows; plant six inches apart in the rows, pressing the earth to the plants. As they advance in growth blanch by earthing up, which should be performed gradually in fine weather, taking care not to bury the heart of the plants. A light dressing of salt applied when earthing up, is beneficial.

Silver Giant White Solid.—The very best tall growing variety, white, very solid, crisp, tender, and superior in flavor.

Boston Market.

Boston Market.—The most popular variety is the Boston Market. It forms a cluster of heads, instead of a single large one, and is remarkably crisp and tender. A good variety for light soils.

Dwarf Golden Heart.—Very fine; when blanched the heart is of a waxy golden yellow, rendering it a most striking and showy variety for either market or private use.

Half Dwarf White Solid.—Is of rather a yellowish white when blanched, and entirely solid, possessing the peculiar nutty flavor of the dwarf kinds, with more vigor of growth.

Dwarf Golden Heart.

Dwarf White Solid.—Dwarf, white, or stiff close habit; solid, crisp, and juicy. Keeps in good order later in the season than any other variety.

White Plume.—The stalks and heart are white, of good eating quality, crisp, solid, and of nutty flavor; is ornamental, resembling an ostrich feather.

Giant Paschal Cellery.—Is from the Golden self blanching variety, but is somewhat longer growing. About 2 feet, very hard, thick and crisp, without any bitter flavor.

Celeriac, or Turnip Rooted.—The Root is cooked and sliced, used with vinegar; makes an excellent salad.

Soup, or Flavoring Celery.—For flavoring soups, stews, etc., not for sowing purposes.

COLLARDS.

Very popular in the South, where it is principally grown, and used as a substitute for cabbage.

CORN.

Judging from the long and constantly increasing lists of corn which annually appear in the Catalogues issued by the various Seed Houses throughout the country, the reader would be led to believe that they were in innumerable variety, more especially amongst the Early Sweet and other kinds for table use. This, however, is not the case, as upon testing, most of them will be found identical, and the long lists will dwindle down to a few pronounced and distinct varieties; in fact, the difference exists more in name than in anything else. We have, therefore, in the present Catalogue confined ourselves to those distinct and standard varieties, which the practical experience of market and family gardeners has decided to be the best for market and family use. Should other kinds appear which are really valuable they will be placed in stock, and we will gladly procure for our customers any varieties from other Catalogues which they may desire to test.

Corn should not be planted until the ground has become sufficiently warm, as cold and wet causes it to rot. Planted every two weeks, until the middle of July, will give a succession throughout the season.

FIRST OF ALL—The very earliest grown for the Philadelphia market.

EXTRA EARLY ADAMS.—The old standard, early sort, and its earliness its principal recommendation.

EARLY MINNESOTA SUGAR—New, and reported the best Early Sugar Corn grown.

CORY—An entirely new Extra Early Sugar Corn, ears very large for an early variety, and said to be the earliest sugar corn known.

EARLY SHAKER SUGAR—Introduced by us to the Philadelphia market many years ago; grows fine long ears for an early variety, and is unsurpassed by any of the other early kinds.

Shoe Peg—The kernal is small and very long, white and exceeding sweet and tender. Is becoming more popular every year.

EARLY LARGE EIGHT-ROWED.—This is the old market standard; a good corn, but not among the earliest.

Zig Zag—Is one of the sweetest and tasty late corns. Resembles Evergreen except that the kernals are placed zig zag upon the cob.

Naragansett. Early Marblehead Sugar. Early Shaker Sugar.

COUNTRY GENTLEMAN—Resembles the Shoe Peg on a larger scale, surpassing it in its superior qualities, viz: deepness of grain, smallness of cob and richness of flavor. Will produce from three to four ears to stalk. Much larger than the Shoe Peg.

LARGE MAMMOTH SUGAR—The largest of all varieties, productive, fine flavor and sweet. A very desirable variety for the family garden.

IMPROVED STOWELL EVERGREEN—has no superior as a late table variety; ears large, and remains green longer than any other kind.

EGYPTIAN—A new large variety, quite late; quality good, and resembles in some respects, the Evergreen.

EARLY WHITE FLINT—An excellent, productive variety, ears good size, and used for making hominy; a good table variety when cut early.

EIGHT ROWED YELLOW, (Canada).—Ears large, and bright yellow color, generally used for re-planting, very early.

MAMMOTH CHESTER COUNTY—One of the very best for field culture; fine large ears, and producing a large quantity of fodder.

MAMMOTH DENT.—A cross between the Mammoth Chester County and the Oregon; we think this the most productive variety grown.

GOLDEN BEAUTY.—Matures as early as the Golden Dent, and surpasses it in size, beauty of grain and productiveness.

LEAMING—One of the recently introduced varieties, medium, well grained ear, good color, and excellent for grinding.

SWEET FODDER CORN—Sown broadcast two bushels, and in drills three feet apart, one bushel per acre, either sweet or field varieties.

Mammoth Sugar Corn.

CORN SALAD (Broad Leaved)

Used as a small salad throughout the winter and spring. Sow early in the spring in drills one foot apart, and keep weeds down by frequent hoeing. For winter and early spring use, sow in drills in August and September. Cover with straw on approach of winter.

CRESS—Pepper Grass

CURLED.—WATER. Used as a small salad. Sow very thickly in shallow drills, on a smooth surface, at short intervals throughout the season.

CUCUMBER.

The Cucumber can be grown by any one who has a few square yards of soil with an exposure to the sun. For early use, make rich hills of well rotted manure the latter part of spring planting a dozen or more seeds, covering one-half to an inch deep, pressing the earth firmly over them. When danger from insects is over, pull all but

three or four of the strongest plants, make the hills from four to six feet apart. For pickling plant as late as middle of July,

Jersey Prolific.—Earliest and hardiest productive variety the fruit of small size and produced in pairs.

EARLY FRAME—Fruit is straight and well formed, flesh tender, though somewhat seedy; when young makes excellent pickles.

IMPROVED EARLY WHITE SPINE.—The very best sort for table use; vines vigorous, fruit straight and handsome, color light green, with few white prickles; tender, and of excellent flavor.

Long Green.

Early Russian.

Early Frame.

LONG GREEN (Jersey Pickle.)—The best pickling variety, dark green color, tender, crisp and productive.

SHORT GREEN PICKLE—This is the favorite Western pickling variety, and is growing in favor here every season.

LONG GREEN TURKEY—An excellent pickling variety, color dark green, firm and crisp.

GHERKIN (Burr Pickle.)—Small, oval shaped, prickly variety, used only for pickling.

Improved Egg-Plant.

early Egg-Plant.

(See next pag

EGG-PLANT.

Sow in hot-beds early in March; transplant middle of May to first of June, in a rich warm piece of ground, about thirty inches apart. Draw the earth up to their stems when about a foot high. Egg-plant seed will not vegetate freely without substantial heat, and if the plant gets the least chilled in the earlier stages of growth, they seldom recover. Repeated sowings are sometimes necessary. Care should be taken in cutting the fruit so as not to disturb the roots, which injures the plants.

Early Long Purple.—This is one of the earliest varieties, hardy and productive; fruit long and of superior quality.

Improved New York Purple.—The best variety in cultivation; fruit large, deep purple color, occasional stripes of green around the stem; of very superior flavor.

Black Pekin.—Fruit black, large, smooth and glossy. Round to globular.

ENDIVE.

An excellent Fall and Winter Salad, when Lettuce is getting scarce. Sow late in the Spring to middle of Summer in shallow drills, and thin out to a foot apart; blanch by tying the leaves together near the top.

Green Curled.

Broad Leaved Batavian.

Green Curled.—Is the hardiest variety, with beautifully curled, dark green leaves, which blanch white, and are very crisp and tender.

