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SOME EFFECTS OF SELECTION ON PRODUCTION OF ALKALOIDS IN BELLADONNA.

The above is the title of Bulletin No. 306, U. S. Department of Agriculture Bureau of Plant Industry. The investigations reported in this bulletin cover some effects of the production of alkaloid in belladonna and gives results of a series of tests on controlling pollination. The conclusions reached are stated in the bulletin as follows:

It having been established in the previous investigation that a wide range of variation exists in the akaloidal content of belladonna plants, the present investigation was undertaken to determine whether the characteristic of alkaloid production is transmissible to the progeny through seed and whether the character is changed by vegetative propagation. The results thus far show that the first-generation plants secured from seed of crosspollinated selected individuals display the characteristic of the maternal parent with regard to alkaloid productivity. This condition is generally true at all stages of growth during a season and also for at least two successive seasons. Close pollination of the parent plant has shown only a moderate influence on the transmission of this characteristic.

Second-generation plants from cross-pollination have been grown at Arlington, Va., Madison, Wis., and Timmonsville, S. C., and at all three stations they have displayed the relative alkaloid-producing tendencies evident ir the original parent plant and the generation preceding.

While the plants at the different localities showed a parallel relationship toward each other, there was considerable difference in the general quantity of alkaloids produced. Thus, in the case of Madison and Arlington, where two pickings were made at fairly corresponding stages of growth, it was found that the Madison plants yielded more alkaloids than those at Arlington. At Timmonsville the yield was still greater than at Madison, but here only one picking was made, and it is hardly possible to make a true comparison. Nothing definite developed to indicate that a relationship exists between the amount of precipitation and sunshine and the percentage of alkaloids produced.

Plants were grown from cuttings, and at two stages of their growth these plants showed a marked tendency to display the same characteristic regarding alkaloid production as the plants from which they were propagated and the original parents of those plants.

PAN-AMERICAN SCIENTIFIC CON-GRESS.

Arrangements have been completed for holding a Pan-American Scientific Congress in Washington from December 27, 1915, to January 8, 1916, in which all of the American republics will participate.

According to the official reports from each of the governments now in the hands of Director-General John Barrett of the Pan-American Union, each one of the twenty-one American republics will appoint delegations composed of its leading educators, economists, engineers, international lawyers, and experts on mining, agriculture, health, transportation and finance. This meeting will signalize an effort to promote closer relations among the American republics along intellectual and educational lines, rather than along political lines. In the same way that the regular international conferences of the American republics have developed closer political ties and the recent Pan-American financial conference helped to promote better financial understanding, so, correspondingly, this congress will bring the Americans more intimately together upon a high plane of intellectual, scientific, educational, and social progress and intercourse.

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MAGNESIUM AND SODIUM SUL-PHATES IN PLASTER OF PARIS.

The sulphates of magnesium and of sodium have been found in almost all the samples of plaster examined by the author. They are generally present in almost the same proportions and occur in the largest quantity in impure plasters. Their presence has an important influence on the setting of the plaster, markedly hastening the period of hardening. When the proportion in which they occur amounts to only a few parts per thousand, they hasten the period of setting by six minutes, and a few percentages will shorten the time of hardening to one-third of the normal period. In this respect sodium sulphate appears to be more active than magnesium sulphate. These two salts are specially useful for employment in making surgical casts, since they have but slight influence in increasing the temperature of the plaster magma. The introduction of 1 per cent of each salt causes a rise of temperature of only 12° C. When sodium chloride is used for a similar purpose, the increase of temperature is so great that there is danger that the patient may be scalded .--- E. Canals (J. Pharm. Chim., 1915, II, 286.)

Book Notices

THE PHARMACOLOGY OF USEFUL DRUGS.—By Robert A. Hatcher, Professor of Pharmacology, Cornell University Medical College, New York, and Martin I. Wilbert, Technical Assistant, Division of Pharmacologv, Hygienic Laboratory, U. S. Public Health Service. American Medical Association, 535 North Dearborn Street, Chicago. 1915.

This volume of 457 small 8 vo. pages is a reprint, with additions and changes, of a series of articles published in the Journal of the American Medical Association under the heading "Practical Pharmacology."

The presentation of the material in the form of a bound volume constitutes an attempt to interest medical students and practitioners in the uses and possibilities of the more widely used drugs which are generally well established.

The book includes a comprehensive discussion of the pharmacology, the chief therapeutic uses and the materia medica or chemical and physical properties of the drugs that have been included by the Council on Pharmacy and Chemistry of the American Medical Association in the "Handbook of Useful Drugs." As an elaboration on this list of drugs the present volume will no doubt be of value to all who are in any way interested in the "Handbook of Useful Drugs" either as a basis for instruction in materia medica subjects in medical schools or as a basis for examinations in Therapeutics by State Medical Examining and Licensing Boards.

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Hygienic Laboratory Bulletin No. 104; a Digest of Comments on the Pharmacopoeia of the United States and on the National Formulary for the Calendar year ending December 31, 1914, is announced in a recently published list of publications of the United States Public Health Service as available for free distribution. Application for this publication should be made to "The Surgeon-General, United States Public Health Service, Washington, D. C." and should specify both the title and number of the document No charge is made for postage. desired. As the number of copies of this publication available for free distribution is limited, members of the American Pharmaceutical