Botanical Society of Canada.

Abstract of recent Discoveries in Botany and the Chemistry of Plants. By Professor Lawson.

SEA-WEED AS A MANURE.

The attention of the English farmer has been recently called to the use of the sea-weed as a manure. This material is thrown up in enormous quantities on the shores of Britain, and on the east coast of Scotland it is extensively employed to fertilize sand dunes that would otherwise be worthless. In dry sandy soils it acts in two ways; first, by directly contributing food materials to the crop, and secondly, by the hygroscopic action of the mucilaginous tissues in maintaining a certain degree of humidity in the arid soil, a result that is no doubt aided by the presence of the sea salt accompanying the weed. The richness of the ash of the common sea-weed in potash, soda, phosphates, and other materials of plant growth, shows that it has a high manurial value. In Greenland specimens, the ash has been found to contain ten per cent of phosphates. The proportion of water in the recent weed is so large, however, that sea-weed cannot be profitably carried to great distances, but along the shores of the lower St. Lawrence and in the other maritime provinces, where it can be readily obtained at certain seasons, its value can scarcely be overrated. The process that have been suggested for converting the sea-weed into a paste for transport, mixing with peat ashes, &c., do not seem likely to lead to any useful result, so far as the British American provinces are concerned.

"STEEPS" FOR SEEDS.

Of the many "steeps" that have been recommended to facilitate the germination of seeds, the most intelligible is that of caustic potash, or carbonate of potash, applied by M. Andre Leroy to seeds naturally protected by fatty or oily pulp. He reports that the seeds of Hollies, Magnolias, Yews, and the like, which often lie dormant in the ground for a couple of years, come up readily after treatment with potash and subsequent rubbing with sand.

BLANCHING OF FLOWERS.

It is well known that light is as necessary to plants as a due supply of heat and moisture. The effects of its absence are often singular. We know that plants grown in darkness do not exhibit their usual healthy green color, light being required for the development of chlorophyll. Advantage is taken of this circumstance in the blanching of salads and vegetables, and the same process is now being applied to flowers. It appears that in Paris there is a great demand for white lilacs for ladies' bouquets in winter, and as the common white lialac does not force well the purple "Lilas de Morly" is used. The flowers of this variety, when made to expand at a high temperature, in total darkness, are of a pure white; those of the Persian lilac will not whiten.

PAPER MATERIALS.

The cry for "more rags" which papermakers raised some years ago, necessarily failed to increase the supply of rags, but it served to bring materials to the paper-mill that had not been previously thought of. Hollyhock stems, straw and heather, and a hundred other substances, were tried and found suitable in various degrees. Many of these, while capable of being converted into paper, could not be profitably used in the manufacture; but several have taken their place as really important sources of paper fibre. Plants that require to be cultivated exclusively for this purpose are not likely to yield satisfactory results, and of late years, therefore, attention has been especially directed to the waste products of agriculture. In all agricultural plants woody fibre is produced to a greater or less extent, and that of the straw of cereal grains has been used for a number of years to a considerable extent. The leaves and husks of Indian corn (*Zea Maize*) are also coming into extensive use, as appears from interesting details published by Professor Lindley in the Gardeners' Chronicle. Dr. Lindley's account of the manufacture appears to be founded upon statements that have appeared in the *Breslau Gewerbeblatt* and the Daily Telegraph, a London paper. The following extracts will be of interest on this side of the Atlantic, where Indian Corn is produced in such enormous quantities:-

"Recent experiments have proved Indian Corn to possess not only all the qualities necessary to make a good article, but to be in many respects superior to rags. The discovery to which we allude is a complete success, and may be expected to exercise the greatest influence upon the price of paper. Indian Corn, in countries of a certain degree of temperature, can be easily cultivated to a degree more than sufficient to satisfy the utmost demands of the paper market. Besides, as rags are likely to fall in price, owing to the extensive supply resulting from this new element, the world of writers and readers would seem to have a brighter future before it than the boldest fancy would have imagined a short time ago. This is not the first time that paper has been manufactured from the blade of Indian corn, but, strange to say, the art was lost, and required to be discovered anew. As early as the seventeenth century, an Indian Corn paper manufactory was in full operation in the town of Rievi, in Italy, and enjoyed a world-wide reputation at the time; but with the death of the proprietor the secret seemed to have lapsed into oblivion. Attempts subsequently made to continue the manufacture were baffled by the difficulty of removing the flint and resinous and glutinous matter contained in the blade. The