Broad Leaved Batavian.—Has broad, thick, plain or slightly wrinkled leaves. It is principally used for cooking, and making a larger head, is preferred for stews and soups. If the outer leaves are gathered and tied on the top, the whole plant will blanch nicely, and make an excellent salad for the table.

KALE (Borecole.)

Sow from May to June, and set out the plants in July, in good rich soil; cultivate same as cabbage. For Spring use sow in September; protect during Winter with covering of straw.

Green Curled Scotch.—About two feet high, leaves dark green, curled and wrinkled, stands winter without protection.

Dwarf German Greens.—Makes excellent greens for winter use, dwarf and easily protected during the Winter.

LEEK.

The Leek is hardy and of easy culture; sow early in Spring in trenches eight inches deep, and have soil at the bottom fine and rich; thin six to eight inches apart, and when the plants are twelve inches high, gather the leaves together and fill the trench so as to blanch the lower part of the plant.

London Flag.—This is the best variety, and succeeds better in this country than any other.

LETTUCE.

There is no vegetable which is more universally used than this. It is of easy culture, and thrives best in rich, moist soil. Its quality depends largely upon rapid and vigorous growth; to secure this, have the soil rich and mellow, with frequent surface cultivation and an abundant supply of water. For an early crop sow in September in the open ground, transplant when large enough into cold frames; protect during winter in same manner as early cabbage; plant out early in April, or sow in hot-beds in February or March, and afterwards transplant.

Simpson's Early Curled.

EARLY CURED SILEASIAN—An early variety of strong growth, leaves large, light yellow and wrinkled. It does not form a head, but is the best variety for cutting when young.

New Treasure—This new variety forms a fine large solid head, with leaves of a richly, creamy, yellow color. Is a fine early variety, although very slow in going to seed.

LARGE DRUMHEAD—Heads large and fine, pale green without, and white at centre; crisp and tender, fine summer-variety.

Philadelphia White Dutch Butter. *Brown Dutch.*

PHILADELPHIA WHITE DUTCH BUTTER.—The best variety for cultivation in the latitude of Philadelphia, fine large heads, and stands the heat of Summer well.

ROYAL CABBAGE—Large, crisp and tender: a good Summer variety.

BROWN DUTCH.—Leaves large, green, tinged with brown; very hardy, and of fine quality

MELON (Canteloupe.)

Plant early in May, when the ground has become warm and dry, in hills six feet apart each way; use well rotted manure, and if plants grow very rank, finer fruit will be secured by trimming off the ends of the shoots when about three feet long. Do not plant near pumpkins, squashes or cucumbers, as they will mix with and injure the quality of the melons.

GOLDEN JENNY.—Small, and very early; globe-shaped, skin green, ribbed and netted, flesh light green and of fine flavor.

JENNY LIND.—The earliest green fleshed melon, and the sweetest variety in cultivation; flesh green, quite small, slightly ribbed and well netted.

Muskmelon. *Bay View.*

PINE APPLE.—Very fine, nutmeg shape, flesh thick and green, very firm, juicy and sweet

GREEN NETTED.—The old favorite, nearly round, good sized, well netted, flesh thick sweet, and fine flavor.

JENNY LIND IMPROVED.—Resembles the old variety only that it produces earlier and is better, filled out, roughing up better, and keeping fully a week longer than any other variety. Is of a handsome green fleshed sort and invaluable for a first early; and of a delicious quality.

HACKENSACK.—A popular large size melon, flattened at the poles, deep netted and ribbed, flesh green and well flavored. One of the best for shipping, and is a favorite with market gardeners.

Green Netted Melon.

Montreal Curon.

CASABA—One of the best in cultivation; flesh green, sweet, melting and delicious.

MELON (Water.)

The Water Melon succeeds best on light, sandy soil, but the young plant requires a good start, and for this should have hills of rich earth, made so with well rotted manure.

Cuban Queen.

MOUNTAIN SWEET.—The old New Jersey variety, equal to the best.

Ice Cream. (See next page.)

Mountain Sprout.—Large oblong variety, gray seed, dark green skin, red flesh and good quality.

Black Spanish.—Large round, dark green skin, flesh red, sweet and delicious, a first class market variety.

CUBAN QUEEN.—One of the largest melons known; vine vigorous, skin striped, light and dark green; rind medium thick, flesh bright red, solid, crisp and sugary,

Dixie Watermelon.—Destined to supercede the Gem. If you want the best melon grown plant the Dixie. It is unsurpassed in fine eating qualities. Form long to half long, diameter large; rind dark with lighter stripes. Early as the Gem, equally productive. Flesh deep red; unequaled as a shipper. We have had seed grown especially for our trade of the best stock. For price see our price list.

Gypsy or Rattlesnake.—One of the large varieties, stands shipments long distances better than any other. Fruit long, smooth, distinctly striped and mottled light and dark green.

Ice Cream.—Medium size, scarlet flesh and very sweet; an excellent variety.

Orange.—Small size, flesh red, tender and sweet, separates from the rind like an orange.

Kolb's Gem.

The Boss.—New, handsome oblong variety, skin very dark, deep scarlet flesh, sugary and of excellent flavor.

Light Icing.—Very light green skin, flesh bright red, crisp and sugary, excellent quality.

Dark Icing.—Skin dark green; in other respects like the preceding melon.

Kolb's Gem.—A new introduction. Has a hard rind and is a good shipper. Shape nearly round. Flesh red and of good quality.

MUSTARD

Mustard is not only used as a condiment, but the green leaves are used as a salad, or cut and boiled like spinach.

White English.—This is the kind usually preferred for salad. The leaves are light green, mild and tender when young; seed light yellow.

Brown Italian.—This is a larger plant than the preceding, with much darker leaves; seed brown and more pungent.

NASTURTIUM

Used as a pickle and highly esteemed. Sow in drills two inches deep, in April and May, five or six inches apart, and provide them with rods. It may also be grown to advantage as an ornamental climbing plant.

Nasturtium.

OKRA. OR COMBO

The green capsules of this plant are used in soups, stews, etc., to which they impart a rich flavor, and are considered nutritious. Plant the seeds about the middle of May, in hills or drills. Plant the seeds thickly, as it is liable to rot in the ground; rich ground is necessary.

Tall White.—About four feet high; pods eight to ten inches long.

Dwarf White.—Two and a half feet high; pods five inches long; very productive.

ONION

A strong, deep soil is desirable for this crop. The ground should be dressed with well rotted manure.

The Silver skin and Yellow Strasburg are principally grown (for sets) in this vicinity. Sow the seed early in the Spring, very thickly in beds or drills. As soon as the tops die off in the Summer, remove them to a dry, airy place, and early in the following Spring replant in rows about two inches apart, the rows wide enough apart to admit of hoeing. The Onions by this process, are obtained of a large size early in the season.

The Large Red Wethersfield may be reared to full size during the first season, by sowing in drills early in March, in strong land, and thinning them out to stand two or three inches apart, keeping them well hoed.

White Portugal. *Early Red Onion.*

Extra Early Red.—A large yielder, of good form and flavor, deep red color, and keeps well. Ten days earlier than the Wethersfield.

Large Red Wethersfield.—The standard Eastern variety. Grows to large size directly from the seed; skin deep purplish red; form round, flat; flesh purplish white; and stronger flavored than any of the other kinds.

Yellow Strasburg.—The old popular Philadelphia variety; not as strong flavored as the Red; a first rate keeper, and valuable for shipping.

Yellow Danvers.—A fine variety, originating in Danvers, Mass.; above the medium size, oval shaped; skin yellowish brown; flesh white, mild and well flavored, very productive

Queen. *Yellow Danvers.*

Silver Skin or White Portugal.—Large flat Onion, of mild flavor; fine for early winter use, and very desirable for pickling. It is the best keeper of the white varieties.

