



The National Hybrid Sow

TWO years ago the National Pig Industry Council decided to invest money in the pig section of the Department of Agriculture's Ruakura Animal Research Station to establish a pilot breeding plant to produce hybrid sows for distribution to farmers. What the national hybrid sow is, how it is being produced, why it is being produced, and when it will be available for distribution were discussed by D. M. Smith, Research Officer, Department of Agriculture Animal Research Station, Ruakura, in an address, an adaptation of which follows, to this year's Ruakura Farmers' Conference.

NATIONAL hybrid sows are the crossbred progeny of purebred Large Whites and Berkshires. They are first-cross sows and must be mated to purebred boars to produce commercial fattening stock.

How Sows are Produced

It is simple enough to cross two pure breeds. It is just as simple to carry on from there and throw in any or all the other breeds available. Crossbreeding, however, contains no magic. The qualities desired in the crossbred must be possessed in some degree by its purebred parents. The basis of the national hybrid sow is, therefore, tested and proven purebreds.

The breeding centre has purchased a number of pedigree Berkshires and Large Whites from studs throughout New Zealand. These animals have been mated and will be discarded or kept, together with their progeny, according to their performance.

First, sows are mated to boars of their own breed. They must farrow litters of at least 7 pigs in their first litter or 8 in subsequent litters. These litters at weaning must weigh 250lb. for first litters and 320lb. for subse-

quent litters. After weaning these purebred progeny must grow rapidly and gain weight economically. Sows which do not fulfil the requirements laid down will be discarded. Similarly the litters which fail to come up to standard will be slaughtered. Those that qualify will be used for future breeding stock.

The sows that produce satisfactory litters will then be mated to produce crossbred progeny and the sows from these litters will be sold under the name of national hybrid sows. The performance records of these hybrids on the farm will be kept and will provide additional information on the purebred strains to be kept at the breeding centre.

The aim, therefore, is not simply to produce crossbreds. It is to produce a cross from two proven purebred animals.

Why Sows are Being Produced

Most farmers are aware of the low productive efficiency of the pig industry. The writer believes that New Zealand could have the most efficient pig industry in the world, but not while sows farrow on average only 9 pigs per litter. Nor can the industry

be efficient when sows farrow only 1.5 to 1.8 litters per year (and farrow them more or less evenly throughout the year) and while 30 per cent. of the pigs born die before weaning. These factors add up to an inefficient industry which markets less than 10 pigs per sow each year.

The first step is to produce sows that, ideally, will have a fair chance of producing litters of 12. The second step is to give the farmer the information that will enable him to provide these sows with the facilities and management necessary to rear their pigs. This second step depends on efficient research and extension services and will be dealt with later.

It is believed that hybrid sows bred in the way outlined have a good chance of satisfying the first requirement of large litters.

A question often asked is: "Why not try to produce a purebred sow for the farmer rather than a crossbred?"

Two reasons for the adoption of a crossbreeding policy are:—

The New Zealand farmer's sow is a farm pig not a stud pig. The fact that 80 per cent. of the pigs in New Zealand today are crossbred and that this has been the position for 20 years suggests that the purebred pig has not satisfied farmers' demands.

There is ample genetical evidence that the phenomenon called hybrid vigour is a real force in animal and plant breeding. It is an advantage simply gained and it would be foolish for any commercial farmer who depends

HEADING PHOTOGRAPH: National hybrid sow and litter.