

RETURN of Experiments—*continued*.

Name.	From whence introduced.	Result of Cultivation.																																								
CEREALS—continued.																																										
Three samples barley ...	U.S.A. and Russia	Failures.																																								
Black barley ...	Spain ...	Curious rather than useful; yet a plump good berry.																																								
RYE.																																										
Mammoth rye ...	U.S.A. ...	Very large berry. Believe it to be a wheat.																																								
Winter ...	Russia & Canada	Both fair samples. Cultivation not continued.																																								
(e.) SUNDRY PLANTS.																																										
Sainfoin ...	England and Victoria	This valuable plant is still in cultivation, but the soil of the farm is unsuitable, being deficient in lime. Some seed is available for distribution.																																								
Canary grass ...	...	Yield not large, soil being poor; but this is evidently a crop suitable to the climate and for limited cultivation.																																								
Sugar-beet, Imperial ...	France, <i>via</i> Victoria	Imperial grows well. This is the first year the laboratory has been of use in determining the percentage of sugar. Three roots, pulled 12th May, gave the following results:—																																								
		<table><tr><th>No.</th><th>Weight.</th><th>Length.</th><th>Circumference.</th><th>Per cent. of Sugar.</th><th>Per cent. of Water.</th><th>—</th></tr><tr><td></td><td>lb. oz.</td><td>inches.</td><td>inches.</td><td></td><td></td><td></td></tr><tr><td>2</td><td>2 0</td><td>11</td><td>12½</td><td>10.36</td><td>83.92</td><td rowspan="3">Pale yellow colour.</td></tr><tr><td>3</td><td>1 10</td><td>11</td><td>11½</td><td>9.60</td><td>82.89</td></tr><tr><td>4</td><td>1 8</td><td>8½</td><td>11½</td><td>7.92</td><td>84.80</td></tr><tr><td>Av.</td><td>1 11</td><td>10</td><td>12</td><td>9.29</td><td>83.87</td><td></td></tr></table>	No.	Weight.	Length.	Circumference.	Per cent. of Sugar.	Per cent. of Water.	—		lb. oz.	inches.	inches.				2	2 0	11	12½	10.36	83.92	Pale yellow colour.	3	1 10	11	11½	9.60	82.89	4	1 8	8½	11½	7.92	84.80	Av.	1 11	10	12	9.29	83.87	
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		No. 1, a coarse necky root, weighing 2 lb. 4 oz., contained 84.90 per cent. water, and yielded only 3.87 per cent. sugar.																																								
Sugar-beet, white Silesian	Christchurch ...	Grows very well—sugar not determined.																																								
Maize ...	U.S.A. and New Zealand	Many (15 to 20) varieties of corn have been tried. They—some of them—may be useful for fodder, but the climate on the plains is too cold and windy for the ripening of the seed, which, however, in several varieties, set very well.																																								
Early amber sugar-cane	New York ...	The same may be said of this plant. I should recommend its being carefully tried in the North Island.																																								
Osage orange ...	Victoria ...	The climate is apparently too cold for this American hedge-plant.																																								
African box-thorn ...	„ ...	Have fair hedges of this. It grows rapidly in good, free, well-drained soil. Stands climate, and fruits well. Am, however, undecided as to its value for general use here.																																								
Thousand-head kale ...	...	A very useful plant, preferable to rape on dry lands; but must be fed in the autumn, else stalks become tough, are not then eaten by stock, and cannot be covered in by the plough.																																								
Kohl-rabi ...	...	Neither the purple nor the green variety is suitable, turnips giving more feed and being more easily grown.																																								
Field cabbage ...	...	If seed of the “drumhead” were cheap and true, this kind—which gave the best results—might be grown with advantage on heavy lands. It is not necessary to transplant.																																								
Linseed ...	...	Besides trials of samples, a few acres have been grown the last two years. The yield of both seed and straw has been very fair. Some of the straw has been retted; but without machinery for dressing the fibre it is useless to continue the experiment.																																								

In order to show the facility with which fruit may be grown in connection with agriculture, about three acres of land have been set apart for an orchard, and about one-third is already planted, chiefly with apples and pears. The preparation of the ground and planting have been carried out entirely by students, under the instruction of the gardener. Two objects have been kept in view: first, to secure the best kinds of blight-resisting stocks; second, to adapt the mode of cultivation to the peculiarities of the climate.

The stocks selected for apples are the Northern Spy and the Majetin, both of which possess great powers of resisting blight. The former is the better stock where dwarf specimens are required; the latter for those of larger growth, but may be used advantageously even for dwarf specimens, of kinds not making a robust growth.