Queen.—A silver skinned variety, of mild flavor, early, a good keeper, and an excellent pickling Onion.

ONION SETS

The Onion sets grown in the vicinity of Philadelphia are recognized everywhere as the best in the country; they are more solid and brighter, and their keeping qualities much better than those grown elsewhere. The best varieties are the *Early Red*, *Yellow Strasburg*, *Yellow Danvers* and *White Silver Skin*. Onions grown from sets come into market long before those grown directly from the seeds, and in consequence much higher prices are realized from them.

PARSNIPS

This well known culinary vegetable does best on a deep, rich, sandy soil; fresh manure should not be used, as it is apt to make the roots coarse and ill-shaped. The seed is sometimes slow to germinate; it should be sown early as possible, covering half an inch deep, and the soil pressed firmly over the seed; thin out so that the plants will stand four inches apart.

Long White Dutch.—Very hardy, and keeps through the Winter without protection,

Sugar or Hollow Crowned.--The very best for table use, very productive.

Hollow Crown.

Champion Moss Curled Parsley.

PARSLEY

Sow early in April in rows. Soak the seed a few hours in warm water before sowing, or it may lay two or three weeks in the ground before vegetating. A few Radish Seed mixed with the seed when sowing will mark the rows and facilitate weeding.

PLAIN OR SINGLE—Dark green color, and very hardy.

DOUBLE CURLED—A dwarf curled variety, which is the best for all purposes.

MOSS CURLED—Leaves bright green, curled and crested like fern or moss, very ornamental for garnishing or garden decoration.

PEAS

The Pea is so generally known that it is needless to give any description of it. There are many new varieties coming out every year, most of which turn out to be no better than the older sorts. We have carefully culled them over, and our list will be found to contain all that are really valuable.

The Pea matures earliest in a light, rich soil; but for general crop, a rich, deep loam will be found best. The Extra Early varieties should be sown as soon as the ground can be worked in the Spring, and continue every two weeks for a succession. The tall varieties require brush stuck in between rows. The wrinkled varieties are superior, more delicate in flavor, and remain longer in season than the smooth sorts, but are not so hardy.

The dwarf varieties suit best for small gardens, and can be planted in rows one foot apart.

IMPROVED PREMIER EXTRA EARLY PEA.—This is undoubtedly the best and earliest Pea grown.

CLEVELAND'S ALASKA, (New.)—See cut on page 41.

CLEVELAND'S RURAL NEW YORKER, (New)

MINGLE'S EXTRA EARLY.—For family use this is probably equal to the Improved Premier; it does not ripen so evenly, but keeps in bearing longer.

Improved Premier

EARLY KENT.—An old early variety, ripening about a week later than the Extra Early; height three feet.

SHARPS QUEEN.—One of the most desirable of the late varieties that have been recently introduced. Being of a vigorous branching habit it needs to be sown thinly. Pods long, slightly curved and well filled, Height $2\frac{1}{2}$ feet, seed dark green and wrinkled.

Telephone

TELEPHONE.—One of the recent introductions from England, where it is highly prized grows about three feet high, and is the best tall Pea in existence, an enormous bearer, producing straight, showy pods, containing from nine to ten peas in a pod.

TOM THUMB.—Very dwarf, grows only ten inches high, excellent quality and productive.

MCLEAN'S LITTLE GEM—Highly recommended for garden cultivation; quite dwarf, and among the earliest.

MCLEAN'S PREMIUM GEM.—An improvement on the Little Gem, being larger and more productive. Does not ripen quite so early, is very luscious in flavor, and is general favorite.

AMERICAN WONDER—A hybrid between Champion of England and Little Gem; grows eight to ten inches high; it is an enormous cropper, and ripens in about fifty days from germination.

PRIDE OF THE MARKET.—Habit of growth and general appearance, both of vine and pod closely resemble the stranger, only deeper in color, and ripening a week later.

ADVANCER.—A green wrinkled variety maturing in from fifty to sixty days, producing an abundance of well filled broad, long pods, considered one of the best of its kind.

LONG ISLAND MAMMOTH—Very popular with the farmer in most sections who want a large handsome pod of deep green color that carries well. Is becoming more popular every year. Height 3 feet.

Premium Gem.

Champion of England Peas.

YORKSHIRE HERO.—Vines stout, about two feet high, pods broad and well filled, large Peas; hardy, productive, and superior flavor, and will be preferred to any other, by those who want a rich marrow-like Pea.

MARKET GARDEN.—An old favorite, of delicious flavor; ripens in sixty to sixty-five days, foliage dark, and continues long in bearing, a universal favorite.

DWARF CHAMPION.—Very much liked by those who have tried it. In quality and flavor equal to Champion of England, and the vine much more dwarf. Equal to Little Gem, except that it is ten days later.

CHAMPION OF ENGLAND.—Universally admitted to be one of the richest and best flavored Peas grown; height four to five feet; seed whitish green and shriveled, and a profuse bearer.

FORTY FOLD.—A very fine Pea, grows about the same height as Champion, very superior quality, and very productive.

STRATAGEM.—New late green wrinkled marrow variety, growth one and a half feet high great bearer and of excellent quality. *See Cut next page.*

LARGE BLUE IMPERIAL. About three feet high, pods long, rather flat, containing eight or nine Peas, a good bearer, and one of the best varieties for summer use.

IRISH DWARF WHITE MARROW FAT.—Similar in appearance and general character to the Large White Marrowfat, but of much dwarfer growth, being only about three feet high, it requires no brush, and is much earlier than the Tall Marrowfat; as a late market Pea it has no equal.

Stratagem Peas—See page 43.

Large White Marrowfat.—About five feet high, and of strong growth; pods large, round and well filled; is undoubtedly, one of the greatest bearers in field or garden.

Large Black-Eyed Marrowfat.—A late variety, well known on the Philadelphia market as a prolific bearer, and is recommended as one of the very best Marrowfat varieties.

Field Sorts.—We keep in stock all the varieties used for soiling or ploughing in as green manures; a practice which is becoming quite general in this latitude.

Long Red Cayenne.

PEPPER

Sow in hot beds in March, or in a warm border early in May, transplant and thin out to stand sixteen or eighteen inches apart; hoe frequently, to keep down the weeds.

Large Sweet Bell or Bull-Nose.—A large sort, of square form, mild, thick and hard; suitable for filling with cabbage, and for a mixed pickle. It is notwithstanding its size, one of the earliest varieties.

Tomato or Squash.—Fruit flat, shaped like the Tomato.

Long Red Cayenne.—Pod long, slim and pointed; color bright red and very pungent.

Sweet Mountain.—Nearly identical with the Bull-Nose; perhaps somewhat larger.

PUMPKIN

Sow in hills eight or ten feet apart each way, or in fields of corn, about every fourth hill; avoid planting near melon or squash vines, as they will hybridize.

Sweet Potato.—Flesh yellow and dry, the very best for family use.

Cashaw.—Long Yellow Crook Neck, one of the best among Pumpkins; sometimes weigh as much as sixty to eighty pounds.

Cheese.—One of the best for table use; shape flat, like a cheese box; flesh yellow and sweet.

Common Field.—Best for cattle feeding.

POTATO

EARLY VERMONT,
EARLY ROSE,
EARLY SUNRISE,
BURBANK SEEDING,

DAKOTA RED,
WHITE PEACH BLOW,
BEAUTY OF HEBRON,
MAGNUM BONUM,

SNOW FLAKE,
WHITE STAR,
MAMMOTH PEARL,
WHITE ELEPHANT.

