Dear Rothchild,

I have been reading about Gordon's plan for polled Ayrshires at or near Coupland. The plans are rather complex, and I shall only try to discuss principles which turn chiefly on Gordon's aims.

The plan on the left he describes as aiming most rapidly at the establishment of a brown and white breed, homozygous polled, and this aim could certainly be achieved more simply and more quickly than in the left hand scheme, since his foundation bull has been shown to be homozygous polled and to carry the pied factor.

Bred to pure polled cows and to their daughters about one eighth of the second generation will be homozygous polled and recessive brown and white. They will, however, in no sense be Ayrshires or Ayshire crosses, and this is certainly part of Gordon's aim.

I take it the more serious aim is that of the right hand plan, where polled is crossed three or four times into pure Ayrshires, so that the germplasm has seven eights or fifteen sixteenths Ayrshire component. But all polled animals are heterozygous. Interbreeding these only one third should be homozygous, to be detected, as Gordon points out, sufficiently
surely by test crosses. I think probably the scours should supply valuable guidance at this stage, as they are probably indicators of the heterozygous condition, and it may be that on the Ayrshire background even cows can be diagnosed in this way. A even if such diagnosis was not invariably successful

I should like to know just what importance Gordon would attach to the claim that all his herd were homozygous polled, in view of the invariable experience that pedigree animals are often heterozygous for many breed characteristics.

Of course I should be glad to go into details if you and Gordon thought it helpful, but I want to get aims and principles agreed first.

Yours sincerely,