

ready reference to numerous minor topics—such as reissues, disclaimers, forfeitures, interferences—which are discussed in brief but effective subordinate paragraphs.

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RECOMMENDATIONS OF THE AGRICULTURAL ADVISORY COMMITTEE

SECRETARY HOUSTON has received the recommendations of the agricultural advisory committee reported at the conclusion of its meeting in Washington, June 27 to July 2. The following are among the most important subjects considered by the committee:

1. Indorsement of Henry C. Stuart, chairman of the agricultural advisory committee, for appointment on the War Industries Board as representative of agriculture.

Following is the text of the resolution:

Resolved, That the full committee indorses the action of the executive committee in asking for the appointment of the Hon. Henry C. Stuart, the chairman of the Committee, upon the War Industries Board.

2. Facts were submitted to the committee showing that the harvest of spring wheat would come at a season when soldiers would probably just be entraining for military services, and they would therefore be lost to the wheat harvest in the spring wheat region. The committee, therefore, passed a resolution, to be presented to Provost Marshal General Crowder, asking that temporary deferred classification be granted to the men called July 22–27, before their entrainment, that they might help in the harvest before leaving home, rather than to report at their cantonments and then be furloughed back, thus saving expenses to the government and preventing a loss of time for the men.

3. A full discussion was had of the unusual car shortage and the delays in the shipments of live stock and grain during the past winter, resulting in large financial loss to the producers. Attention was called to the fact that transportation conditions were still unsatisfactory and the Department of Agriculture and the Food Administration were requested to take up the matter again with the Railroad

Administration, with the view of insuring relief in these matters. A subcommittee on transportation was appointed, of which Henry C. Stuart was chairman, to act with the two departments in placing this matter before the Director General.

4. Consideration was given to criticisms that had been made in regard to the application by division heads of the rules and regulations of the War Industries Board regarding wool. There seemed to be ground for believing that some of the interpretations of the rules worked a hardship on the wool growers. A subcommittee was appointed to look into this matter and make such recommendations as seemed to them necessary to a readjustment of the matters complained of, and a recovery of losses incurred, if any.

5. The committee devoted a large portion of its time during the first three days of its session to a discussion of the grades and prices of wheat in which Mr. Hoover and members of his staff, with representatives of the Grain Division and the Bureau of Markets of the Department of Agriculture, participated. Practically all of the recommendations of the committee were provided for in the final draft of the announcement issued July 1.

A subcommittee had formulated an expression of suggested explanations of terms and conditions that were thought to be helpful in giving the farmer a clear understanding of the regulations and his personal status in their administration.

These suggestions were heartily indorsed by the full committee and the Food Administration.

6. A resolution was passed giving indorsement of the plan of the Bureau of Animal Industry for stamping out tuberculosis in cattle. Suggestions were made that some of the plans might be slightly modified in the matter of facilitating the disposition of tubercular animals.

7. WHEREAS the Department of Agriculture has submitted for our consideration a proposal for the elimination of certain less essential types or designs of farm machinery and parts thereof, giving as a reason therefor that because of the war

demands the allotment of steel for the manufacture of farm machinery must be limited to the amount strictly necessary to enable our farmers to maintain crop production, and that the multiplicity of types and designs now existing places an unnecessary burden upon steel mills in preparing steel and iron therefor; and whereas we believe the reasons given are just and valid and that the demand upon us is in line with the demands made upon other industries: Therefore be it

Resolved, That we indorse the schedule of eliminations submitted by the Department of Agriculture, with certain minor changes, with the understanding and with the assurance on the part of those who have prepared the schedule that no change in design of any implement has been made which will lessen its strength or efficiency, and no machine or implement has been eliminated which is essential for the efficient production of agricultural products in any extensive region, and the work performed by which can not be as efficiently done by other machines, the manufacture of which shall be permitted. We recommend, however, that measures be taken to afford full protection to farmers owning machines of types eliminated by requiring that manufacturers make and place on the market repair parts for eliminated machines or eliminated parts of machines for a length of time equal to the average normal life of such machines or parts.

The committee passed resolutions urging the Department of Agriculture to insist on the standardization of parts of farm implements, such as cultivator teeth, mower and harvester guards, mower and harvester sections, threads on bolts, skeins on wagons, surface cultivator knives and many other parts on which patents have expired. It was the opinion of the committee that this would result in very material economy in every way and increased convenience to the farmer in securing implement parts.

8. After discussing the prevalent prices of farm machinery and the advances made during the past three years, the committee passed a resolution asking for an investigation at the earliest possible date, into the cost of manufacturing farm implements and asked that the industry be required to operate on a basis of cost plus a reasonable profit.

9. The committee recorded its appreciation of the good work done by the Food Adminis-

tration in increasing the consumption of potatoes, thus partially relieving the stress arising from the production of a heavy spring crop in the south, with large storage stocks held over in the north.