The soil best suited to the Potato is a rich sandy loam, but it seems to thrive in almost any soil and climate. The best fertilizers are plaster, super-phosphate of lime and bone-dust. Plant as early in the spring as the ground can be worked thoroughly, covering about four inches in warm soil, and in wet soil three inches deep, cultivate to keep down weeds, and draw earth to the plants as they advance in growth.

There are many so called new varieties offered every season, but they disappear quickly. There is really none to be found better than the Early Rose, Snow Flake, and White Peach Blow.

RADISH

Should be sown in a warm, sandy, loam, enriched by well rotted manure, and a liberal dressing of salt, this will have the effect of making them brittle and free from worms. Sow as early as the ground can be worked, and thin to two inches apart as soon as the rough leaves appear.

Radishes must have plenty of room and be grown quickly, otherwise they will be tough and wormy.

EARLY LONG SCARLET SHORT TOP (*improved*).—The best standard variety for private gardens or market use, is brittle and crisp, and of quick growth; color bright scarlet, small top, and is uniformly straight and smooth.

EARLY SCARLET TURNIP—The earliest of the Turnips varieties; small root and small top.

White Tipped Scarlet Turnip.—Fine French variety; scarlet bulb with white tip, very showy and ornamental.

Early Red Turnip Rooted.—This is the old favorite, and there are few that are better. (*See Cut.*)

Early Deep Scarlet Turnip Rooted.—An improvement on the former very smooth and rich dark color.

Early White Turnip Rooted.—Like the preceding in shape, but pure white in color; bears the heat well without becoming spongy, a few days later than the former.

Early Long Scarlet Short Top (improved).

Early Scarlet Turnip.

EARLY SCARLET OLIVE-SHAPED—In form of an olive; fresh rose colored, tender and excellent.

EARLY YELLOW SUMMER TURNIP.—Oblong, turnip shaped and russet colored, much larger than the Red and White Turnip varieties; solid and brittle, and stands heat better than any other kind.

GOLDEN GLOBE.—A fine French variety, amber colored, mild flavor, and keeps long in eating condition.

SCARLET CHINA WINTER—Form conical, of a bright rose color, flesh firm and pungent flavor.

WHITE CHINA WINTER.—Similar in shape to the preceding, flesh piquant, solid and brittle; an excellent sort for late Fall or Winter use.

Winter China (Page 45.)

Long Black Spanish Winter.—One of the latest as well as one of the hardiest of Radishes, and is one of the best for Winter use; roots oblong, black, of large size and firm texture.

LARGE WHITE SPANISH WINTER Differing from the Black Spanish only in color.

RAPE.

Extensively cultivated in England for the seed, from which is manufactured Rape Seed Oil. As a forage plant it yields abundantly; fed green it is eaten by nearly all animals, and is very nutritious. Sow in May ten pounds broadcast, and in drills four pounds per acre.

Early Red Turnip (Page 45.)

Rhubarb or Pie Plant.

It is cultivated in gardens for its leaf stalks; used for pies and tarts, it is fit for use before green fruit can be had, and is an excellent substitute. Sow seed in the seed bed early in Spring, and transplant in Autumn or ensuing Spring to any desired situation, allowing plants three feet square space.

Salsify or Vegetable Oyster.

Sow early in the Spring, in deeply dug and richly manured soil, in drills eighteen inches apart. Keep clear of weeds, and when up a few inches, thin out, so as to stand four or five inches apart. This is a hardy vegetable and can remain in the ground all Winter for early Spring use, but should be taken out before they start growing. It is excellent for the table, and can be served as Carrots, or, after being parboiled, may be made into cakes and fried like oysters, which they greatly resemble in flavor.

Salsify

SPINACH.

The Spinach is very hardy, wholesome and palatable, and make a delicious dish of greens. Should be planted in rich ground. Sow in drills one foot apart, and commence thinning out when the leaves are an inch wide. For early spring use, the seed should be sown middle of Autumn, and will require through the Winter a slight protection of leaves or straw. For Spring and early Summer use, sow as early as the ground can be tilled, and at short intervals, if a succession is desired.

ROUND LEAVED SUMMER.—(*Extra Curled.*)—This variety is the best and most popular with our market gardeners; leaves large, thick and fleshy, and stands the Winter well.

LARGE LEAVED FLANDERS—Has a very erect habit of growth, and preferred by many on that account.

PRICKLY SEEDED—The hardiest variety, and will withstand the severest weather, with only a slight protection of leaves or straw; seed is prickly, leaves oblong and triangular. It is the best for Fall sowing.

LONG STANDING—New large crimped fleshy leaved variety; stands two weeks longer than any other variety before running to seed. Best kind for seed sowing.

MONSTROUS VIROFLAY—A mammoth variety of good quality, much used in Europe

SQUASH

Cultivate same as Cucumbers or Melons. The summer varieties should be planted four or six feet apart each way, and the Winter sorts eight feet. Three plants are sufficient for a hill.

EARLY WHITE BUSH, OR PATTY PAN—The earliest in maturing, and very productive.

EARLY GOLDEN SCOLLOP Bush.—Like the preceding, except being of a golden color

GOLDEN SUMMER CROOK-NECK.—The best of the Summer squashes, gold color, profusely covered with warty excrescences; very superior flavor.

Hubbard.

Early White Bush, or Patty Pan.

WINTER CROOK NECK,—Shape like a Cashaw pumpkin, grown for Winter use; is a good keeper.

BOSTON MARROW.—A Fall and Winter variety, very popular, oval form, thin skin; when ripe, bright orange color, fine grained, and for sweetness unsurpassed.

HUBBARD.—A very superior variety, flesh bright orange yellow; dry, sweet and rich flavored, good keeper, boils or bakes exceedingly dry.

Golden Summer Crook-Neck Squash.

WHITE PINAPPLE SQUASH.—A superb variety for pies; it cannot be excelled.

AMERICAN TURBAN.—Flesh orange yellow, good flavor and excellent for Fall and Winter use.

TOMATO

Tomatoes do best on light, warm, not over rich soil, and success depends upon securing a rapid, vigorous, unchecked growth during the early part of the season. To have them very early the plants should be started in a hot-bed; transplant carefully, and cultivate well as long as the vines will permit. Tying to a trellis or stakes, improves the quality.

EXTRA EARLY. (or Cluster).—The earliest variety, and desirable only on that account.

Early Tomato.

Extra Early Richmond.—Almost as early as the Early Cluster, larger and smoother, it is a favorite among truckers, and is a good shipper.

Hathaways' Excelsior.—Quite early, vigorous growth, vines large, and productive throughout the season. Fruit dark rich color, slightly below medium size, but always round and smooth.

Paragon

ACME.—One of the most popular varieties; vines large, and produce abundantly until frost. Fruit in clusters, color maroon or reddish, with slight tinge of purple, invariably smooth and round, of good size and unusually solid, is a good shipper.

PARAGON.—Vines large, liberal and productive; fruit large, round, of a dark crimson color, occasionally tinged with purple. The flesh is thick and fine flavored, and taken altogether, it is the best variety yet produced.

LIVINGSTON'S PERFECTION—A handsome new Tomato, so nearly identical with the preceding as to be interchangeable with it.

TILDEN.—A well known and favorite variety, rich color, solid flesh, and desirable in every way.

LIVINGSTON'S FAVORITE.—This is the most perfect shaped Tomato in cultivation, is smoother than the Paragon, and does not crack or rot like the Acme. It ripens evenly, and as early as any good variety; very prolific, good flavor, few seeds, solid, and a good shipper.

TROPHY.—Well known as one of the best; vines of medium size, but producing large quantities of fruit, which is large, smooth, and bright red in color.

LARGE RED.—An old, reliable variety, resembling the Tilden.

