It is estimated that 2,000,000 tons of alunite are available at Lake Campion in deposits which could be removed readily by dredging. From this quantity it is estimated that 250,000 tons of potassium sulphate could be produced, sufficient to meet Australian requirements for 25 years at the present rate of consumption.

It is proposed to produce 200 tons a week, which would meet the Commonwealth demand. Australia normally imports about 12,000 tons of potash salts annually, and it is estimated that two-thirds of the total are used for agricultural fertilizers in the form of potassium sulphate and potassium chloride. Potassium sulphate is the basis of the potassium chlorate used in making matches and explosives, and in pharmacy. So far, no plant for the manufacture of chlorate exists in Australia.

Before the war Australia obtained potassium chlorate principally from Germany, Sweden and Switzerland. Australian firms handling potash, fearing a shortage such as occurred in the last war, have built up stocks which are expected to last for twelve months. By the end of that period it is hoped that the Western Australian plant will be producing commercially.

The production of other forms of potash from wool is being investigated. The sweat in wool is composed largely of potassium soaps, which can be obtained by steeping the wool before scouring.

It is estimated that sufficient potassium carbonate and potassium hydroxide for Commonwealth requirements can be produced from this source. In these forms potash is used in the making of soft soaps and in the preservation of dried fruits, where it is of great importance. In the year ended 30th June, 1939, Australia imported from Germany 10,709 cwt. of potassium carbonate and pearl ash and 7,991 cwt. of potassium hydroxide. (From *Chemistry and Industry,* 60, 4, 52.)

SOAP-MAKING.

With the object of cutting down expenses and using up some of the copra which they are unable to sell, many planters are now making soap, both for their own and native use. Many planters have satisfactory recipes, but the majority are always anxious to try others, particularly if they are cheap. Already two recipes have been published in this *Gazette,* and a third, kindly supplied by the Catholic Mission of the Holy Ghost at Alexishafen, will now be presented. Any planters, having other recipes which they have found to possess special merits, are invited to submit them to the Editor for publication.

(1) 100 lb. of coco-nut oil or two-thirds coco-nut oil and one-third rendered animal fat.

(2) Ash solution.—This consists of the ground ashes of coco-nut husks mixed with water until a consistency of 8 degrees is registered on a Baumé Aerometer.

(3) Soda solution.—To 16 gallons of cold rain water add 100 lb. caustic soda.

Method:

The oil, or oil and fat, is heated to a temperature at which one may just hold a finger in without being burned. Ash and soda solutions are then added and stirred in well. The mixture is then allowed to boil for one-half to

three-quarters of an hour. This process of adding ash and soda solutions and boiling is repeated until the soap has acquired the desired consistency. The test is made by placing a small amount of soap on a plate and allowing it to cool. The soap should be stiff enough after about the sixth or seventh boiling.

For the first addition, 47 lb. of ash solution and 3 lb. of soda solution are added when the mixture should register 13° Baumé. The other additions are as follows:—

1st	addition,	50	lb.	ash	and	soda	= 13°	Baumé.
2nd	„	30	„	„	„	„	= 15°	„
3rd	„	25	„	„	„	„	= 18°	„
4th	„	20	„	„	„	„	= 20°	„
5th	„	20	„	„	„	„	= 22°	„
6th	„	20	„	„	„	„	= 25°	„
7th	„	22	„	„	„	„	= 27°	„
8th	„	30	„	„	„	„	= 25°	„

After the desired consistency has been obtained, the soap is allowed to stand twelve to fourteen hours, then 1 quart of cold coco-nut oil is well mixed in to give the soap a glossy, finished appearance. On the addition of the cold oil, the soap should not be too cool or it will go streaky. The soap is then poured into convenient forms until it is hard enough to cut.

Usually, some liquid remains under the soap, which can be used in the next soap-making. It replaces about one-third the required amount of soda. Dyes and antiseptics may be added to the soap.