

## Use the Breweries for New Yeast Food

[By Arnold E. Wahl, President of Arnold Wahl Institute of Research Chemists, Biologists and Engineers, in Chicago Examiner.]

Breweries of the United States may be used to increase the food supply of the nation. In case the scarcity of foodstuffs becomes more marked during the course of the war, these plants, now producing an output of little food value, may be changed into manufactories of a new food, containing as much nutritive value as beef and costing only 15 cents a pound, whereas beef now is selling for about 25 cents a pound.

This is not the only potentiality of these breweries. Their great refrigeration systems, among the best in any industry, may be taken over by the government for storage of army rations or of temporary surplusage of other foodstuffs.

With an increase of equipment, they could be turned into bakeries and the great amounts of yeast which they make at present could be turned into their bread, increasing its food value many fold. If military necessity demands it, the breweries could manufacture picric acid and other chemicals instead of vinegar, as at present.

There are many such possibilities, but the greatest of all, in my opinion, is the use of these plants for making a new food.

The food which I propose is similar to beef extract. At present, it could be served in liquid or many other forms. This new food is a yeast product, made principally from bran or the present raw materials of breweries — rye, barley and corn. With this grain would be combined

certain salts, among them ammonium and calcium salts.

The product would contain about 50 per cent of water and 50 per cent nitrogenous matters. Now, nitrogenous foods are exactly what the country, the whole world, in fact, demands at present. For the supply of meats, beans and other nitrogenous foods is extremely limited. And, whereas beef contains only about 15 per cent of nitrogen—the rest being 75 per cent water and 10 per cent fat—this yeast extract would contain 50 per cent of nitrogen.

Advantages of the manufacture of this new food are numerous. I enumerate only the following:

### Great Increase in Food Would Result

1.—It would increase the nation's food supply without causing a drain upon the present limited supply of wheat. There are about 10,000,000 barrels of bran produced in this country every year as a by-product of the milling industry. At present this bran is used as cattle food. It is cheap as compared with grains. To make human food of this would be a great benefit.

2.—It would cost the brewers next to nothing. Already their plants are adapted to the manufacture of yeast, but this is diverted into beverages instead of made into wholesome food.

3.—It would release thousands of bushels of rye, barley and corn, now used to make beer, for use in making foodstuffs.

4.—It would help to make up the alarming deficiency of meat animals. Experts tell us that it will take several years to increase the cattle population of the United States. Meanwhile this new yeast extract could help to nourish the poor who can not afford meat or meat extracts.

5.—It would entail no economic loss through the manufacture of alcohol. In the "mash" liquid from which beer is made, there is about 10 per cent of sugar. This is fermented into alcohol and carbonic acid gas. In the case of the "mash" liquid, from which the yeast extract is made, there is only 1 per cent of sugar, and therefore less than 1 per cent of alcohol results. In the present manufacture of yeast, about one-half of the sugar is lost.

6.—It would not interfere with production of corn, barley and rye. Farmers still would have their markets for these grains. Thus it would not demoralize the system of rotation of crops, which is necessary to get the maximum yield of all grains, especially rye and wheat.

7.—It would cost the average consumer, oppressed by high prices, only about one-half as much as meat.

8.—It would be of permanent value to the world. For many years scientists have been experimenting on the manufacture of synthetic foods, that is, foods which are not grown, but which contain all the chemical substances which are found in vegetable matter. This yeast extract is not exactly a synthetic food, since it contains bran, but it is a step in that direction. German chemists have been experimenting in this, but they have been unsuccessful. The method was perfected recently in America.

**Brewers Would Yield Rather Than Close**

The next question is, Would the brewers stand for this? I think they would in preference

to having their plants closed by the government, as has been done in the warring countries abroad. If the department of agriculture should request the brewers to do this, if the government should help to teach the people the use of the yeast extract, I believe that the brewers would be glad to turn their plants to this use.

I believe that they would do so even were it not for the war and the acts of patriotism which the present situation demands. For the brewers have been thinking for a long time of what they are going to do with their breweries in view of the spreading prohibition sentiment.

In Iowa and other "dry" sections of the country they have tried changing them into bakeries. This is only partially successful, because it requires the installation of much new machinery and the discarding of many old machines. Changing beer factories into bread factories at present is not practicable for another reason: It would cause an overproduction of bread and an over-demand for wheat.

