promptly precipitated upon meeting with lime or any of its salts, as a neutral phosphate of lime.

When it encounters salts of iron or alumina, which very frequently exist in soil, it forms with them compounds believed to be absolutely insoluble in water, unless it already holds alkaline silicates in solution.

We learn from science, therefore, the cause of so many contrary results in the practical use of the soluble phosphates to consist in the several favorable conditions of soil and weather, that must coincide to prove a success where they are used.

Mr. Laws, the well known British farmer, informs us through the London Gazette, that super-phosphate lime rarely or never fails in producing a decided benefit to a turnip crop, but when applied to the grain crop, the effects are irregular. "In some instances the crop has been in-"creased one-half, whilst in others a total want of effect has "been the result of its application." The inference would seem to be that the farmer should not largely invest in super-phosphates until he has fully tested their effects upon a small scale.

The experiments of Laws and Gilbert prove that "the "super-phosphates always tended to early ripening, whilst "mixtures of sulphates of potash, soda and magnesia retarded "the ripening of the crop."

In 1857 Mr. Harris, of the Gennessee Farmer, found in a series of experiments on a corn crop on his farm, that 100 lbs. gypsum per acre, costing 25 cents, gave precisely the same increase as 300 lbs. of super-phosphate of lime, which cost him $7 50!

Three years later Mr. Harris experimented upon a crop of oats, with the following results, viz:

On plot No. 1—no manure.
" " " 2—600 lbs. gypsum.
" " " 3—300 " super-phosphate of lime.

Plot No. 1 produced 36 bushels.
" " 2 " 55½ "
" " 3 " 47½ "

The oats on No. 2 weighed four pounds per bushel more than on No. 1, and the increase was 11½ bushels of grain and 950 lbs. of straw.

Whilst these results go to show that super-phosphates were not as useful to corn or oats as gypsum in that soil, the agricultural journals record contrary results in some cases.

In view of this uncertainty, it would be prudent for the farmer, perhaps, to avoid them altogether, and supply his land with phosphoric acid, by the use of guanoes and bones,