

to awaken all at once a sustained interest in matters of health, but it is practicable during one week in the year to secure for them a fair measure of public attention. "Health week" may fittingly start with Health Sunday. "If the clergy will but awaken and stir the conscience of the nation, and bring home to all their congregations a sense of their personal responsibility for their own health and that of their families and neighbours, the Press and other agencies for moulding public opinion may be trusted to do the rest. The Press of this country has again and again given proof of its readiness to work for the public health. Only a few months ago one of our great papers devoted columns day after day to a campaign against tuberculosis. Still more recently leading journals have taken a strenuous part in the agitation for wholesome bread.

"Our local authorities are largely occupied with health work. Let them for one week in the year take their constituents into their confidence. Let them hold one or more public meetings to discuss the special needs of the town or district, the work already accomplished, and that which still remains to be done.

"And then the schools. Throughout Health Week let the regular teaching in hygiene be supplemented, at least for the elder children and their parents, by one or more lectures from local medical men—lectures, not crammed with dry scientific facts, but brimful of that romance in which the pages of sanitation abound.

"I would also enlist the aid of the trade unions, the cooperative societies, the friendly societies, the funds of which are so cruelly depleted by preventable disease—every body of men, in short, who care for the well-being of their fellow men, and are willing to work for it."

The difficulties to be overcome should not be underestimated, but they need not be exaggerated. Hospital Saturday and Hospital Sunday in this country, and Tuberculosis Sunday in the United States, have shown the way. From small beginnings they have grown into great national institutions; and if the cure of disease has a claim on our sympathy and support, how much the more has its prevention?

#### THE FIFTH INTERNATIONAL DAIRY CONGRESS.

THE fifth International Dairy Congress met at Stockholm on June 28, and was closed on Saturday, July 1. There was a large attendance of members, and some interesting discussions arose on the various subjects contained in the programme.

The meetings were held in the two chambers of the Houses of Parliament, and to facilitate the procedure, the subjects under discussion were divided into two sections. In Section 1 the production of milk was the main subject of discussion, whilst in Section 2 attention was directed to the treatment and use of milk. It is not possible to follow in detail the discussions which took place on practically all the subjects which were dealt with by the two sections, so a short account of the questions placed before the congress, and a *résumé* of the conclusions or recommendations arrived at, will be given. The first question was on the effect of the different fodders on the quality of milk and dairy products; six reports had been presented, and abstracts published and issued to members. The discussion of this subject made it clear that there is still a great deal of uncertainty as to whether or not food can cause an increase of fat in milk. Kellner (Möckern—Leipzig) reported that feeding experiments which had been carried out under his direction proved that the use of palm-nut cake meal caused a rise in the amount of fat in the case of cows with a high milk yield.

Böggild (Copenhagen) recalled the experience of Danish farmers some twelve or fifteen years ago, when it was found that palm-nut cake meal raised the percentage of fat in milk. The rise was not maintained and the use of palm-nut cake meal fell. The influence of the season should not be overlooked in these cases, for in some years the increase in the fat content of milk seemed to be due to this factor.

Further evidence of the possibility of increasing the fat in milk was given by several speakers, and Nils Hansson, in

a very able paper, pointed out that it may be necessary to abandon the view that food has no quantitative influence upon the fat of milk. The part played by foods in influencing the flavour of milk was discussed, and particularly the bacteria from feeding stuffs. The entrance of organisms into the milk, either directly or indirectly, through faecal matter, was considered important.

The interest displayed in this subject resulted in a *résumé* being prepared by Martini, Kellner, and Ostertag, and communicated to the next day's meeting. The final conclusions of the congress were that it is evident from practical observations and from scientific researches, particularly those of Kellner, that certain foods exercise an influence upon the quantity of fat in milk in the case of cows having a high milk yield, but that the following questions still need an answer:—(1) From what period does the influence of the food make itself felt? (2) To what degree is this influence maintained? (3) Does the addition of certain foods exercise an equal influence upon the quantity of fat? (4) Is the quantity of fat obtained by the use of these specific foods remunerative?

The second question dealt with the influence of the different fertilisers on forage plants with regard to the quality of milk and dairy products. Orla Jensen (Copenhagen) gave an account of a long series of experiments which he had conducted. The results proved, however, to be largely negative, and in spite of slight and irregular changes in the milk salts, and the coagulation of the milk, it was concluded that the chemical effect of the fertilisers was very little indeed. The effect of bacteria coming from fodder upon milk, particularly when associated with digestive disturbances, is very considerable and of far-reaching influence, in the making of cheese particularly. This being the case, the necessity for the strictest cleanliness in the cowshed and in the dairy, the adequate cooking of the milk, and the retention of healthy cows only, become once more the recommendations of those best fitted to advise. Unfortunately there was little discussion upon this question; in all probability the subject had not been investigated by others.

