

# DRAINAGE MACHINERY

By A. J. GALPIN, *Fields Instructor, Palmerston North.*

**A** TWO-DAY demonstration of some modern farm drainage machinery recently arranged by Massey Agricultural College attracted wide interest, farmers and farm contractors being present from the South Island as well as from most districts of the North Island where land drainage is a problem. The numbers of Manawatu and Rangitikei farmers present on both days indicated their keen interest. Although chief interest was shown in the "Rotohoe," a combined tile drain-digging and tile-laying machine recently imported by Massey College from England and the first of its kind to come into this country, some other locally-made machinery demonstrated the initiative and ingenuity of practical New Zealand farmers in the production of machines capable of reducing very considerably the labour and cost of farm drainage. Among these the drain-digging machine demonstrated by Mr. Guy Lewis, of Eketahuna, was outstanding.

Some of the machines seen at the demonstration were:—

The "Rotohoe," a drain-digging and tile-laying machine capable of laying tiles 24in. deep at the rate of 10 chains an hour. Depths up to 36in. are within the range of the machine, which is shown in illustrations 1 to 4.

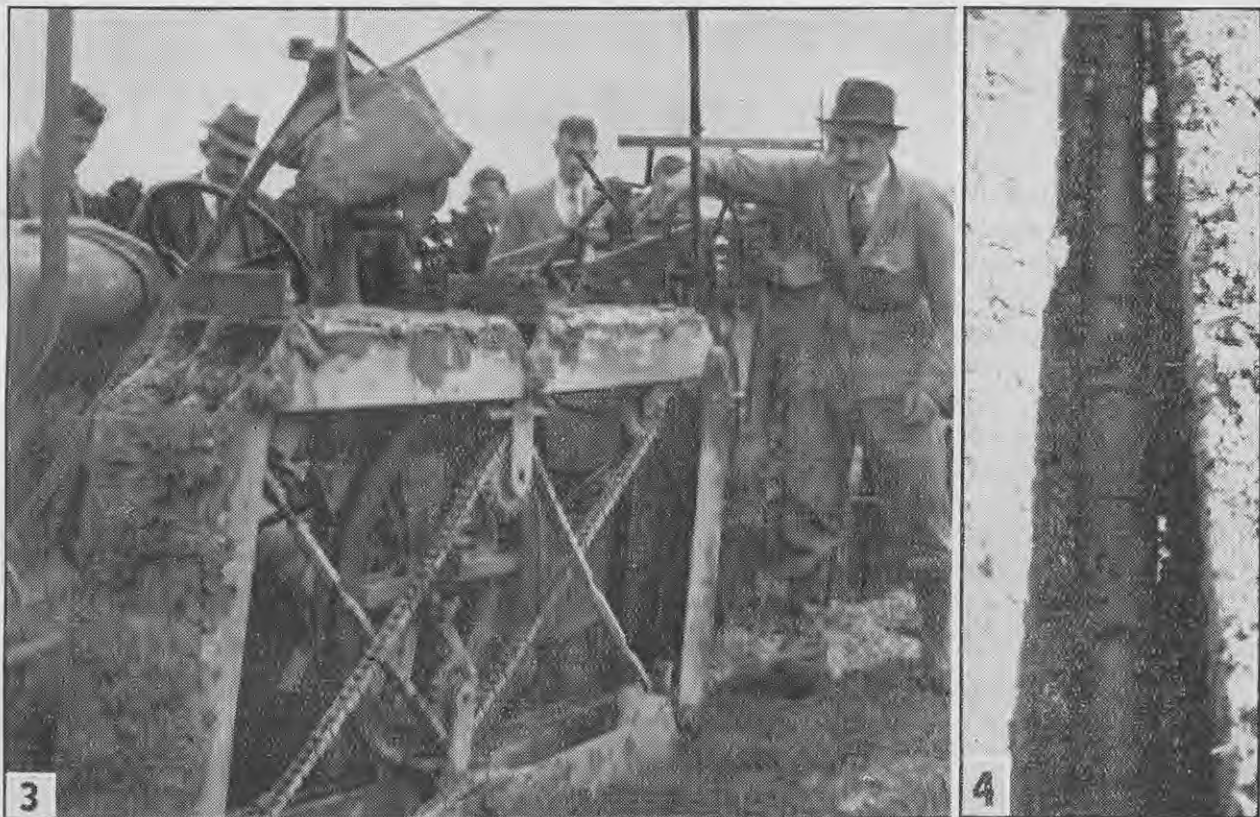
A special angle dozer for backfilling tile drains, which further reduces the labour required.

The Guy Lewis drain digger, a locally-made trench-digging machine designed by Mr. Guy Lewis, an Eketahuna sheep farmer, for digging tile drains on recently-stumped and rush-covered river flats. The machine digs a trench 11in. wide and up to 26in. deep at the rate of 15 to 20 chains an hour on rough swamp land and is capable of much faster work on clean pasture land. It is designed to ride over roots or timber buried in the ground, leaving it ready for the axe, and operates effectively on rough swamp surfaces as well as on clean land.

Linton Bros.' tile drain digger. The third tile drain-digging machine was demonstrated by Mr. M. Lankshear, Manawatu. This machine, which was designed by Messrs. Linton Bros., of Carterton, is of quite simple construction, and on clean country is capable of digging ditches for tiles 4 to 6in. wide and to a depth of 36in.

Tractor power-lift-operated mole drain plough. The Manawatu Machinery Agency demonstrated an English tractor operating a standard type mole drain plough by means of the power lift gear.

Among other aids to good farm drainage which were demonstrated were simple methods of cutting tiles and cutting holes in tiles for junctions, various types of equipment for taking accurate levels, and equipment for placing a tile in the end of mole drains which has been illustrated in a previous issue of this "Journal."



3. Operating the remote control gear. As the machine moves slowly forward the direction and depth controls are easily operated. 4. The completed trench with tiles as laid by the "Rotohoe." (Note: At the time of the demonstration the land was too wet for really good work and the operators were not yet experienced in the manipulation of the machine.)