

scouring of ditches, should be collected and spread over the manure heaps or cattle yards from time to time during the winter, to absorb the liquid manure, and so to be applied in the solid state. Whatever is the cause, very great disappointment has followed the use of the tank and water-cart system, and, no doubt, the application in the solid state is the best.

The Society considers lime an excellent alternative, applied once in eight or ten years, to the extent of five tons per statute acre, in as live a state as possible; and both it and lime from the gas works are excellent things to mix with the scouring of ditches, or scutch, to manure grass land, and when mossy or sour, it will much improve and sweeten it.

It is also thought necessary to purchase manure of some kinds, as enough can seldom be made profitably at home. It then becomes an important question what kind is the best. There are some temporary, but valuable stimulants, which may be used with advantage occasionally, such as soot, nitrate of soda, sulphate of ammonia, &c., but the following, for general purposes, are most lasting and generally used, namely—horse and cow manure, privy ditto and ashes, called black manure, and guano, all of which can be readily purchased. The latter is the general favourite, and it is to be regretted the price is so high in comparison to that of produce. One of the great advantages attending it is, its easy and quick application compared with the two other kinds named, but it will be well to compare them as to price, &c. The first-named is, when brought home about 6s. per ton, and twenty tons per acre will be £6; black manure is about 3s. 9d. per ton, which, at twenty tons, will be £3 15s.; guano, at 10s. per cwt., at 3 cwt. per acre, is 30s. Now, considering that although it must yield to the first-named in its lasting qualities, yet for the first year it will produce very near, or quite as much increase, as either kind, and still leave a little good behind, and for the price of one acre of the former, (that is cattle manure), you can cover four acres with guano, and for one acre, of black manure, two and a half with it. It follows that guano must be the cheapest and best; for suppose the £6 was spread in guano on one acre of grass for hay the second on oats for corn and straw, the third on turnips, all three for cattle, and the fourth on wheat, for money, the great increase it always gives when properly applied will enable the farmer to keep so much extra stock, which will, in its turn, make so much more manure for the farm, that it becomes in this manner the most permanently useful manure of the three, as well as the cheapest. This is no theory, but has been proved by many years' practice, and many can aver from experience, that fre-

quent application of guano on the same land is a permanent benefit to it.

Having now considered the best kinds of manure and the management of them, it remains, secondly, to consider shortly the application of them.

It is considered that, on light and shallow land it is right to apply small quantities and often, but on deep and heavy land it is better to put enough at once to carry it through a course of cropping; and a change of manure is also recommended on the same land, guano one time and farm-yard manure the next, and, occasionally, lime for a change.

The Society would advise that all the farm-yard manure made during the Summer should be applied, up to Christmas, on any grass land or young clover that may require assistance, and all the Winter-made manure should be used for root crops,—first, for potatoes, to be applied in a half-rotten state, and what is left, for mangel wurzel and turnips; but for these it should be more decomposed and solid, as it suits the crop better and is better able in that state to retain moisture, which in some hot and dry seasons may be of great advantage. When it can possibly be accomplished, the manure should be spread and covered in the same day it is drawn on to the land, as every hour's exposure to the sun and wind dries its juices and is injurious. When the farm-yard manure is exhausted, then the guano should be used alone for the root crop, (they have been found to answer best separated,) at from 3 to 4 cwt. per statute acre, never to exceed the latter; and the Society recommends that guano should be used in preference to manure for Spring crops of grain and pulse, and should always be harrowed in, and that it should also, in the Spring, be applied to grass land and young clovers when required, in preference to manure; but care should be taken in this case to choose a showery time, with a low barometer; and it is far better to wait patiently for such weather than put it on in a harsh dry time; evening is the best time to sow it, as then you are almost sure of some dew during the night; about an equal weight of common salt should be mixed with it as it helps to retain the ammonia.

There is a question arises on this matter, whether farm-yard manure or guano injures most by exposure to the atmosphere. The Society are not quite unanimous upon the point, but are satisfied all manures should be covered as quickly as possible; and they think the application of them as mentioned above, the best under all circumstances.

#### WHAT IS A SUCCESSFUL EXPERIMENT.

In pronouncing whether an experiment has been successful or not, it is necessary to have a clear idea of the purpose for which it has