The third question dealt with a subject which is much discussed at the present time in this country, and the conclusions of the congress as noted below ought to prove conclusively that we are neglecting one of the best means of improving our milk supplies at practically no cost. The question was as to the importance of control associations (milk record societies) for the production of milk. Benno Martini (Gross Lichterfelde) criticised the manner in which these associations are generally run, and the conclusions which are often drawn from the results; but he agreed as to their usefulness in bringing the importance of the careful testing of each cow in the herd before the farmer himself, and this in many cases was first done when a travelling tester visited the farm. Every other speaker, and they were of all nations, had praise for the control associations, and if any evidence were needed that their operations resulted in the rise in quantity and quality of milk, it was furnished in abundance.

Funder (Christiania) reported on a condition of affairs in Norway which somewhat resembles that in England, namely, the reluctance of the farmers, especially the smaller ones, to join the associations, and the objection to the travelling tester staying at the farm.

The opinion of the congress is well expressed in the following resolution, which was passed:—

"Judging from the good results obtained in Sweden, Denmark, Germany, Finland, and Austria, the fifth International Dairy Congress declares that milk record societies exercising a control of the feeding of the cows furnish one of the best methods of raising good animals of a milking strain, and assist in the reduction of the cost of milk.

"The congress directs attention to the great importance of such control societies in initiating a rational, economical, and balanced mode of feeding, and in propagating the sound experience which has been gained in the keeping of animals."

The veterinary control of live stock as regards the production of milk was the fourth subject dealt with, and the discussion showed that very strong views were held as to the necessity of veterinary inspection of cows. The question of the food for cows from which special

"infants" milk is obtained, and the tests to which the milk should be subjected, were also discussed. It was agreed that when a change from dry to green food was made, it must be done gradually, and also that the milk from cows on good pasture was permissible for the feeding of young children, and could be recommended. The congress did not, however, feel that there was unanimity in the proposals which had been made, so it was finally decided that a special commission should be appointed to draw up regulations for the veterinary control of milk, and to submit them to the next International Dairy Congress.

The following were elected to the special commission:—Poels, Rotterdam; Regnér, Stockholm; C. O. Jensen, Copenhagen; Martel, Paris; Trotter, Glasgow; Bougert, Berlin; Ostertag, Berlin; Winkler, Vienna; Zschokke, Zurich; Malm, Christiania; Happich, Dorpat; Fettick, Budapest; Fiorentini, Milan; with power to add to their number.

A recommendation was made to the milk associations of the various countries to appoint committees, which should work with the object of getting the control system introduced into all public and private ventures.

The fifth subject dealt with the supervision of the milkers and attendants, and the visiting of them in their homes by a regularly appointed medical man was urged. Cleanliness in the habits of dress of the milkers was also strongly recommended.

In the second section of the congress the subjects dealt with have a more practical and less scientific bearing, with the exception of the seventh subject, noted below. The sixth subject, for example, treated of what demands should be made in the case of new milk intended for direct consumption, of condensed milk, and of dried milk. The congress passed a number of strong recommendations, which, if they could only be carried out, would be of the greatest possible benefit to the consumer, but to the producer they would necessitate a heavy expense and a consequent increase in the cost of the milk.

Subject number seven placed before the section was a question dealing with analytical methods to be employed in testing milk and dairy products. In addition to the ordinary fat determination, and the taste and smell, it was advocated that a test for dirt should be made also the reductase test (Barthel), the fermentation test (Walter), and the leucocythemia test (Walter) and the catalase test. The alcohol boiling test and a determination of the acidity were also advised.

No unanimous resolution was adopted, but the general feeling of the congress seemed to be that the above-mentioned tests could be used with most satisfactory results, whether the milk was intended for direct consumption or for the manufacture of butter, cheese, &c.

The ninth subject, which dealt with cheese control, attracted a large amount of attention from representatives of countries exporting cheese. It was resolved by the congress that it should be left to the next congress to fix what can be regarded as the normal amounts of dry matter and fat in cheese. The permanent committee was charged with the task of undertaking the necessary preliminary work. It was also recommended that margarine cheese should not be made up in form of the ordinary types of commercial cheese.

