some seeds was found to have a higher initial titer against one strain of *Apl. stewartii* than against another. In other cases, the same degree of lysis was demonstrated against both strains. In a few instances the extract contained a lysin effective against one strain only.

The lytic substance from seeds was usually not effective in as high a dilution as the lysin from fire blight canker. The latter had been in association with its test organism much longer than the former.

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GRAZING IN RELATION TO THE CONTROL OF LEAFY SPURGE

EXPERIMENTS conducted the past summer (1937) at this station have demonstrated that sheep will eat leafy spurge (*Euphorbia virgata* Wldst. and Kit.), and keep it under control. Two one acre plots were enclosed with woven wire and on July 2 four ewes and five lambs were confined on each plot. A similar lot of sheep was allowed to run at large in the pasture. The sheep used were of western origin and had been grazing a spurge infested pasture since early spring. The animals were weighed at the beginning of the experiment and at frequent intervals during the summer. Shelter, water and salt were provided. One plot was mowed and raked and the other left unmowed. The plots were in a pasture, the vegetation of which consisted chiefly of a mixture of spurge and bluegrass in a fairly uniform stand. Accurate counts indicated that there were on an average 370 stalks of spurge ranging from 12 to 30 inches tall and mostly in blossom or forming seeds and 298 small clumps of blue grass per square meter.

On August 2 the sheep on the mowed plot were removed because of lack of forage. Weights taken on this lot indicated that the ewes had lost an average of 14.1 pounds (a not unusual loss of weight in ewes with lambs) and the lambs gained an average of 13.0 pounds.

On August 12 the sheep in the unmowed plot were given access to both plots until September 24. On this latter date the ewes had lost an average of 17.5 pounds and the lambs had gained an average of 28.5 pounds.

The sheep given the run of the regular pasture showed a gain of ¼ pound per ewe and 26.25 pounds per lamb on September 24.

The experiment terminated on September 24 and at this time the spurge stalks were almost completely stripped of leaves, flowers and seeds. Practically no new growth of the weed was evident. The blue grass was also eaten off close to the ground.

The results reported above are at variance with these reported by other workers. Bakke,[1] in Iowa, reports little success with this method of control for spurge and states that according to Esser[2] this weed is poisonous to animals. In our trials the sheep ate the weed quite readily and in no case were any harmful effects noted.

Studies will be continued this summer in order to secure data on survival and the effect of grazing on root reserves. Further studies on the carrying capacity of the spurge will also be made.

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SCIENTIFIC BOOKS

ORGANIC CHEMISTRY

Organic Chemistry—An Advanced Treatise. HENRY GILMAN, editor-in-chief, assisted by ROGER ADAMS, HOMER ADKINS, HANS T. CLARKE, CARL S. MARVEL and FRANK C. WHITMORE. 2 volumes, lvi + 1890 pp. John Wiley and Sons, New York, 1938. $15.00. (Sold separately, $7.50 per volume.)

TEXT-BOOKS often fall into a stereotyped pattern which persists for many years until some new author creates a new mold which in its turn becomes a model for later books. The traditional "organic chemistries" have for years been molded along quite similar lines. The present volumes are a sharp break from this tradition, and in that respect alone are almost unique in the text-book field.

These volumes comprise in reality a series of twenty-two short monographs bound together. There is no essential interrelationship between most of the individual chapters. One chapter does not logically lead to another, but each is an entity in itself. This is necessitated by the fact that each chapter is written by a specialist, or by a small group of specialists, competent to speak with authority in that special field.

The work may be divided into three major subdivisions dealing respectively with the theory and nature of reactions in organic chemistry, the relationships between physical properties and the structural constitution of organic molecules, and a series of chapters dealing with some of the more important naturally occurring organic compounds. In the case of this latter group of chapters, the approach is largely from the standpoint of the organic chemistry which is involved so that these chapters tend to sup-

[1] A. L. Bakke, Ia. Ag. Exp. Sta. Res. *Bull.* 222, 1937.
[2] P. Esser, "Braunschweig." 1910.