LIVINGSTON'S BEAUTY.—The very latest production of Mr. Livingston, and claimed to be the best; color a bright glossy crimson, slightly tinged with purple, grows in clusters of four or five large fruits, and retains its size until late in the season, and will average more pounds of fruit to the acre than any other variety.

COOK'S FAVORITE—A solid, nearly round Tomato, very desirable, and almost identical with the "Canada Victor."

FEJEE IMPROVED—One of the best; color maroon, solid flesh, very productive, and known as the Beefsteak Tomato.

PEAR SHAPED—*Yellow and Red.* Used for preserves and pickles; is extraordinarily productive.

TURNIP.

Early Purple Top Munich.—A handsome early Turnip, decidedly earlier than any other sort; color white with bright purplish red top; of fine quality when young and recommended as the very best for a first crop.

Early Purple Top Munich.

Early Flat Dutch (Strap Leaved).—This is the most popular early Turnip for table use; very early, sweet and tender, and sure to bulb.

Early Purple Top (Strap Leaved).—Very similar to the preceding except in color, being purple or dark red on top; form round, flat, with but few leaves, which are of upright growth. This is the standard variety, and there is none better for general purposes.

Large Early Red Top Globe.—Only recently introduced; very attractive, of large size and rapid growth. It is a very heavy producer, and quite as early as the Flat Red Top.

Early White Egg.—A recently introduced variety; color pure white, egg-shaped, of very rapid growth, and of good quality.

Pomeranian White Globe (Strap Leaved).—A free-growing, rough-leaved variety, and very productive; will, frequently, in good rich soil grow to ten or twelve pounds in weight; it is a perfect globe in shape, skin white and smooth. A first rate kind for either table use or stock.

White Norfolk.—One of the standard field sorts; and is extensively grown everywhere for stock feeding. In shape, round, color white, and often grows to large size. It is an admirable keeper.

Early Purple Top—Strap Leaved.

Improved American Ruta Baga.

Cow Horn.—This variety is carrot-shape, and grows nearly half out of the ground; is pure white, except slight shade of green at top. It is well flavored, of rapid growth, and seems to be increasing in favor every year.

Amber Globe (Strap-Leaved).—This is one of the best of the rough leaved sorts, for either table use or for stock; flesh yellow, fine grained and sweet; hardy, keeps well, is a good cropper, and grows to a very large size.

Yellow Aberdeen.—This is a very nutritious cattle turnip; flesh pale yellow, tender and sugary; is a good keeper, hardy and productive. It is an old favorite, and for stock purposes hard to beat.

Robertson's Golden Ball (*Orange Jelly*).—One of the most delicate and sweetest yellow flesh Turnips yet introduced; does not attain a very large size, but is firm and of excellent flavor. Has no superior as a table variety.

Improved Purple Top Yellow Swede (*Ruta Baga*).—This is the standard and most important now cultivated for stock purposes; noted for rapid growth, large size and nutritious quality, and cannot be too highly recommended.

White Fleshed Purple Top *Ruta Baga*.—This differs mainly from the preceding in color; possesses most of the good qualities of the yellow, but is of slightly milder flavor. is not as valuable for stock as the yellow.

The above comprise about all the desirable varieties for either table or stock use. There are several others which differ from each other more in name than in anything else, being in most instances identical in their characteristics. We have not noted them here, but any varieties not named, which our customers may desire, we will cheerfully procure, and at such prices as will compare with any other Catalogue.

CLOVER AND GRASS SEEDS.

There are no plants so valuable for fertilizers as the clovers, and as a class they include some of the best forage plants. The common clover is the natural manure of the Northern farmer, and it is the cheapest and best renovator of worn soils. Its full value on poor land is best obtained by securing the first crop for hay, and ploughing under the second crop when in seed in September. The cutting of the growing plants causes the development of a large amount of roots, which extract from the soil large amounts of mineral constituents, which, by the decay of the roots, greatly increase the fertility of the soil; the long roots extend far into the earth, and when they decay leave channels through it for the admission of air and distribution of water. Soils best adapted to clovers are clays and heavy loams, and on such soils lime is the best clover manure. They also do well on soils of lighter character, and when ploughed under as a green manure, add greatly to their fertility. The seed may be sown in Fall or Spring; but in the Eastern and Middle States the best results are usually had from Spring sowing; it should be sown early on a mellow, well prepared soil; plaster will increase the growth remarkably, and should be sown broadcast the season following the seeding.

CRIMSON CLOVER.

Crimson Clover.—Or more commonly called Scarlet, Italian or German Clover, is an annual of French origin, makes a growth from 20 to 30 inches high, has a bright crimson blossom from 1½ to 3 inches long, and when in full bloom with its luxuriant growth of green foliage and its crimson bloom, is a thing of beauty. It is a winter crop, must be sown in July, August and September of each year from which the spring following can be cut for soiling, by the 20th, of April; for Ensilage and hay by the 8th of May, and for seed crop by the 25th of May. It will produce on ordinary soil 12 to 15 tons of green food per acre, 1½ to 2½ tons hay per acre, and 2 to 12 bushels seed per acre. Ploughed under as a manurial crop it is worth as a fertilizer \$30. per acre. Experiments at the Delaware Experiment Station, have shown that \$1 invested in seed per acre added 24 bushels corn. While \$1 worth of nitride soda per acre increased the yield of corn only 6 bushels.

Professor Voorhees, Director of the New Jersey Experimental Station, says, on page 21 of station bulletin no. 100: The average of the matured crops on May 24th and 31st contained per acre 200 lbs. nitrogen and 6,500 pounds of organic matter, or equivalent to that contained in 20 tons of city manure, which would cost in that form \$30. On page 29 of the same bulletin Professor Voorhees says; Used as a manure only the average crop per acre is worth \$25, when used as a feed the value is increased to \$40. This plant provides a good pasture before other crops are available. An early pasture is not only valuable for food contained in it, but also because it helps to insure proper feeding and to prevent too early use of other and later pasture. The crop when 6 inches high contained over 1,300 pounds of digestible food per acre, sufficient to properly nourish 12 cows for one week. When sown in July and August it furnishes excellent pasture in December; can also be pastured some in early spring without injury to either hay or seed crop. When Red Clover failed to give a good stand or blighted on wheat stubble, the stubble can be harrowed over and Crimson Clover sown, which will more than make up the loss of the Red Clover. Crimson Clover weighs sixty pounds to the bushel. Ten to fifteen pounds are necessary to seed an acre properly, and after sowing the seed it should be covered by harrowing with a light harrow. Professor Voorhees and other experimentors of high authority regard it as hardy as red clover. It withstood the winter at the Maine experimental station and attained a growth of 26 inches. Good results have been obtained in Northern New York. Crimson Clover will grow on poor light soils when other grasses fail. By its use poor soils can be improved more rapidly than by any other method. Therefore, it is the cheapest and best fertilizer.

It makes an abundant food of highest quality. As pasture, stock prefer it to other grass. As a soiling crop or for Ensilage it cannot be excelled, and for hay stock not only have a decided preference for it, but they thrive remarkably upon it.

The Delaware Experimental Station sums up its uses as follows:—

1. To Plow down for Green Manure.
2. For Silage.
3. For Soiling.
4. For Haymaking.
5. For Seed Production.
6. For Eradication of Weed.
7. For Reduction of Expenses in Cultivating Orchards.
8. For Winter and Spring Pasture.
9. As a Protection for Falling Fruit in Orchards.
10. For Binding drift Soils and for preventing Washing on Hill Sides.

We make Crimson Clover a specialty and we are prepared to furnish it in large or small quantities. We have in stock choice re-cleaned seed. Prime seed and No. 2 seed which we and furnish at market prices.