The question of the training and instruction of the personnel of dairies was closed with an invitation to the societies of each nation to draw up methods and conditions of instruction.

Finally the congress resolved that it is absolutely indispensable, for the avoidance of misunderstandings, that in all dairy publications the metric units of measure and weight should be used, and for temperatures the degrees centigrade.

At the conclusion of the congress most of the members paid a visit to Örebro, where the twenty-first General Swedish Agricultural Exhibition was held. These exhibitions are held once in five years in different parts of Sweden. The show, somewhat spoilt by rain on the first day, was excellent. The members of the Dairy Congress had then an opportunity of taking part in one of four different excursions. Those who were interested chiefly in agricultural and educational matters visited Ostergötland and Scania, and were rewarded by a most interesting and instructive trip.

### THE BRITISH PHARMACEUTICAL CONFERENCE.

THE forty-eighth annual meeting of the British Pharmaceutical Conference was held at Portsmouth on July 25-27 under the presidency of Mr. W. F. Wells. The presidential address dealt mainly with pharmaceutical legislation, incidentally directing attention to the fact that the laws regulating the practice of pharmacy in Germany and France afford better protection and greater privileges for pharmacists than the British and Irish laws. Mr. Wells deprecated the practice of Irish boards of guardians of purchasing drugs of inferior quality at competitive prices, and expressed the opinion that a large proportion of the damaged drugs imported from abroad went to public institutions, the governors of which paid more attention to price than to quality.

For the first time in its history, the meeting was this year divided into two sections, the "science section" and the "practice section." In the former section eighteen papers were contributed, the larger number of which were of purely pharmaceutical interest.

Mr. H. Finnemore and Mr. G. E. Town contributed a short note on *Bartsia odontites*, a very common wayside plant of the natural order Scrophulariaceæ. It is well known that this plant is avoided by cattle, and bearing in mind the haphazard methods in which our knowledge of the use of medicinal plants has emerged, and also the fact that plants botanically related often contain similar chemical constituents, it occurred to the authors that this relative of digitalis might possibly be worthy of pharmacological and chemical study. A quantity of the plant was extracted with alcohol, but Dr. Laidlaw, who tested the action of the solution on frogs, found that it had no poisonous or digitalis-like effect. A crystalline matter which separated from the alcoholic solution was identified as mannite.

Mr. H. J. Henderson described an experiment in peppermint culture in the shade. The plants were grown on the bank of a stream at Hitchin, and some of them reached a height of 50 inches; the stems were stout, and the leaves correspondingly large. It was found, however, that the lack of sunlight, due to the shadow cast by the trees on the opposite bank, prevented the production of the hairs bearing the oil cells, and reacted powerfully on the yield of oil, this being only 0.1 per cent. from the fresh herb. The yield of oil from ordinary plants grown on the same farm was 0.409 per cent.

Mr. E. H. Farr and Mr. R. Wright contributed a paper in which they described experiments carried out with the view of testing the accuracy of the statement, which is frequently made, to the effect that in the conversion of opium into extract or tincture the quantity of morphine shown by the official assay of a sample of opium is always greater than the amount found in the finished product. The authors find this statement to be correct. In seven samples of opium worked upon, the loss of morphine varied between the limits of 0.8 per cent. and 9.0 per cent. of the whole, with an average for the whole series of 4.78 per cent. The loss appears to be due to occlusion of the alkaloid, rendering its complete extraction by water or alcohol a matter of practical impossibility, or to some other factor which has hitherto escaped recognition.

Mr. H. Deane, in a communication on extract of Indian hemp, demonstrated the variability of this extract as supplied by the manufacturers. He suggested a modification of the official process of manufacture by which an extract consisting practically of pure resin would be obtained.

Mr. R. R. Bennett suggested that an iodine standard should be officially adopted for *Thyroideum siccum*. The majority of pharmacologists are agreed that the activity of thyroid is dependent upon the combined iodine present, but the author finds that the combined iodine present in commercial preparations varies considerably. The percentage of iodine in dry thyroid prepared from a series of sheep's thyroids obtained direct from the slaughter-house varied from 0.21 per cent. to 0.096 per cent., the average value being 0.158 per cent. The author thinks that an iodine standard of 0.15 per cent. might be adopted without unduly harassing the manufacturer.

Mr. John C. Umney contributed a note on *Podophyllum emodi*. At the request of the Indigenous Drugs Com-