

penditure. I do not see why, after six months' experimental and initiatory work, we should not obtain considerable *returns*, if not profits.

(From the Madras Times, 28th July 1919.)

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*Vitality of seed.*

Interesting experiments have recently been made at Rothamsted, to investigate the length of time it is possible for seed of weeds to lie dormant. When, in 1915, it became evident that much grass land would have to be put under cultivation, a field which had been under grass for ten years was chosen, and before the land was broken up, samples of earth were taken inch by inch in succession, down to 12 inches at various points in the field. These samples were at once transferred to sterilised pans and kept moist in a glass house. A number of arable weeds came up from every sample, although the conditions of the experiment were such that these young plants could only have arisen from seeds in the soil dormant as long as the land was in grass. The experiment was then repeated in similar manner on other grass fields of known age and history. Soil from grass fields forty years old gave a copious flora of arable weeds especially at the depth of six to twelve inches, that from fields sixty years old gave fewer arable weeds, and from fields 200 years old none at all. These observations prove beyond doubt that seed of certain weeds can survive in the soil a very considerable period when deeply buried by the plough.

Extract from Planters' Chronicle, Vol. XIV. No. 17, April, 26 '19.

S. Sundararaman.

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**Abstracts.**

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*The Founders of the art of Breeding.*

The March 1919 number of the Journal of Heredity starts with a very interesting article entitled "The Founders of the art of

Breeding." There appears to be evidence, to show, that, the unisexuality of the date palm was known to the Assyrians and the Babylonians, long before the beginning of the Christian era. Kazwini, an arabic writer, who flourished in the B. C's, says of the date, "it is created out of the same substances as Adam, and is the only tree that is artificially fertilised." The first part of the above quotation refers to the varied uses of this tree—over 360 different uses are claimed for the tree—and the second part has an obvious allusion to the methods of cross-pollination which was practised on the tree even in those early years. The lessons taught by the date palm seem, however, to have been subsequently forgotten, till, the existence of sex in plants was subsequently rediscovered by Camararius in 1694, and the subsequent events are modern history and familiar to every breeder.

T. S. V.

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*The National Research Council of the United States.*

One of the effects of the terrific war, which has just been concluded, is the increased attention, which Research, in all its aspects, is receiving at the hands, both of the public and the Government in various countries. In this war, more than in any of the previous ones, Science played a very prominent part, and but for certain recent discoveries, a war of such magnitude would have been impossible. It is pleasant to remember, that, while Science has, of late years, enormously increased the powers of destruction, it has equally increased the powers of protection. It has greatly improved the aircraft, the motor service, and the wireless, while it is believed that great strides have been made in the science of healing and nursing. We Cull the following from NATURE, May 29th, 1919. "After the attack on the *Sussex* in April 1916, the National Academy of the United States offered its services to the President for organising the research facilities of the country in order to prepare for an eventual active part of the United States in the War.....This offer was accepted by the President and "The National Research Council" was constituted. So successfully has this council been

carrying on the duties entrusted to it during the time of war, that it has now been decided to make it a permanent organization, so that its advice and help will now be available."

Thus, the national direction of research work in the United States has become vested in a body of men whose conduct of research work during the war period of that country has shown that they are competent to handle the great problems which go with peace and reconstruction. The scheme is a wise one, because it calls for the closest co-operation between the Government and the research worker, but leaves the decision as to the methods of attacks in the problems involved in the hands of experts.

T. S. V.

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### Notes and News.

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#### *Water culture.*

The following is the result of a Water Culture Experiment conducted in the Botanical Laboratory for class IV last year. The plant used was *Dolichos Lablab* and the solutions were prepared according to the formula of Von Crone Viz.,—

Potassium Nitrate	1.0 grm.
Ferrous phosphate	0.5 grm.
Calcium sulphate	0.25 grm.
Magnesium sulphate	0.25 grm.
Distilled water	2 litres.

The experiment was started on 17-6-18 with seedlings five days old and the final observations were made on 19-7-18. It is interesting to note that similar results have been obtained this year also. The plants are noted according to their ascending order of growth.

1. Distilled water. Very few lateral roots. First leaves alone appeared and remained throughout. No further growth.