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IRISH AND SWEET POTATOES.

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METHODS OF APPLYING MANURE TO IRISH POTATOES AND COMPARISON OF VARIETIES.

An inquiry from Mobile county, received last January, suggested the following experiments with different modes of applying the manure to Irish potatoes as well as that with methods of cultivation. The fact that all three of the methods of applying the coarse manures, commonly used with potatoes, are employed in common practice, suggested that it mattered but little which was adopted. The results show that while there is a difference in the average yield, of the nine varieties, of a little more than eighteen bushels per acre, there is in some instances a greater difference than this in the yield of the same variety on different plots. The inference is, therefore, that the variation, which occurs on the plots differently manured, is not greater than that which might reasonably be expected from the same variety upon different plots under normal conditions. There are nine experiments in each plot. A comparison of the nine varieties used in connection with each inquiry as to the method of applying the manure.

It is interesting to note the difference in the proportion of culls in the different varieties. The Charles Downing is conspicuous in this respect for its large number of small potatoes—49.73 bushels out of a total average yield of 227.34 bushels—while the Early Sunrise, though giving the largest yield, has only a small per cent. of culls—20.08 bushels out of an average total yield of 316.04 bushels.

The difference in the extent to which the same varieties were affected with scab upon the different plots, is not enough to justify even a suspicion that this is due to the relative position of the seed, and hence of the potatoes, to the measure, except in the case of the Maine and Early Sunrise varieties in plot 1.

While the results in the tabulated statement are not decisive, they are interesting.

EXPERIMENT WITH VARIETIES OF POTATOES AND METHODS OF APPLYING MANURE.

No. Stake.	NAMES OF VARIETIES.	HOW PLANTED AND FERTILIZED.	FORM.	SCAB.	YIELD PER ACRE IN BUSHELS.			Average merchantable yield pr acre.
					Merch-ant-able.	Culls	Total	
PLOT No. 1.								
1	Beauty of Hebron	Manure scattered in furrow and potatoes dropped on it.	1 Oblong	Slight.	198 45	51 45	249 90	1
2	Burbank Seedling.....		2 Long.....	"	282 97	22 78	305 75	2
3	Charles Downing		3 Roundish....	"	183.75	45 57	229 32	3
4	Southern Grown Early Rose.....		4 Oblong	"	205 80	25 72	231 52	4
5	Houghton Rose or Maine.....		5 "	Badly.	198.45	36 01	234 46	5
6	Early Sunrise		6 Long.....	"	266.07	19 84	285 91	6
7	Empire State		7 Oblong	Free	124 21	33 95	163 16	7
8	Peerless		8 Roundish flat.	Slight.	268 27	52 92	321 19	8
9	White Star.....		9 Long.....	"	296 20	25 72	321 92	9 224 91
PLOT No. 2.								
10	Beauty of Hebron	Potatoes dropped in furrow and manure scattered on them.	10	Slight.	224 91	29 40	254 31	1
11	Burbank Seedling		11	Very slight	307 2	23 52	330 75	2
12	Charles Downing		12	Free	154 31	47 77	202 08	3
13	Southern Grown Early Rose.....		13	Slight.	216 82	33 07	249 89	4
14	Houghton Rose or Maine.....		14	"	194 77	14 70	209 47	5
15	Early Sunrise.....		15	Free	330 01	22 05	352 06	6
16	Empire State.....		16	Slight.	166 84	25 72	192 56	7
17	Peerless		17	"	309 43	24 25	333 68	8
18	White Star.....		18	"	288 86	22 78	311 64	9 243 68

EXPERIMENT WITH VARIETIES OF POTATOES AND METHODS OF APPLYING MANURE—CONTINUED.

