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THE NATIONAL EDITORIAL SERVICE

INCORPORATED

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vb.
The N.Y. J. 11th, Le Toi
By Mr. Steinmetz, 3/7
** To Mr. Steinmetz, Schenectady, N.Y., 1596.*

PHILADELPHIA, PA., March 11, 1915.

MAR 13 Rec'd

Mr. Charles P. Steinmetz,
Schenectady, N. Y.

My dear Mr. Steinmetz:

Have you in mind any subject of keen interest for editorial treatment in our Service? We have not run anything from you since March 6, and I would like to get you in again before the month is out if possible.

I do not know that I have anything particular to suggest, unless, possibly, the announcement in today's papers regarding the production of potash from the Pacific coast kelp may have a significance that will appeal to you. If this report is true, it probably means that one of the results of the war will be to break the grip of the German potash syndicate.

This subject should be of considerable interest to the farmers of the country and in the agricultural sections, but it may be rather far from your line of thought. However, no one can advise me about that except yourself.

Very truly yours,

Atherton Brownell

AB/u

March 16, 1915.

Mr. Atherton Brownell,
National Editorial Service,
Philadelphia, Penna.

Dear Sir:-

Received your letter of March 11th, and
send you enclosed the desired editorial, as it
deals with a subject, in which I am interested
and which I have followed closely. As you
know, before I was an electrical engineer, I was
a chemist.

Yours,

CPS-SW

Mar, 1915

AMERICAN POTASH FAMINE.

Nitrogen, phosphates and potash are the three foremost plant foods. They are taken out of the soil in large quantities by the crops, and if not replaced, the soil gradually becomes barren, like many of New England's farms. The virgin soil has now pretty well all been taken up, and more and more our country becomes dependent upon the use of fertilizers.

The value of a fertilizer is measured by its contents of nitrogen, phosphorus and potash. In the supply of nitrogen and phosphorus, ~~or~~ domestic conditions are normal, and America is the foremost producer of phosphate rock. For potash however the world almost entirely depends on the potash mines of Germany, and by the war, this supply is cut off, and a potash famine is already upon us. Crude potash salts have already disappeared from the American fertilizer market, and in complete fertilizers the potash content is being reduced. For this year, the potash content remaining in the soil may tide us over, but if the war continues, an adequate potash supply has to be found or serious consequence in the decrease of crops threatens, especially those as tobacco, which requires much potash. Thus an independent potash supply has become the most important

problem of industrial agriculture in America.

A search for potash mines in America and other neutral countries thus far holds out no promise of immediate relief. Wood ashes, which were used before the discovery of German potash mines, have ceased to be available with the vanishing of our woods.

Potash is one of the most common constituents of the earth's surface: granite, which forms most of the great mountain ranges, contains several percent. But in granite and other rocks, the potash is locked up in insoluble form, and therefore unavaila_ble. A number of methods have been developed to work up potash-bearing rocks for potash. They usually consist in replacing the potash by fusion of the rock with lime, and then leaching out the potash. While this would safe-guard the industrial supply of potash - for glass making etc. - the process thus far is too expensive to meet the low prices required in a fertilizer.

During ages, by the weathering of the rock, even granite disintegrates, and the potash is leached out and carried by the rivers into the ocean, and the ocean is the second largest source of potash. There it is in soluble form, available as fertilizer, but the percentage is so small that it can not be economically separated. But sea-weeds gather it from the ocean water, and the ashes of the sea-weeds contain a large percentage of available potash. The use of the

giant kelps of the Pacific Ocean has thus been proposed for potash supply, and considerable work done, and some potash produced experimentally from them during the last years. However, the sea-weeds are over 90% of water, and of the dried residue, the ashes are again a small percentage only, and very large masses of sea-weeds have to be handled to get an appreciable amount of potash. The enormous beds of giant sea-weeds along the Pacific Coast appear most promising. They would be dragged on shore by machinery and dried by sun and air, as they are too bulky to load on ships and unload, contain too much water to dry economically by fuel. This means the development of handling machinery to take care of large bulks of material at very low cost, but nevertheless it is at present the most promising outlook for the relief of the potash famine, and may make America more independent of the German Potash Syndicate.

The most serious difficulty, which stands in the way of the development of this industry, is the same which makes capital so reluctant to enter the development of the production of any of these commodities, from which we have been cut off by the war, such as benzol compounds as carboic acid, hydroquinone, dye stuffs, etc. It is the uncertainty of the future of such new industry, or rather the almost certain destruction of it by the dumping at any price of large masses

of foreign products as soon as the war is over. Especially with potash is this the case, as its cost of production in many of the German mines is very much lower than the monopoly prices charged by the potash syndicate.

This is the most serious situation, which at present confronts industrial expansions, and which requires the intelligent consideration of our law makers.

Charles P. Steinmetz

Schenectady, N.Y.
March 16, 1915
CPS-SW

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