For all these reasons I believe that the manufacture of this yeast extract is the salvation of the brewers who fear prohibition, and the salvation of the United States, which is oppressed by wartime food shortages.

### FOR A DRY NATION DURING WAR

[Baltimore American and Sun, April 17, 1917.]

Baltimore, Md., April 14, 1917.  
Woodrow Wilson,  
President of the United States,  
Washington, D. C.

For God's sake, for humanity's sake, for the nation's welfare, I earnestly and urgently appeal to you to use your influence to prohibit, during the war at least, the manufacture and sale of intoxicating liquors throughout the nation, which traffic causes waste of more than two billion dollars yearly and is destroying soul, mind and body of drinker.

If the capital dry, why not the nation?  
HENRY S. DULANEY.

To All American Citizens:

"A drop of ink makes millions think." If a million citizens of the United States would each send a telegraphic Night Letter like the above to President Woodrow Wilson it would make the world think. "The King's business demands haste."

### RUSSIAN WORKERS TO SUPPORT WAR

A Washington dispatch, dated May 7, says: A plea against a premature peace for Russia and renewed assurances that American wage earners and the American people are in hearty sympathy with the Russian democratic movement, are included in a long cablegram sent by President Samuel Gompers of the American Federation of Labor to the executive committee of the Council of Workmen and Soldiers' Deputies at Petrograd.

Speaking for organized labor in this country, Gompers also expresses complete confidence in the purposes and opinions of the American war mission soon to go to Russia. Although he does not mention specifically the recent attacks on Elihu Root, who will head the mission, the labor leader denounced as criminal and pro-German any suggestion that the members will seek to interfere in Russia's internal affairs or will give any advice except with the pur-

pose of combating the common enemy.

Forcible annexations are condemned, but Gompers pleads that every people affected by the war should in the end be free to choose their allegiance. Punitive indemnities also are denounced, and hope is expressed that leaders of the working classes of the central empires will cease plotting for an abortive peace and will bring a real peace by overthrowing the autocracies of Hohenzollern and Hapsburg.

The message, timed to aid in combating the pro-German agitation apparent during the last few days in Russia, was cabled yesterday. Its full text was made public tonight.

"The gravest crisis in the world's history," the cablegram said, "is now hanging in the balance, and the course which Russia will pursue may have a determining influence whether democracy or autocracy shall prevail. That democracy and freedom will finally prevail there can be no doubt in the minds of men who know, but the cost, the time lost, and the sacrifices which would ensue from lack of united action may be appalling. It is to avoid this that I address you."

### RESERVES OPENED TO STOCK

Moved by the serious range conditions prevailing over nearly all the western states, the secretary of agriculture has authorized the district foresters in all districts where the situation is critical to issue temporary permits to stockmen wherever the conditions were such as to indicate losses unless the animals could secure grazing in some of the national forests.

The secretary has gone even farther in a supplementary instruction authorizing the foresters to use their best judgment in admitting additional stock even to the extent of a possible overgrazing of some of the ranges, if by that means losses can be prevented or minimized. Every possible assistance, says the secretary, will be rendered the stockmen through the opening of the ranges at the earliest possible date or increasing the number of stock to be grazed to the utmost limit.

The news of this action will undoubtedly be highly gratifying to the California stockraisers, who have been severely straightened by the long cold season and shortage of rain. It has been estimated that the unfavorable winter has reduced the carrying capacity of the private range in California by from 20 to 40 per cent. This meant, unless additional range could be procured, that the meat supply could not even be kept up, much less increased.

The national forests in California contain a vast amount of pasturage, now exceptionally productive because of the limited amount of grazing permitted in recent years. The secretary's action in opening it to the fullest use is in line with good common sense and will help the stockmen and the state.—San Francisco Chronicle.

### KNEW BY EXPERIENCE

Said the teacher to the little Hebrew boy: "Ikey, is the world flat or round?"

"It ain't needer vun, teacher," said Ikey.

"But what is it, Ikey," asked the teacher in surprise, "if it is neither round no flat?"

"Vell," said Ikey with conviction, "mine fader he saays it vos crooked."—Ladies' Home Journal.

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Goodness—Energy—Ease of Digestion—Excellent Flavor—are all found in this truly remarkable wheat and barley food.