MAMMOTH OR LARGE RED.—This variety is best adapted for ploughing under as a green manure; it grows five to six feet high, has large, coarse stalks, which are not liked by cattle. It is not ready to cut for hay until long after the common variety, and when cut leaves the ground bare, making no second growth. Sow at the rate of about ten pounds per acre.

MEDIUM OR COMMON RED—This is the most important of all the varieties of Clover for practical farm purposes; it makes excellent pasturage when sown with Timothy and other grasses, and is one of the best fodders for milch cows or sheep; sow at the rate of ten to fifteen pounds per acre, according to nature of the soil.

ALSIKE OR SWEDISH—This is the most hardy of all the Clovers, it resists the severest cold, and extremes of drought and wet, yields large crops of superior hay, and on rich soils may be cut several times in a season; it is perennial, and its long, strong fibrous roots take a firm, deep hold on the soil, preventing washing away of the extra earth from hillsides. It produces superior pasturage, and is much liked by cattle; grows well on any soil; stalks are fine and palatable, blossoms globular, sweet and fragrant, and much liked by bees. Sow in Spring or Fall, at rate of about six pounds per acre.

CRIMSON TREFOIL (*Scarlet Italian*).—Grows about one foot high, with fine stems and long leaves. Blossoms are long, cone shaped, of a dark red or carmine color, grows rapidly, but being an annual, must be re-sown each season; it yields several crops per year, and makes excellent hay. Sow about ten pounds per acre in Spring.

WHITE DUTCH.—A small, low growing variety, with creeping stems; mixed with Blue grass or Perennial Rye Grass, or Timothy, it makes a permanent pasture of great value. Its blossoms are round, white, tinged with red, and sweet scented; stems fine and palatable, with numerous leaves of bright green color, blotched with white. Sow about six pounds per acre.

LUCERNE, OR ALFALFA—This is undoubtedly the most valuable variety for permeable sub soils, as it sends down its tap roots in mellow soils to great depths, having been found in sandy soils thirty feet below the surface, far below the reach of drought. The flowers are a pale blue, somewhat difficult to establish the first year, requiring a fine mellow soil, but will then produce a profitable crop for ten or twelve years. The Fall is the best time for sowing in this latitude, though it has done well when sown in the Spring; the ground should be thoroughly prepared, and made smooth and fine. Sow twenty-five pounds per acre, harrow in lightly, and follow with a light roller to properly imbed the seed. It should be cut as soon as it begins to blossom, or even a little earlier; if left too late is apt to become coarse and hard, and is less relished by cattle. In no event should it be allowed to go to seed the first season, as it tends to weaken the plant; it improves rather than exhausts the soil, and as a fertilizer it stands at the head of the list. It may be exterminated at any time by simple ploughing thoroughly, and removing the crowns to where they may be burned or rotted, it yields an enormous amount of green fodder, and can be cut four or five times during the season.

TIMOTHY.—This crop to cut for hay, probably surpasses any other grass in cultivation it thrives best on moist, loamy soils, and is not well suited to light, sandy or gravelly soils it should be cut just when the blossom falls. Sow either in Spring or Fall, at the rate of twelve pounds per acre, if alone, but less if mixed with other grasses.

Orchard Grass.—This is one of the most valuable grasses, on account of its quick growth and valuable aftermath. It is ready for pasture in Spring two weeks earlier than most grasses, and when fed off, is again ready for grazing in a week. It is palatable and nutritious, and stock eat it readily when green; it will also withstand severe drought keeping green where many grasses wither, and will endure considerable shade. When sown with Clover it makes excellent hay, as it blossoms at the same time, and they should be cut together; for grazing it has no equal, and should be used more than it is; it has a tendency to grow in tufts, which can be prevented by close cropping and heavy seeding. When sown alone, one and a half to two bushels per acre are required; if sown with clover, half that quantity. It is a perennial, and will last for years, but its habit of growth unfits it for lawns.

Red Top or Herds Grass.—Is a good permanent grass, and makes a good pasture when fed close; is valuable for low, wet meadows, producing large crops of good hay. It is often sown with Timothy and Red Clover, in which case it makes a close sward.

Kentucky Blue Grass.—This makes an excellent pasture grass, producing a most nourishing food for cattle, retaining its qualities till a late period in Winter, and further South affording abundant food during the Winter. In connection with White Clover it affords a fine and close lawn: for this purpose an extra quantity of seed must be used, say, two bushels Blue Grass and six pounds of White Clover per acre. If sown by itself, either in Spring or Fall, two bushels per acre are required.

Natural Green Grass.—This is the grass par excellence for lawns, making a fine close surface of dark green velvety color. It is very sensitive to good treatment, and will in most cases drive out the other grasses and take possession of the soil. Should be sown not less than two bushels per acre.

Perennial Rye Grass.—A very valuable variety for permanent pasture, and makes a large return of hay; it is very nutritious, and stock are very fond of it; succeeds best on moderately moist land, for which it is peculiarly adapted. It is also largely used for lawns, in conjunction with other grasses. Should be sown in the Spring in quantities of one and a half to two bushels per acre.

Sweet Vernal Grass.—An early and exceedingly fragrant variety, and on that account invaluable for Lawn Grass mixtures, presenting a beautiful appearance, and exhaling a delightful odor when in blossom.

Fine Mixed Lawn Grass.—For fine lawns, careful preparation of the ground, with thorough rolling, are absolutely necessary, following which a selection of the seeds of such grasses as will present a luxuriant verdure from early spring till late in Autumn. There should also be frequent mowings with a lawn mower; no matter how much care has been taken with soil and seed, no lawn will be beautiful without frequent mowing and rolling. Too much care cannot be bestowed on the selection of grasses, these we can supply ready mixed, in proper portions of each kind required. We have been exceedingly successful with our mixture, and refer to the many fine lawns around Philadelphia, which have been put down with our mixture. Should be sown two to three bushels per acre.

Common Millet.—Requires a dry, light, rich soil, and grows two and a half to four feet high, with a fine bulk of stalks and leaves, and is excellent for forage. Can be sown in drills or broadcast, from May 1st until last of July. For hay sow one bushel; if for seed one-half bushel per acre.

German, or Golden Millet.—A much improved variety, medium early, growing three to five feet high; the heads are closely condensed, though the spikes are very numerous. It is an enormous cropper; should be sown not less than one bushel per acre, if less will grow coarse and woody, in which state it is not relished by cattle.

Hungarian Grass.—This belongs to the millet family, growing less rank, with small stalks often yielding two to three tons of hay per acre; like millet it is an annual, and requires, to be sown every season, but will produce a larger return than almost any other crop. Sow and cultivate like millet; all kinds of stock eat it with avidity.

For Hay.—Either sown together or separate, are unsurpassable both as to quantity and quality of hay.

German Millet, (and it must be remembered that Tennessee German Millet is the best in the world,) being sown and cultivated for seed and compared to seed grown elsewhere, the Tennessee grown is purer and better in every way.

After all danger of frost is past, break the land and thoroughly pulverize it, then sow at the rate of one to one and a quarter bushels per acre, and roll or harrow in, and cut when seed are in the dough; cure as timothy.

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AROMATIC AND SWEET HERBS.

ANISE,
 BASIL, SWEET,
 CARAWAY,
 CORIANDER,

*FENNEL,
 *LAVENDER,
 MARIGOLD, POT,
 MARJORUM, SWEET,

*ROSEMARY,
 *SAGE,
 *SAVORY, SUMMER,
 *SAVORY, WINTER,
 *THYME.

