

Sidney-Barton Limited

FIELD HOUSE, 15-25 BREAMS BUILDINGS, LONDON, E.C.4

CHANCERY 9551

S T A N D N O. 1 3 1

MASS POTATO HARVESTING

TESTS

NEW DEVELOPMENTS EVOLVED

BY STOREYS

RESEARCH RESULTS IN

REVOLUTIONARY ADVANCE

Results of the largest scale potato harvester tests in this, or any other, country with an individual machine are embodied in the potato harvester shown on the stand of the Agricultural Division of Thos. Storey (Engineers) Limited, of Stockport, Cheshire, at the Smithfield Show and Agricultural Machinery Exhibition, Earls Court, London, this week (December 6th to 10th).

Carried out during the 1954 harvest on almost every type of soil and growing conditions throughout the United Kingdom, the tests involved the use of over 30 machines and the findings, coupled with the most recent additional developments, have been incorporated into the Packman Potato Harvester, manufactured by Storeys.

Throughout the world there are many potato-growing areas where the top soil, and particularly the sub soil, is of such a character - gravel, chalk or stone content - that no matter what the moisture condition of the top soil, the Potato Harvester, mounted on pneumatic wheels, will maintain a constant depth level and not subject the farmer to the inconvenience of sinking, involving constant machine adjustment.

There are, however, many other potato-growing areas where, by reason of deep tilth and soft sub soils - loam, clay and fine sand - wet conditions of harvesting would make it impossible for a pneumatic wheel mounted machine to function.

Revolutionary Step

Potato growers also appreciate that soil conditions may vary considerably in different parts of the same field, and maximum mechanical harvesting efficiency can only be achieved if a machine is buoyant enough to prevent sinkage. Because of this the revolutionary step of fitting caterpillar tracks was taken.

The tracks give the following advantages:-

- (a) Maintenance of the share depth-setting under all conditions of land contour, soil and crop.
- (b) Elimination of stoppages for adjustment of share and coulters, thus increasing harvesting speed.
- (c) Precise control of flow into the machine, allowing potatoes with only the minimum amount of soil and rubbish to pass over the share, which is impossible to maintain when wheel depths are constantly altering.
- (d) A greatly reduced tendency for the machine to side-slip.

The importance of allowing only the minimum amount of crop, soil and rubbish to enter the machine is obvious. Storeys, therefore, fitted a disc-coulter unit with facilities for using four separate types of discs, the whole unit having lateral, vertical and angular adjustment which can be simply and quickly carried out.

Hand-Picking Reduced

The discs can very simply be set to cut the sides of the drills, including any straggling haulm which is present, and to create three streams of flow: the centre stream containing potatoes along with the minimum of soil and rubbish being directed over the share, and the other two, containing surplus soil and rubbish, being deflected one on each side of the intake.

This flow control lightens the work of the machine at various stages, and enables the number of hand-pickers to be reduced. In fact a complement of five hand-pickers would only be required under the heaviest stone and clod conditions.

The drill tops are trimmed by an efficient haulm stripper, working in conjunction with the disc-coulter arrangement. This trimming of drills prior to starting their flow through the machine was seen to be of paramount importance during the 1954 harvest tests, and was the basis for carrying out modifications to the wheels, coulter unit, and to the intake itself.

The intake is now streamlined and offers no resistance to the flow of material.

Tests in Denmark

Alternative designs of separation-carpet were decided upon after tests in Denmark, where the mid-early and maincrop potatoes are similar in size to British earlies. The tests there gave valuable knowledge which has been applied to the harvesting of the British early potato crop.

The sinking of the wheels proved to be as troublesome in the light, sandy Danish soil as it was under our home conditions this year, and further emphasised the need for the

prevention of this fault.

Technical improvements carried out, to the main drive and at other points in the machine, ensure continuous running for the duration of the harvest.

These, coupled with the Company's soil and crop flow control appliances and the already well-known and recognized capabilities of the Packman Harvester in handling potatoes with the minimum amount of damage, assure users of being able mechanically to gather their potato crop without damage at an economical speed and with the minimum of labour.

First-time Exhibits

Three other exhibits will be shown for the first time in Britain.

One is a new set of coverers of continental design, shown fitted on the Packman Planter for the first time. These enable the precision planting method employed by this machine to be linked with the latest developments from the Continent in soil loosening between rows and loose covering of seed potatoes at planting time. Each coverer of the unit has its own spring mounting.

Secondly, there is a new type of potato and seedling harrow which eliminates both hand-hoeing and the possibility of any damage either to potatoes or sprouts. This harrow is of entirely new construction, evolved after many years of tests by leading experts. The harrow construction ensures perfect balance of pull without side-drag.

The third new exhibit is a beet digging, quick-change unit which is part of the Company's range of reining multi-purpose root crop tractor attachments. These units were

recently brought from the Continent for tests prior to manufacture at Stockport.

Manure Preparation

A further example of Storey Agricultural Division enterprise is a new system of manure preparation and handling, the Bihudung system, for which the Company are sole concessionaires throughout Britain and the Commonwealth.

This system is considered to be of national importance and has aroused considerable interest in Government Departments. In any national emergency the Bihudung plant could be quickly incorporated in a plant for the production of tractor fuel (being fundamentally designed for this purpose).

Enquiries to Stand No. 131, or
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