

Cereal Harvest and Grass-grub Control

Seasonal Notes by the Extension Division

TO ensure the smooth working of machinery and a good grain sample consideration should be given to harvest operations.

THE CEREAL HARVEST THE harvest concludes the year's work on cereal paddocks and efficient harvesting is essential for maximum returns.

Worn, bent, and broken parts on all harvesting machinery likely to waste valuable time when threshing is being done should be repaired without delay. Decisions as to whether to direct head or windrow with a binder will be made as the crop ripens. Generally wheat—except for a few varieties subject to wind damage—will stand until header-ripe and should be direct headed. Oats are best windrowed. Barley that ripens evenly and is free from second growth, tall weeds, or severe lodging may be direct headed. Windrows should be laid on a long stubble if the height of the crop permits.

THRESHING THE CROP

In threshing, the essential aim should be to secure a clean, undamaged sample without undue loss of grain. The crop should be mature, with the grain hard and having a moisture content below 16 per cent. Standing crops lose moisture rapidly in favourable weather, but once in the bag grain takes a week or more to lose 1 per cent. of moisture. The labour of turning bags and the risk of further rain make it unwise to head an out-of-condition crop. The header capacity should be adequate to the task. Poor threshing, damage due to the return of grain to the drum, and losses due to grain being carried over with the straw result when headers become overloaded. Reducing forward speed or narrowing the "cut" should overcome these difficulties. Undamaged samples are particularly important in malting barley, with which consistently high germination is essential. Slow drum speed with the maximum concave clearance will allow thorough threshing. Adjustments are necessary to drum speed during the day, as the crop dries out with the heat and toughens again toward evening. Header screens to separate out shrivelled, broken, and immature grains should be used.

—C. P. WHATMAN

GRASS-GRUB CONTROL

CHEMICAL control with modern insecticides is efficient and economical for combating grass-grub in pastures. Both B.H.C. and D.D.T. insecticides have proved successful in extensive trial work. For general grazing land where grass-grub alone is present or where not more than 2 years' life of pasture is required either of the following treatments is recommended:—

- (a) 1lb. of 100 per cent. para para isomer D.D.T. per acre, or its equivalent at lower percentages (for example, 2lb. of 50 per cent. p.p.i. or 4lb. of 25 per cent. p.p.i.); or
- (b) 1lb. of 100 per cent. gamma isomer B.H.C. (lindane) per acre or its equivalent at lower percentages. (B.H.C. is benzene hexachloride.)

Where 3 years' production at a higher level of control is required double the above dosages should be applied.

For high-return pastures or crops or where both grass-grub and subterranean caterpillar are present 100 per cent. p.p.i. D.D.T. or gamma B.H.C. at 2lb. per acre should be used. The D.D.T. may be applied by using manufacturers' mixes of D.D.T. at the recommended rate according to the concentration of the mixture. Alternatively, the necessary quantity of p.p.i. D.D.T. should be thoroughly mixed with a spreader, usually fertiliser or

lime. Mixing for 3 minutes at 25 revolutions per minute in a concrete mixer with tumblers ensures a uniform distribution of the very small quantity of insecticide. This mixture should be applied to close-grazed and preferably dry pasture on a calm day with an ordinary topdresser with bags attached behind even in slightly breezy weather. Spin topdressers should not be used. At least 1 in. of rain should fall before the pasture is restocked. Applications in spring or autumn give good control.

—R. B. GORDON

LAYING DRAIN TILES

BEFORE laying of drain tiles is begun the trench bottom should be checked for even, continuous fall and a solid foundation. Boning rods, or preferably a dumpy level worked from set pegs, should be used for this check. To facilitate laying of the tiles they should be placed close to the edge of the drain within easy reach of the operator. Working in the trench is satisfactory only when the bottom is firm and dry. Under wet conditions heavy boots soon stir up enough mud to make efficient tile laying impossible. Standing on each tile as it is laid will not overcome this problem, as the operator's weight tends to displace tiles lying on a soft bottom. When using a tile hook the operator stands on ground level beside the trench. Each tile should be laid tightly against the preceding one to ensure the smallest possible opening between tile ends. The irregular ends of tiles provide sufficient space for water to enter. Misshapen tiles not fitting closely should be placed so that any gap occurs at the bottom and not at the top, where it would allow backfill material to drop through. Sufficient spoil to hold the tiles firmly in position should be placed in the trench before the main bulk of backfill is returned.

—J. F. SCOTT

SEED-BED PREPARATION FOR NEW PASTURES

OVER the past few years an increasing number of farmers have been renewing some of their poorer pastures to introduce better herbage strains. Such pasture renewal is frequently preceded by a crop; in others a straight-out grass-to-grass policy is favoured. When the area is to be sown directly grass to grass, or if there is a considerable quantity of crop residue or weeds after a crop has been fed off, ploughing is recommended, as this will give a clean ground surface to work on. On lighter soils rolling on the furrow should then follow, as this will compact the furrow and is a valuable first step toward getting the final consolidation that is so essential. Discing and harrowing, followed by a final rolling, should result in the production of a seed-bed with a good, firm tilth. Seed is often sown on too loose a seed-bed, particularly on the lighter soil types, and clover establishment in particular is frequently very poor under such conditions. Implements such as the giant discs and the rotary hoe are apt to produce a very loose seed-bed, unless they are used sufficiently early to allow the land to settle down before the seed is sown. When a paddock has been in crop and utilisation has been sufficiently good to leave a relatively clean surface ploughing is not necessary, and a light discing, followed by harrowing and rolling, should be sufficient to produce a satisfactory seed-bed. Unfortunately rollers are not as plentiful as they should be in some areas, and the seed-bed is not given the rolling that so often makes all the difference between a good and a fair seed-bed. The driving of a mob of sheep over the area before the seed is sown is an excellent substitute for the roller and is recommended, particularly on the lighter soil types.

—A. V. ALLO