

# RECENT INVESTIGATIONS

## Sachaline.

Sachaline has been very extensively "boomed" as a forage plant, but from nearly every experiment station which has tried it come unfavorable reports. Prof. C. E. Bessey, among the rest, reports adversely upon the introduction of this plant. His report is based upon two years' observation of its growth. Its foliage is said to be unfit for forage, and no animal has shown a disposition to eat it.

## Effect of Farmyard Manure.

Experiments at Rothamstead, England, upon the continuous growing of barley upon the same soil, show that the residual effect of farmyard manure was conspicuous twenty-three years after the last application. Thus the plots once manured produced in 1892, 1893, and 1894, respectively, 16 $\frac{3}{4}$ , 12, and 13 $\frac{3}{4}$  bushels per acre more than the continuously unfertilized plots yielded in these same years.

## Effect of Lime.

At the Maryland Experiment Station, on land to which was applied twenty bushels per acre of stone lime just before planting corn, the yield of corn was increased 34.7 per cent., as compared with no lime; without further applications of lime the following crop of wheat was increased 37 per cent., and the hay crop following the wheat 91.3 per cent., or 1,271 lbs. per acre.

The main value of lime consists in liberating plant food from insoluble compounds in the soil, and improving the texture of clay, making it more porous and friable. Hence lime would be of little or no value on really poor soils.

## Planting at Different Depths.

At the Michigan Experiment Station seeds of wheat, oats, flax, corn, barley, clover, peas, and buckwheat were planted in boxes containing sand, loam, and clay soils, the depth of planting ranging from half an inch to twelve inches. The highest percentage of germination for wheat, flax, corn, and clover was at a depth of 1 inch; for oats, 2 inches; for barley,  $\frac{1}{2}$  inch (closely followed by 1 and 2 inches); for peas, 4 inches; and for buckwheat, 2 inches. Clover entirely

failed when the depth was greater than two inches. Some plants of oats, corn, and peas appeared above ground when the depth of planting was 8 inches or more.

## Field Experiments With Corn.

J. G. Lee, Louisiana Experiment Station, reports tests of fertilizers. With every form of nitrogen used the yield of corn was largely increased. The most effective form of nitrogen was nitrate of soda, followed, in the order named, by dried blood, compost, cotton-seed meal, stable manure, fishscrap, and green cotton seed. With the use of phosphoric acid there was an increased yield, the most effective form, being dissolved boneblack. Potash did not increase the yield, and the author recommends the use of fifty pounds of nitrogen and thirty-six pounds of phosphoric acid, with not more than thirteen pounds of potash.

## Potato Scab and its Prevention.

J. C. Arthur, Indiana Experiment Station, reports very favorable results from the use of corrosive sublimate as a remedy for potato scab. The experiments cover three years, and the treatment consisted in immersing the tubers for different lengths of time, varying from half an hour to fifteen hours, in a solution of corrosive sublimate of a strength of 1 part to 1,000.

The average of the three seasons' work shows that 82 per cent. of the crop from treated seed was without scab, against 56 per cent. from untreated.

It was found that in all trials made the number of tubers per hill was less in the treated than in the untreated portion, but the weight of merchantable tubers showed a decided increase in two years out of the three.

The corrosive sublimate proved somewhat injurious to potatoes that had sprouted before treatment, though the injury was not serious when the immersion was of short duration.

Though cut tubers may be treated without serious injury, it is deemed preferable to treat before cutting.

The strength of solution recommended is 1 part corrosive sublimate to 1,000 parts water, or 2 ounces of corrosive sublimate to 15 gallons of water. The length of time of immersion varies with the