The beginning of permanent pasture improvement demonstrations as a major extension project in Ohio dates back to 1920. There was little experimental work to guide us at that time, and in recommending treatments on run-out pastures it was thought necessary to tear up the old sod, lime, fertilize, and reseed. This treatment was found effective but expensive. In fact the expense was so great that it was difficult to find men who would consent to act as demonstrators. Some of the demonstrators did only part of what was recommended. As it turned out, this was fortunate because it showed that some of the more expensive parts of the recommended treatment were not necessary. By 1922, we were convinced that reseeding was unnecessary in most cases and that any tillage operations on the old sod were not only an unnecessary expense but, in some cases, were positively harmful. In that year, the general recommendations were changed to include only the liming and fertilizing program.

Of the different fertilizers tried, superphosphate gave the best returns by way of restoring the old sod to one composed principally of white clover and bluegrass. About this time another fact was brought to our attention by a demonstrator at Mt. Perry, Ohio. He had treated an acre with lime and superphosphate according to our recommendations and then, on his own account, treated another acre without lime but with additional phosphate in such a quantity that he spent as much money on the plat receiving phosphate alone as on the one which received both phosphate and lime. To our astonishment, he obtained better results on the plat which received the extra phosphate but no lime. This led to an investigation of what was the minimum pH value satisfactory for permanent pasture. The results indicated that where the reaction of the soil was pH 5.5 or higher liming did not seem to be necessary or economical. On soils where the reaction was lower than this, liming seemed necessary if the best results were to be secured from the phosphate.

By 1925, a thousand or more demonstrations were under way in the state, mostly in eastern Ohio where the problem was most acute. As an interesting observation, it was noted at this time that a consider-