No. Stake	NAMES OF VARIETIES.	HOW PLANTED AND FERTILIZED.	FORM.	SCAB.	YIELD PER ACRE IN BUSHELS.			Average mer- chantable yield pr acre.
					Mer- chant- able.	Culls	Total	
	Plot No. 3.							
19	Beauty of Hebron.....	Manure scattered in furrow, scooter run in it to mix thor- oughly and potato dropped on it.	19	Slight.	252 10	34 54	286 64	1
20	Burbank Seedling.....		20	"	299 88	13 23	313 11	2
21	Charles Downing		21	Free	194 77	55.86	250 63	3
22	Southern Grown Early Rose.....		22	Slight.	249 90	14.70	264 60	4
23	Houghton Rose or Maine.....		23	"	170 52	31 60	202 12	5
24	Early Sunrise.....		24	"	291 79	18 3	310 16	6
25	Empire State		25	"	174.93	38 96	213 89	7
26	Peerless.....	26	"	297.67	20 58	318 25	8	
7	White Star.....	27	"	260 92	11 02	271 94	9	
								243 61

The accompanying tabulated statement showing results of different methods of cultivating the Irish potato needs little comment. The soil upon which the potatoes were grown is sandy and dry, and yet mulching between the rows proved apparently injurious.

The half or flat bed culture produced one hundred bushels per acre more than the mulched.

This experiment is so much involved in the character of the season during the growth of the potato that it cannot be taken as a reliable guide.

The season of growth was sufficiently moist without the mulch.

EFFECTS OF DIFFERENT METHODS OF CULTIVATING IRISH POTATOES.

NAME OF VARIETY.	How Cultivated.	Scab.	Bushels Merchantable per acre.	Bushels Culls per acre.	Total yield per acre.
Peerless.....	Level culture.....	Slight....	207.27	19.84	227.11
Peerless.....	Half bed.....	Badly....	277.09	22.05	299.14
Peerless.....	Full bed.....	Slight....	253.57	18.37	271.94
Peerless.....	Mulch between rows	".....	185.22	14.70	199.92

The question as to whether the Irish potato should be cut for seed or the whole tuber planted, has been a mooted one amongst growers.

The results point to the propriety of planting the whole potato as decisively as a single experiment could well do.

The increased yield resulting from the use of the whole potato—of that cut to one eye—154.34 bushels per acre will justify the additional expense for seed.

RESULTS FROM DIFFERENT MODES OF PREPARING THE SEED.

NAME OF VARIETIES	How Treated.	Scab.	Bushels merchantable per acre.	Bushels culls per acre.	Bushels. Total yield per acre.
Peerless.....	Cut to one eye	Badly. ...	181 54	16 92	198.46
Peerless.....	Cut to two eyes. ...	Slight ...	264.60	25.72	290 32
Peerless.....	Cut to three eyes. :	Slight ...	205 80	23 52	229 32
Peerless.	Whole potato ..	Badly...	316 05	36.75	352.80

A COMPARISON OF LARGE WITH SMALL SWEET POTATOES FOR BEDDING.

While the majority of sweet potato growers use the small potatoes for bedding, because of the cheapness and the greater number of eyes or buds in a given quantity, some of the most successful growers have used large potatoes for seed with uniformly satisfactory results.

The large potatoes produce very few sets, and, hence, to secure plants for a large area a large quantity of roots of edible size is required. On the other hand, the small potatoes having more surface exposed in a given area of bed, produce plants in greater abundance. Economy, therefore, seems to point to the use of the culls.

This practice is not pursued in other vegetables or field crops; but, as a rule, the best is used for seed.

Some successful growers use for seed only roots grown from vines. The results in this case are decidedly in favor of the use of large potatoes for bedding. This would be the natural course to be pursued if improvement of the potato was the object in view.

As in the case of the use of whole potatoes already discussed, the increased yield justifies the additional expense in the value of seed used.

RESULTS OF COMPARISON OF LARGE AND SMALL SEED
SWEET POTATOES.

PLANTS DRAWN FROM BEDDING LARGE POTATOES.			PLANTS DRAWN FROM BEDDING SMALL POTATOES.		
Yield in bushels per acre large potatoes.	Yield in bushels per acre small potatoes.	Total yield in bushels per acre.	Yield in bushels per acre large potatoes.	Yield in bushels per acre small potatoes.	Total yield in bushels per acre.
99.72	36.47	136.19	75.20	23.56	98.76