

tends to lessen their amount, which even in the best of soils is but small; hence the necessity of replacing them by means of nitrogenous and phosphatic manures. But by means of these manures we are enabled not only to replace what has been removed, but by adding more, to increase their proportion; thus gaining a higher standard of fertility from which more productive crops may be calculated on.

The indirect effects of these elements of fertility are no less important; thus we may regard nitrogen as a key by which the natural stores of potash, &c., in the undecomposed minerals of the soil, are unlocked and made available; while by using phosphatic manures for our green crops, we are enabled to gain supplies of nitrogen from atmospheric sources; for which reason phosphatic manures must be considered as the more generally important.

Phosphoric acid, and to a less extent nitrogen, may thus be regarded as the more choice description of plant food, which the cultivator of the soil has to purchase to feed his crops, so to speak, in order that they may proceed vigorously with their work of organizing or building up the more abundant elements of food, everywhere present in the atmosphere and water. For we should not forget that by far the greater part of all food, whether of man or animals, is thus beneficently prepared from air and water through the instrumentality of plants, and upon which we are entirely dependant, since no chemistry of our own can produce even a blade of grass; although, to quote the old saying, 'it can make two blades grow where one grew before.'

PHOSPHATIC MANURES.

The universal efficacy of superphosphate, and the manures supplied under other names in which it is the basis, is sufficiently well known and explained by the facts we have just briefly noticed. Its value for the root crop especially, upon which in the present system of agriculture so much depends, can scarcely be overrated, and the means it affords of increasing our stores of available nitrogen, by the green crops, as just pointed out, furnishes a resource which is yet hardly appreciated by the majority of practical men.

The advancement made of late years in the production of superphosphate and other phosphatic manures, consists more especially in an extension of the application of mineral phosphates to their manufacture. The principal advantages so gained may be thus enumerated:—

1. The production of manures with a much higher proportion of soluble or available phosphate of lime than could be made from bone dust.

2. The preparation of much drier, more uniform and pulverulent manures—or a superior 'mechanical condition,' which

adds materially, as we shall presently perceive, to their practical value.

3. The more economical and advantageous employment of bone-dust by using it in conjunction with these mineral phosphates; the latter for giving the soluble phosphates, while the bones furnish a valuable insoluble phosphate and also some nitrogen; many of the best bone manures now in use are of this description.

4. A considerable reduction in the cost of manures so prepared.

5. The production of manures, or the conversion to a manageable condition in less time than formerly.

In preparing superphosphate from the mineral phosphates, it is the object of the manufacturer to reduce the greatest possible quantity of the phosphate of lime present to the soluble condition, since that which is left undecomposed is assumed to be of no value as manure, and is generally left out of consideration in judging of the value of such manures. All technical details of the processes which have for their object the attainment of this end with the greatest economy of acid, &c., would obviously be out of place in a book of this character, but I shall be happy to supply such information on application, free of cost, or on other topics connected with agricultural chemistry.—*Sibson's Report.*

THE use of Superphosphate of Lime is greatly increasing in England. The manufactories of artificial manures are very numerous, and at one establishment alone, the enormous quantity of forty thousand tons of superphosphate is made and sold in one season.—*Ed. A. J.*

PRESENT CONDITION OF WINTER WHEAT.

Elsewhere in this No. will be found a few remarks on the Extension of the Cultivation of Spring Wheat in Nova Scotia. In reference to Winter Wheat there is a different tale to tell. News from various parts of the Province indicate that the Winter Wheat, which looked so well in the fall, and seemed to resist the severe cold of winter, became killed when exposed on the bare ground to the cold winds of March. In some cases the Winter Wheat has been ploughed up and Spring Grain sown in its place.

The results of this season may discourage some of our farmers from trying again to raise Winter Wheat; but we hope that it will be kept in view that the failure of a crop of Winter Wheat now and again does not at all militate against the suitability of our climate for Spring Wheat, which is now receiving increased attention.

In a letter from Hon. Alex. McFarlane, he mentions that notwithstanding the severe winter, the grass in Cumberland does not seem to have suffered.

THE HORSE "MELBOURNE."

This fine animal, imported from England some years ago by William Cunard, Esq., and now the property of the Board of Agriculture, will stand for the season at Halifax, Windsor, Truro and Pictou.

We give below the dates of attendance at each place, so far as arranged:

Windsor.....	18th to 25th May.
Halifax, Lavers' Stables... 25th and 26th "	
Truro.....	27th and 28th "
Pictou.....	29th to 1st June.
Truro.....	1st and 2nd "
Halifax.....	3rd and 4th "
Windsor.....	5th to 8th "
Halifax.....	9th and 10th "
Truro.....	11th and 12th "
Pictou.....	13th to 16th "
Truro.....	17th and 18th "
Halifax.....	19th and 20th "
Windsor.....	20th to 24th "
Halifax.....	25th and 26th "
Truro.....	27th to 29th "
Pictou.....	29th to 3rd July.
Truro.....	4th to 6th "
Halifax.....	6th to 9th "

And will attend also at New Glasgow, and remain at Windsor after 9th July.

Reports of Agri. Societies.

PARADISE AGRICULTURAL SOC'Y.

In submitting my annual report of the above named Society, I beg to say, that the Society is advancing favourably, and our prospects for the future are encouraging.

Our regular meetings during the year have been well attended, and all subjects having reference to the improvement of stock or agriculture have been energetically discussed, and much information given.

The Society held an exhibition on the 19th October. The show of stock and fruit was good; but I regret to say, it being decided by a majority of the members that no prizes should be given, there was not that interest taken that was expected.

The Ayrshire bull purchased last year at the sale at Richmond, has improved much, and is considered a fine animal.

In consequence of reducing the annual dues from two dollars to one dollar, the Society was not in fund to make purchases this year at the sales at Richmond.

I have to inform you that I received a Circular from the Secretary of the Central Board of Agriculture, relative to the proposed Exhibition to be held in Halifax, in October, 1868. A special meeting was called by your order, for the purpose of considering the same, and the sum of \$20 was granted towards said exhibition, —to be deducted from this year's grant.

In reference to the crops, I have to report: Hay, abundant. Fruit, very fine,