Those marked with * are perennial, and when once obtained in the garden, may be preserved for years with a little attention. Most of the varieties thrive best on rich, sandy soil. which should be carefully prepared and cultivated, as the young plants are for the most part delicate and easily choked out by weeds. Sow as early as the ground can be made ready, in drills sixteen to eighteen inches apart, or sow in beds in April, and set plants out in June, they should be cut when in bloom, wilted in the sun, and then thoroughly dried in the shade.

PERMANENT GRASSES.

We also furnish single grasses, or several kinds in a mixture, for the production of hay or permanent pasture, to suit either heavy or light land.

MISCELLANEOUS FARM SEEDS.

Under this head we keep in stock all kinds of Spring and Winter Wheats, Rye, Common and Silver Hull Buckwheat, Oats, Field Peas, Spring Vetches and Tares, and all other seeds required for the farm.

BIRD SEEDS.

CANARY,
 HEMP,

MILLET,
 RAPE,

MAW,
 LETTUCE.

☞ And other articles required by the Bird Fancier.

PRICE LIST.

LESS QUANTITIES THAN 1-4 lbs. and 1-4 BUSH. ARE CHARGED AT THE PRICES PER OZ. AND QUART.

While we exercise the greatest care to have all Seed pure and reliable, it is hereby mutually agreed that we are not in any respect liable or responsible for the seeds sold by us, either as to quality or kind, nor any loss or damage arising from any failure thereof in any respect.

WRITE US FOR FIRM PRICES.

ASPARAGUS. oz. LB.

Conover's Colossal.....	\$ 10 50
Barr's Mammoth.....	10 50
Palmetto, (new).....	10 50

BEANS, (*Bush, or Snap Shorts.*) qt. BUS.

Early Mohawk.....	4 50
Early Red Valentine.....	4 50
Cleveland's Improved Round Pod Valentine.....	4 50
Early Long Yellow Six Weeks..	4 25
Early China Red Eye.....	4 00
Refugee or Thousand to One.....	4 00
Currie's Rust Proof Wax.....	4 50
Dwarf German Wax.....	4 50
Golden Wax.....	4 50
Wardwell's Kidney Wax.....	5 00
German Wax, (white seeded)....	4 00
Crystal White Wax.....	4 00
Ivory Pod Wax.....	4 00
White Seeded Valentine.....	5 00
White Cranberry.....	3 25
Royal Dwarf, White Kidney.....	3 25
Large White Marrow.....	3 25
Dwarf White Navy.....	3 25
Henderson Bush Lima.....	6 50
Burpee Bush Lima.....	7 00
Dreers Bush Lima.....	7 00

BEANS, (*Runners.*)

Extra Early Jersey Lima..	40 7 00
Improved Extra Large Lima, (Salem Mammoth).....	40 7 00
Dreer's improved Lima.....	30 7 00
Small White Lima or Carolina...	30 6 50
Horticultural.....	20 5 00
Giant Wax, (<i>Red Seed</i>).....	20 6 00
Tall German Wax,.....	20 6 00

BEET. oz. LB.

Extra Early Bassano.....	10 60
Early Egyptian Turnip.....	10 60
Eclipse.....	10 60
Early Blood Turnip.....	10 60
Bastian's Early Turnip.....	10 60
Half Long Blood.....	10 60
Improved Long Dark Blood.....	10 60
Swiss Chard.....	10 60
White Silesian Sugar.....	10 40
Imperial White Sugar.....	10 40
Giant Long Red Mangel Wurzel	10 40
Long Red Mangel Wurzel.....	10 40
Yellow Globe Mangel Wurzel...	10 40
Yellow Ovoid Mangel Wurzel...	10 40
Red Globe Mangel Wurzel.....	10 40
Golden Tankard Mangel Wurzel	10 40

BROCCOLI.

Purple Cape	20 2 50
Early Large White... ..	20 2 50

BRUSSELS SPROUTS.

Dwarf Improved.....	\$ 15 1 50
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CABBAGE.

Large Early York.....	\$ 15 1 50
Early Jersey Wakefield...	20 2 50
Early Winningstadt.....	15 1 50
Early Cone.....	15 2 00
Early Sugar Loaf.....	15 2 00
Early Dwarf Flat Dutch.....	15 1 50
Fottler's Early Drumhead.....	15 1 50
Premium Large Late Flat Dutch.	15 1 50
Premium Large Drumhead.....	15 1 50
Improved Drumhead Savoy.	15 2 00
Red Dutch (<i>for Pickling</i>).....	15 2 00

CARROT.

Earliest Short Horn.....	10 75
Early Scarlet Horn.....	10 75
Danvers... ..	10 75
Early Half Long Scarlet, (<i>Stump Root.</i>).....	10 75
Improved Long Orange.....	10 75
Long Red Altringham.....	10 75
Large White Belgian.....	10 75

CAULIFLOWER.

Extra Early Paris.. ..	35 5 00
Lenormand's Short Stem.....	50 7 00

CELERY.

Giant White Solid.....	15 1 50
Boston Market.....	15 1 50
Dwarf Golden Heart.....	15 1 50
Half Dwarf Solid.....	15 1 50
Dwarf White Solid.....	15 1 50
Flavoring Celery.....	10 40
Matchless Red Solid.....	15 1 50
Celeriac, Turnip Rooted.....	15 1 50
Self Blanching.....	20 4 00
White Plume.....	20 4 00

COLLARDS..... 20 1 50

CORN SALAD..... 10 75

CORN.

Cory.....	15 2 00
Perkins' Extra Early.....	15 2 00
Extra Early Adams.....	15 2 00
Early Marblehead Sugar ..	15 2 00
Early Shaker Sugar, ..	15 2 00
Early Red Naragansett.....	15 2 00
Early Large Eight Rowed.....	15 2 00
Triumph.....	15 2 00
Amber Cream Sugar.....	15 2 00
Crosby's Early.....	15 2 00
La.ge Mammoth Sugar.....	15 2 00
Improved Stowell Evergreen.....	15 2 00
Longfellow.....	15 2 00

CORN.	QT.	BUS.
Egyptian.....	\$ 15	2 00
Early White Flint.....	15	1 50
Eight Rowed Yellow, (<i>Canada</i>)..	10	1 50
Mammoth Chester Co.....	10	1 50
Mammoth Dent.....	10	1 50
Golden Beauty.....	10	1 50
Golden Dent.....	10	1 50
Blunt's Prolific.....	10	1 50
Leaming.....	10	1 50
Hickory King.....	10	1 50
Sweet Fodder Corn.....	10	1 50

CRESS.	OZ.	LB.
Curled.....	10	50
Broad Leaved.....	10	60

CUCUMBER.		
Early Cluster.....	10	60
Early Frame.....	10	60
Improved White Spined.....	10	60
Long Green Turkey.....	10	60
Jersey Pickle.....	10	60
Short Green Prolific.....	10	60
Boston Market.....	10	60
Gherkin.....	20	2 00

EGG PLANT.		
Early Long Purple.....	20	2 00
Improved New York Purple.....	20	2 00
Black Pekin.....	20	2 00

ENDIVE.		
Green Curled.....	15	1 50
Broad Leaved Batavian.....	15	1 50

GRASS SEED.		
Red Clover Seed.....	} According to Market.	
Mammoth Red Clover Seed		
White Clover Seed.....		
Alsike Clover Seed.....		
Crimson Clover Seed.....		
Orchard Grass.....		
Herds Grass.....		
Red Top.....		
Green Grass.....		
Kentucky Blue Grass.....		
Perennial Rye Grass.....		
Lucerne.....		
Alfalfa.....		

