

a common sire. The trial covered the May-July period. Each group was provided with comparable and comfortable feeding and housing quarters, together with a grass run-out pen.

One group was fed on the normal ration of the farm, and served as a control pen. The remainder were rationed in such a way as to provide comparisons between meat-meal and peas as "winter protein supplements," and between mangels and pumpkins as winter "roots." The actual rations were as follows:—

		Ration per Pig Daily.
Group 1 (Control)—Buttermilk mixture + pumpkins	1½	gallons for fourteen days ; 2 gallons thereafter.
Group 2—Barley, meat-meal, and pumpkins	½ lb.	meat-meal for fourteen days ; ¾ lb. thereafter.
Group 3—Barley, peas, and pumpkins	½ lb.	peas for fourteen days ; ¾ lb. thereafter.
Group 4—Barley, meat-meal, and mangels	½ lb.	meat-meal for fourteen days ; ¾ lb. thereafter.
Group 5 — Barley, peas, and mangels	½ lb.	peas for fourteen days ; ¾ lb. thereafter.

Barley (whole grain) was fed to all groups except the control at the rate of ½ lb. per pig daily for the first thirty days, and at ¾ lb. per pig daily thereafter.

The "roots" were fed at a standard rate to all groups—50 lb. per group daily in the case of both pumpkins and mangels.

The "buttermilk mixture" used with the control group was a standard mixture used on the farm, and consisted of 200 gallons of buttermilk, 200 gallons of water, 100 lb. of meat-meal, and 80 lb. of molasses.

The meat-meal used was commercial "pure meat-meal" showing 65 per cent. crude protein on analysis.

It will be noted that this arrangement provided the following comparisons:—

- Group 2 with Group 3—Meat-meal compared with peas in association with pumpkins.
- Group 4 with Group 5—Meat-meal compared with peas in association with mangels.
- Group 2 with Group 4—Pumpkins compared with mangels in association with meat-meal.
- Group 3 with Group 5—Pumpkins compared with mangels in association with peas.

The trial extended over fifty-nine days. Live-weights were taken at the commencement and at the end of the period. These were taken in the morning prior to feeding, the pigs being virtually in an "empty" condition.

RESULTS OBTAINED.

The pigs came through the winter well; health was good, and the animals finished in a thrifty condition. Increase in weight appeared to have occurred mainly through increase in size or frame rather than in condition or flesh and fat. There were no differences apparent in the appearance of the groups, except for a slight advantage in "bloom" of the pigs in the control-pen receiving