

slightly nitrified and the azid scarcely at all. The interesting observation was made that where ammonia salt and cyanide were used together, the nitrification seemed to be arrested at the nitrite stage, as shown by a considerable production of nitrite, with relatively little nitrate.

During the spring of 1916, white clover was unusually plentiful in the pastures and bloating was very prevalent among cows and cattle. This afforded a good opportunity to further test the formaldehyde treatment proposed by this department. In a large majority of cases, both coming under our observation and reported by others, the treatment resulted in a cure. The success of our method of treatment may be considered as established.

This spring cows and cattle bloated badly on fresh clover, before blossoming time, a new experience here. This led us to examine the distribution of sugar in the clover plant, both before and after blossoming. It was found that small, immature plants, before blossoming, contained 1.2 per cent. of sugar; the leaves and stems of blossoming plants contained 1.43 per cent. and the blossoms contained 1.55 per cent. Former tests had shown that bluegrass, leaves of clover and alfalfa contained less than 1 per cent of sugar. It thus appears that, in seasons of unusually good growth of clover, there is an increased production of sugar and much of it may be stored in the plant, before blossoming time. We further demonstrated the presence on fresh clover plants of several species of bacteria capable of fermenting sugar, with formation of carbon dioxide.

Much work was done on the isolation and identification of hog cholera virus. Having previously succeeded in isolating a filterable organism, as described in a paper under this title in the *Journal of Infectious Diseases*, January, 1916, we have further succeeded in obtaining this organism from the virus blood serum, growing it in a special medium which contained no hog tissue other than the small quantity of virus serum added. Experiments in inoculating normal shotes with these cultures seem to show that hog cholera was communicated to healthy shotes in this way. We desire to verify this observation, however, by repeating these experiments.