The promotion of war gardens was commended, as it was believed by the committee that the results not only showed a larger supply of fresh vegetables but converted many acres to the growing of staple crops that helped to increase the total food supply and to lessen transportation difficulties.

The Department of Agriculture was commended for its work in the selection and breeding of potatoes in the various potato-growing sections.

Much interest was expressed in the dehydration of vegetables, especially potatoes, and it was recommended that this work should be followed up.

Record was filed, briefly reviewing the poultry conditions of the country, showing that although the price of poultry had not advanced in keeping with the price of feeds, more eggs have been shipped and stored than at the same time in 1917, this being partly due to the early warm season and partly to the patriotic adherence to the industry in spite of adverse conditions.

A resolution was passed expressing the opinion of the committee that the vegetable forcing industry was important, and so blended with the forcing of plants for field crops, that the industry should be fostered and protected as far as the exigencies of the war may permit.

10. On reports of members of the committee from the west and south where wheat has already been harvested, regarding the highly efficient service rendered by the Farm Labor Division of the United States Department of Agriculture and the Federal Department of Labor, in the mobilization and distribution of harvesters to the wheat fields of the south and west up to the present time, the committee asked for a continuation of this service to the completion of the harvest in the spring-wheat region.

11. The following resolution was adopted by the committee:

WHEREAS absolute war necessity and shortage of wheat for export has required that, in the exchange milling of his own wheat, the farmer be restricted to a supply of flour equal to his household needs and those of his farm employees for 30 days; and

WHEREAS the present crop prospect seems to make this necessity less acute, be it

Resolved, That the Food Administration be requested to remove this restriction as early as conditions will allow.

12. The committee was of the opinion that groundrock phosphate and acid phosphate should have the same freight classification as agricultural lime, taking an increased freight rate of one cent a hundred pounds, instead of an increase of 25 per cent., as applied to general commodities, and it was directed that request be made to the Director General of Railroads that the desired classification be granted.

13 Resolutions were passed by the committee favoring:

(1) Regulation of the use of mill feeds by the mixers of proprietary feeds, so as to secure to the dairyman the benefits of the efforts of the Food Administration to lower the price of mill feeds.

(2) Regulation of the manufactories of mixed feeds.

(3) Equitable distribution of mill feeds.

(4) Use of sugar substitutes in ice cream manufactories.

(5) The disallowance of sugar to manufacturers of ice cream failing to comply with reasonable standards of butter fat and solids not fat.

(6) Purchase of dairy products by Army and Navy.

(7) Expression of appreciation to the Food Administration for the publicity given to the economic value of milk.

(8) Recommendation to the government to extend the standardization of dairy and other agricultural products.

(9) Commendation to the market report service by the Bureau of Markets.

The subcommittee on dairy products presented to the tariff department of the Railroad Administration an explanation of the

hardship upon the small shipper of milk and cream, because of the minimum charge of 50 cents on any individual shipment.

The regulation was promptly modified so as to nullify the application of a minimum charge.

SPECIAL ARTICLES

THE RELATION OF THE RATE OF BLOOD FLOW THROUGH THE MEDULLA OBLONGATA TO THE AMPLITUDE AND FREQUENCY OF RESPIRATORY MOVEMENTS

ALTHOUGH the relation to respiratory movements of the changing concentrations of carbon dioxide in the blood, and of afferent nerve impulses from the lungs to the medulla oblongata has long been recognized, a third factor entering into the equation, *i. e.*, the rate of blood flow through the medulla oblongata, has received but little consideration. Haldane¹ mentions the rate of blood flow as one of the factors, but the emphasis, as is natural in pathology, is placed mainly on the general disturbances of the circulation.

Some years ago I repeated Sir Astley Cooper's old experiment of ligating permanently both common carotid and both vertebral arteries close to their origin in dogs. The experiments were done aseptically and the animals allowed to live. The chemical analyses of the brains of these animals were published by Waldemar Kock and S. A. Mann.² The general results of the ligation were similar in all essential respects to those noted by Leonard Hill.³ Hill remarks that in one dog, there was preliminary acceleration of the respiration following the ligation of the four arteries.

I noticed respiratory disturbances in some dogs, and one in particular attracted my at-

¹ "Text Book of General Pathology," edited by M. S. Pembrey and James Ritchie, London and New York, 1913, chapter on Respiration; Organism and Environment as Illustrated by the Physiology of Breathing, New Haven, 1917, pp. 5-6.

² Mott's "Archives of Neurology and Psychiatry from the Pathological Laboratory of the London County Asylums," London, 1909, IV., pp. 211-12; Studies from the Rockefeller Institute for Medical Research, X., 1910, p. 38 of the reprint.

³ "Physiology and Pathology of the Cerebral Circulation," London, 1896, p. 123.