Effect of Mercury Compounds and Arsenate of Lead on Soil Nitrification.
Results expressed as parts per million of nitric nitrogen produced in 14 days.

Materials used and rate per 1,000 sq. ft. of soil.	Unlimed Soil pH 4.77. No Amm. Sul.	Amm. Sul.	Limed Soil pH 7.02. No Amm. Sul.	Amm. Sul.	Totals— No Lime.	Limed.
Untreated soil	55	43	58	41	98	99
½ lb. bichloride of mercury	41	25	61	38	66	99
2 lbs. bichloride of mercury	44	26	61	41	70	102
½ lb. calomel	46	30	52	38	76	90
2 lbs. calomel	46	24	58	44	70	102
1 lb. semesan	55	34	56	37	89	93
3 lbs. semesan	45	28	60	38	73	98
11½ lbs. arsenate of lead	59	45	62	40	104	102
46 lbs. arsenate of lead	94	44	66	38	138	104

erably reduced the activity of the nitrifying organisms. Arsenate of lead, on the other hand, has stimulated the production of soil nitrates in case of each soil. The addition of lime, however, has eliminated the injurious effect of the mercury compounds as shown from the fact that on the unlimed soil the three mercury compounds reduced nitrification on an average of 25% compared to only 1.5% on the soil which had received limestone. The reduction of nitrification in case of each of the three mercury compounds used was as follows: bichloride 31%, calomel 26% and semesan 17%. Arsenate of lead increased nitrification on the unlimed soil 40% and on the limed soil 5%.

Shows Lime Need

In addition to the factors already mentioned which may reduce the supply of available nitrates in the soil, we now learn that mercury compounds used for the control of fungous diseases also produce an injurious effect on nitrifying organisms in acid soils. The addition of lime, however, has been shown to overcome this toxic effect. The results of this experiment are presented to you with no idea in mind of discouraging the use of compounds of mercury necessary to combat fungous diseases of turf grasses, but rather to call to your attention the fact that such materials may reduce the available nitrogen of the soil, especially in case of those soils which are in need of lime.

The slow recovery of grasses, often noted following repeated application of fungicides, may be due to the reduction in the supply of available nitrogen in the soil as the result of injury to nitrifying organisms.

In conclusion may I say that today we are facing a new era in the scientific management of greens and fairways. The greenkeepers are turning to their state agricultural experiment stations for advice gained as the result of many years of careful research. The soil chemist, the pathologist and the plant breeder are joining hands in an effort to aid those responsible for the development and maintenance of our American golf greens and fairways. The results of various turf grass experiments initiated by the United States Department of Agriculture are beginning to bear fruit. Art and science, theory and practice are going forward hand in hand and there should be no conflict between them.

Illinois Pros Entertain Club Officials at Meeting

FOR their first meeting of the year, the Illinois P. G. A. on April 20 put over a novel and valuable stunt by inviting club officials to sit with them for an evening and learn the many ways in which pros expect to serve their clubs better in 1931 than ever before.

Among the speakers were Jim Wilson, pro at Ravisloe and president of the local body, who told of the association's aims for the year; Albert R. Gates, administrator of the national P. G. A., who gave the latest news of that organization; George Laadt, chairman of the Chicago Junior Association of Commerce tournament committee, who described the J. A. C.'s progress toward sponsoring a Chicago $10,000 open tournament this summer; and Bob Harlow, manager of the P. G. A. tournament bureau, who gave a resume of the winter circuit.

As an additional feature, the slow motion reels of Jones, Vardon and Joyce Wethered were presented.

The meeting was the first of its type ever attempted by the Illinois P. G. A. and the results indicate more to come.