	QT.	BUS.
Mixed Lawn Grass, &c., No. 1....	15	2 50

KALE.	OZ.	LB.
Green Curled.....	10	50
Tall Curled Scotch.....	10	50
Dwarf German Greens.....	10	50
Siberian.....	10	50

LEEK.		
Large London Flag.....	15	1 00
Musselburgh.....	15	1 25

LETTUCE.		
Early Curled Silesian.....	15	1 25
Simpson's Early Curled.....	15	1 25
Large Curled India.....	15	1 25
Large Drumhead.....	15	1 25
White Dutch Butterhead.....	15	1 50
Royal Cabbage.....	15	1 50
Brown Dutch Butterhead.....	15	1 50

MELON.	OZ.	LB.
Mountain Sweet. ...	10	50
Black Spanish.....	10	50
Cuban Queen.....	10	75
Gipsy, or Rattlesnake.....	10	50
Dixie.....	10	50
The Boss.....	10	50
Ice Cream.....	10	50
Mountain Sprout.....	10	50
Light Icing.....	10	50
Dark Icing.....	10	50
Kolb's Gem.....	10	50
Black Italian.....	10	50
Iron Clad.....	10	50
Citron, for preserving.....	10	50
Large Netted Nutmeg.....	10	50
Netted Green.....	10	50
Montreal Green Nutmeg.....	10	50
Pine Apple Citron.....	10	50
Jenny Lind Citron.....	10	50
Little Gem Citron.....	10	50
Hackensack.....	10	50
Golden Jenny.....	10	50
Early Rough.....	10	50
Bay View.....	10	50
Surprise.....	10	50
MUSTARD, White English.....	5	20
Black Italian.....	5	20
NASTURTIUM.....	15	1 00
OKRA, or GOMBO, Dwarf and Tall	10	50
ONION, Extra Early Pearl.....	20	1 00
Extra Early Red.....	20	1 00
Large Red Wethersfield.....	20	1 00
Large Yellow Strasburg.....	20	1 00
Yellow Danvers.....	20	1 00
Silver Skin.....	20	1 50
Italian Queen.....	20	1 50

ONION SETS.		
Yellow Strasburg.....	} Prices Variable.	
Yellow Danvers.....		
Silver Skin.....		
Early Red.....		
OATS, &c.		
Surprise.....	} According to Market.	
White and Black Norway		
Welcome.....		
White Belgian.....		
Imported Scotch.....		
Excelsior.....		
White Probstair.....		
Barley.....		
Seed Wheats, &c., &c.....		

PARSLEY.	OZ.	LB.
Plain.....	10	75
Double Curled.....	10	75
Moss Curled.....	10	90

PARSNIP.		
Sugar, or Hollow Crowned.....	10	50
Long White Dutch.....	10	50

PEAS.	QT.	BUS.
Mingle's Extra Early.....	15	3 50
Improved Premier, Extra Early..	15	3 50
Philadelphia Extra Early.....	15	3 25
Horsfords Market Garden.....	20	3 50
Pride of the Market.....	30	4 50
Alaska.....	15	4 00
Long Island Mammoth.....	20	3 50

PEAS.	QT.	BUS.
Tom Thumb.....	\$ 20	4 50
Improved Little Gem.....	20	4 00
McLean's Premium Gem.....	20	4 00
American Wonder.....	25	4 50
Kentish Invicta.....	25	3 00
McLean's Blue Peter.....	20	3 50
Advancer.....	20	3 50
Full Basket.....	20	3 50
Early Frame.....	15	3 00
Stratagem.....	20	3 50
Telephone (new).....	20	4 00
Laxton's Marvel.....	20	4 50
Yorkshire Hero.....	15	3 00
Eugenie.....	20	4 50
Dwarf Champion of England.....	15	3 00
Tall Champion of England.....	15	3 00
First and Best.....	15	3 50
Large Blue Imperial.....	15	3 50
Large White Marrowfat (dwarf).....	15	1 75
Large Black Eyed Marrowfat.....	15	1 75
Canada Field.....	10	1 10

PEPPER.	OZ.	LB.
Large Sweet Bell.....	15	1 50
Tomato or Cheese.....	15	1 50
Long Red Cayenne.....	15	1 50
Sweet Mountain.....	15	1 50

POTATO.	According to Market.
Early Vermont.....	
Early Rosé.....	
Early Sunrise.....	
Burbank Seedling.....	
Dakota Red.....	
White Peach Blow.....	
Beauty of Hebron.....	
Magnum Bonum.....	
Snowflake.....	
White Star.....	
Mammoth Pearl.....	
White Elephant.....	

PUMPKIN.	
Sweet Potato.....	10 50
Cashaw.....	10 50
Cheese.....	10 50
Common Field.....	10 25

RADISH.	
Long Scarlet Short Top.....	10 75
Early Long Scarlet (improved).....	10 75
Early Scarlet Turnip.....	10 75
White Tipped Scarlet.....	10 75
Early Deep Scarlet Turnip.....	10 75
Early Red Turnip.....	10 75
Early White Turnip.....	10 75
Early Scarlet, Olive Shaped.....	10 75
Wood's Early Frame.....	10 75
Early Yellow Summer Turnip.....	10 75
Golden Globe.....	10 75
Scarlet China Winter.....	10 75
White China Winter.....	10 75
Long Black Spanish Winter.....	10 75
Large White Spanish Winter.....	10 75
French Breakfast.....	10 75
White Strasburg.....	10 75
Red Strasburg.....	10 75

RAPE.	QT.	BUS.
Winter and Summer.....	10	2 40

SALSIFY.....	OZ.	LB.
	\$ 10	1 00

SPINACH.	
Round Leaved Savoy.....	10 40
Long Standing.....	10 40
Large Leaved Flanders.....	10 40
Prickly Seeded.....	10 40
Viroflay.....	10 40

SQUASH.	
Early White Bush.....	10 60
Long Green.....	10 60
Golden Summer Crook-neck.....	10 60
American Turban.....	10 60
Early Golden Bush.....	10 60
Winter Crook-neck.....	10 60
Boston Marrow.....	10 60
Hubbard.....	10 60
Cocoanut Squash.....	10 60

TOMATO.	
Extra Early Cluster.....	15 1 50
Extra Early Richmond.....	15 1 50
Hathaway's Excelsior.....	15 1 50
Acme.....	15 1 50
Paragon.....	15 1 50
Livingston's Perfection.....	15 1 50
Livingston's Favorite.....	15 1 50
Tilden.....	15 1 50
Trophy, Improved.....	15 1 50
Large Red.....	15 1 50
Cook's Favorite.....	15 1 50
Fejee Improved.....	20 2 00
Pear Shaped, (Yellow and Red).....	20 2 00
Livingston's Beauty, (new) papers only.....	15 1 25

TURNIP.	
Early Purple Top Munich.....	10 60
Early Flat Dutch, (<i>Strap Leaved</i>).....	10 60
Early Purple Top, (<i>Strap Leaved</i>).....	10 60
Large Early Red Top Globe (<i>New</i>).....	10 60
Early White Egg.....	10 60
Pomeranian White Globe, (<i>Strap Leaved</i>).....	10 60
White Norfolk.....	10 60
Cow Horn.....	10 60
Amber Globe, (<i>Strap Leaved</i>).....	10 60
Yellow Aberdeen.....	10 60
Robertson's Golden Ball (<i>Orange Jelly</i>).....	10 70
Purple Top Yellow Swede, (<i>Ruta Baga</i>).....	10 75
White Fleshed Purple Top Ruta Baga.....	10 75

HERBS.	
Anise.....	15
Caraway.....	15
Fennel.....	15
Lavender.....	15
Pot Marigold.....	50
Sweet Marjorum.....	20 1 75
Rosemary.....	20
Sage.....	20 2 00
Sweet Basil.....	15 1 50
Summer Savory.....	15 1 50
Winter Savory.....	25
Thyme.....	25 3 00

FOR DESCRIPTION SEE PAGE 50.