

"HALTON."

We are enabled this month to present our readers with a portrait of this distinguished Short Horn Bull, whose many superior excellencies are well known and appreciated, both in Canada and the United States. HALTON was bred by *George Vail, Esq. of Troy, N. Y.* (who has been a most successful breeder, as well as importer of Short Horns, for a number of years,) and was purchased when only three months old for \$300, by the late John Wetenhall, Esq. and his near neighbour, the Honourable Adam Fergusson, for the improvement of their respective herds. Halton became the sole property of Mr. Fergusson upon the lamented death of Mr. Wetenhall. The improvement effected by Halton on Mr. Fergusson's herd was of the most striking and satisfactory nature, as numbers of his progeny fully testify; and it was with much regret that Mr. Fergusson found it necessary to part with him, from a dread of breeding too much "*in and in.*" He was purchased by an eminent American Short Horn breeder, *S. P. Chapman, Esq. Clockville, Madison County, N. Y.*; who, we are informed, is highly delighted with him, as well he may; and considers him a Bull as near perfection in form and handling, as any animal can possibly attain.

Halton is of a rich dark roan, and was dropped in August 1848. Got by Meteor; Dam, Lady Barrington, both of whose pedigrees are duly recorded in the *American Herd Book*. The *Duchess* family of Short Horns, which is considered by many of the best judges superior to any other of that world renowned breed, has thus been successfully introduced both into Canada and the United States, as the splendid herds of Messrs Fergusson and Vail, to say nothing of others, amply show. The late celebrated English breeder, Mr. BATES, of Kirkleavington, Yorkshire, originated, or at least, greatly improved the Dutchess' blood, and we purpose giving in our next some account of his proceedings, both as a breeder and a farmer, with a general notice of the history and progress of Short Horn Cattle.

There are but few who know how to be idle and innocent; by doing nothing we learn to do ill.

HORTICULTURE.

THE SCIENCE AND PRINCIPLES OF GARDENING.

No. VII.

PROPAGATING BY SEEDS.

The most common way of procuring a great number of plants of one kind, is by sowing seed; indeed, this is the means which nature herself has provided, and, of course, it is the most simple and efficacious.

Every seed has a shell more or less hard, to protect it from external injury, and its base is furnished with what is called the seed-pore, (popularly the eye,) which performs two important functions, viz., conveys the nutrient pulp to the seed while in a young and green state, and previous to its becoming ripe, and also is the point from which the roots and stem of the young plant proceed after sowing.

Within the shell is the kernel, consisting of the embryo plant, with its radicle or root, its gemlet or stem, and the neck between these, which afterwards becomes the crown, besides the seed lobe or lobes containing materials for nourishing it in the first stage of growth.

In order to excite the embryo into action, and induce it to grow, four things are indispensable—heat, water, air, and darkness.

The heat is required to soften the nutrient materials in the lobes, but without water it would be more likely to harden these. Pure water is more appropriate than water containing humin or other rich materials, that which is contained in the lobes being sufficiently rich.

Freely circulating air is indispensable for supplying oxygen gas, and carrying off carbonic acid gas, a process the reverse of what takes place in leaves exposed to sun-light. For the same reason light is injurious, by carrying off the oxygen gas requisite in this stage of growth.

In sowing any sort of seed, these four circumstances must be carefully attended to. On account of the absence of heat, accordingly, seeds will not vegetate during frost; without a sufficient supply of water, they will not come up when sown in dry sand; for want of air they will not come up if too deep in the ground; and if not duly covered, they will not come up from having too much light.

Seeds, however, often germinate in the light, such as corn in wet seasons, before it is cut; but they do not, in these cases, produce strong plants, as the root requires to shoot away from the light, as much as the stem into the light. Birch seed succeeds best when not covered. These are exceptions, not rules.

Most seeds are benefitted by steeping them for an hour or two, previous to sowing, in pure water, which, in the cold weather of spring, may be made milk-warm. Pickles, train oil, urine, and other steeps, must in most cases, be injurious; and will never, as is ignorantly pretended, destroy the eggs of insects, even if such be among