

hitherto failed, or at least none of them have proved satisfactory when put to the test of practice in the harvest field. Binding with wire has been tried, but the wire was found to be too troublesome at threshing time.

In general, too few hands are employed at this work of binding when a reaper is going its rounds, and as a consequence of being required to keep up with the machine, they often do their work too hastily, leaving a great deal of grain in the straw scattered over the ground. Often they are supplied with whiskey, and urged into rivalry with one another, each endeavouring to be able to boast, at night, of having bound the most sheaves. We have known a man to boast of having bound 690 dozen of sheaves in a day. As a natural consequence of such hasty work, when the grain comes to be drawn to the barn, a large proportion of sheaves break loose, entailing a great loss of time and labor in rebinding them.

Setting up the shooks usually falls to the lot of the binder, though it is sometimes done by boys. If the crop is large and being rapidly harvested, a man is or should be detailed to attend to this work, which will require all his time, if it is to be well done. Each shook can be made to contain the same number of sheaves, so that the owner, by counting the shooks, can form an approximate estimate of the yield of the crop, and the amount of room required for housing it. It is of consequence that the shooks be nicely made, put together so as to stand firm, and yet allow free ventilation through them to dry off the moisture, from any grass or weeds that may have got bound into the sheaves. Should the weather threaten to be wet, the shooks may be capped, to save the grain from getting discoloured, or sprouted by rain, but the caps are to be removed as soon as dry weather comes on.

The work of pitching and carrying the grain to the barn or stack is too often entrusted to the boys, if there are any on the farm, and as a consequence many sheaves fall out of the load on the road to the barn. Sometimes every third or fourth load tumbles out of the waggon. Boys can do the pitching well enough, but a careful hand should be on the load to stow away the sheaves and place them snug and compact. A good hand will stow away quite as many as the team can draw, without making the load so high or wide as to run the risk of upsetting, or getting jammed between gate posts. The pitcher ought to send up each sheaf separately, with the head towards the loader, and pitch no faster than he can get them

stowed away, otherwise the loader cannot do his work either quickly or properly. One load upset, and many sheaves broken and grain shelled out, will cause more loss than the little time gained by hasty work will pay for. When the load reaches the barn, the loader should do the work of stowing away the sheaves in the mow, and if the work is well done, there will be room found for many more sheaves than if the work is left to be done by a lot of boys, who often care more for the fun they can make out of the operation than for saving barn room for the crops.

Can we not reduce the expense of the Turnip Crop?

The turnip crop is every year being more and more appreciated in Canada. In districts which will not produce fall wheat, it is indeed a *sine qua non*, and the cattle fattened by it are now depended on to produce the cash necessary to carry on the farmer's operations. The manure resulting from the cattle feeding is only of secondary importance to the cash obtained for the cattle, and if it were not that the crop will not bear the expense of hired labour to any great extent, added to the necessity of housing in the winter, the area sown with turnips might be increased until the farmer could, as in England, afford to buy large flocks of sheep for the purpose of consuming a large portion of the turnips on the ground before the frost destroys them, instead of, as now housing or pitting the entire crop.

Theoretically the benefit of the turnip crop could be increased in two ways; first, by having the crop so forward, as to ensure its coming to perfection at so early a date as to give time for the consumption of it on the ground by sheep; and secondly, if the late crop, sown at the ordinary time, could be so managed as to avoid the expense of hoeing and singling. Now, apart from the question of expense, both ends are attainable; and when this is once shown, the practical knowledge and common sense of the farmer ought very soon to provide the means for the attainment of so desirable and profitable an end.

William Cobbett, the great English Radical and agriculturist, was the first person to put on record and to practically show on a large scale, that the Swedish turnip, (I do not mean the modern improved hybrid Swedes and yellows, for they were not then known, but the old genuine Swedish turnip,) would produce a larger and a better crop when transplanted, than when sown and hoed to the necessary thinness in the ground,

The success he met with in transplanting Swedish turnips was almost marvellous, as may be seen on reference to his "Farming," "A year's residence in America," and "Cottage Economy." He showed that the Swed-

ish turnip both could be, and was by him at Long Island (United States), transplanted with success, and that it would flourish and grow when set out in the summer time, notwithstanding the ardent heat of the American summer. His statements at the time, like all new doctrines, were looked on with great suspicion, and even ridicule, and it was not until he carried out the same system at Botley in England, and like our present Meech, invited all to come and see the roots in the field, that Englishmen came to believe his statements. Cobbett insisted that in England all that the Swedish turnip required was "good ground" and "time," and "room to grow." Good ground he obtained by manure and deep tillage, draining and general good husbandry. In the transplantation of Swedish turnips, he insisted on two things:—First that the plants should be strong and healthy, that they should not be fly-bitten, and that they should be extracted from the seed bed with the least possible injury to the root; and secondly, that they should be planted in "newly moved ground." So particular was he in this latter respect, that if the plough gained on the planters, the plough was stopped until the planters came up, and he declared that half a day's advance of the plough before the planters would ruin the crop.

The first grand point he attained by sowing the entire seed, in seed beds, under glass, in the same way as early cabbages are raised. The soil in which the plants were sown was composed of the lightest and richest material, so that the plants could be raised and drawn forth with the least possible injury, while being under glass and with bottom heat, the fly never attacked them. Before transplantation the beds were soaked with water to moisten and loosen the soil, and in this way the plants were scarcely deprived of their fibrous roots, and never of their tap root. When separated the plants were dipped into clay and water, made rich with liquid manure, so that each root was protected in the same manner as the nursery men protect the roots of their trees before shipment. The plants were only withdrawn from the bed in small numbers as wanted, and were planted in the "new earth" before the roots had time to dry. The consequence was great success, and very few losses. Vacant spaces were afterwards filled by taking plants from the seed bed, treated in a similar manner to those first planted, and the ground of each space being first moved and turned over with a spade. Eventually his crops were beautifully even, and the amount per acre of weight far exceeded that of a broad-sown, and hoed, or of a drilled crop.

The writer having heard of the wonders of the transplanted turnips, visited Botley, and saw the field wherein they then were. The leaves and tops had just been removed previous to harvesting the crop for use at the cattle byres, and also for ascertaining the