

I USE LUX
TOILET SOAP EVERY
DAY. IT LEAVES SKIN
FEELING SO WONDERFULLY
SOFT AND
SMOOTH.

Loretta
Young

COLUMBIA
STAR IN
"BEDTIME
STORY"

LUX
TOILET SOAP
COSTS SO LITTLE...
LASTS SO LONG.



EVER BROTHERS (NZ) LIMITED, AUCKLAND, N.Z. L.T. 11 107
Easy Extra Money.—Make simple, attractive Rag Dolls at home from scrap material. We show you how and buy your work. Write NOW for free details. MacMASTERS' TOY SUPPLY, Box 183, WANGANUI.

Amazing Sea Plant, Rich
in FOOD minerals,
has built up many



THIN
RUNDOWN
TIRED-OUT
people!

A Tonic and
a FOOD
combined!

Here is a natural food tonic which re-nourishes your system with a daily ration of vital Mineral Salts.

Your body must have life-giving Mineral Salts and Food Iodine. Vikelp gives you these precious elements.

The concentrated Mineral food value in Vikelp is tremendous. For instance, one day's supply gives you as much Calcium as in 7 Eggs—as much Iron as in 23-lbs. of Oranges—as much Phosphorus as in 4-lbs. of Butter. And Vikelp Tablets contain 9 of the 12 essential Mineral Salts.

And as all these precious Minerals get into your system they help re-nourish it. Your tiredness then turns into energy—you find new life.

SEND NOW!

FREE!

Send this coupon today for free booklet, crammed full with vital information on "How to Gain New Health, Energy and Strength". Write to Fassett & Johnson Ltd., Dept. L.8, Levy Bldg., Manners Street, Wellington, P.O. Box 33.

NAME.....
ADDRESS.....

FIRE ALARM

(Written for "The Listener" by
J. O. H. TRIPP)

THE writer of this article is careful to point out that he has no standing as a man of science. He writes as a hill-country farmer, after consultation with other hill-country men.

HITLER is merely a passing blot on the earth's crust. Erosion is an insidious, creeping thing, that starts disintegrating the earth's crust often before it is recognised. How many of us realise that it is the top six inches of soil on this world that keeps us alive—that in fact, if it were removed, every living thing above water would perish, except, perhaps, the sea birds, ice animals and Eskimos?

And how many of us realise that almost every desert was caused by man's folly, even the Sahara? It used to be the granary of Italy 1800 years ago. The Romans overcropped it, and erosion got a start. With no decayed vegetable matter to hold it together, the soil rapidly disintegrated with the help of the wind and the rain, until only sand was left, which gradually seeped over field after field until the damage was beyond repair.

In Africa the Highlands of Nyasaland have been so eroded that the Assistant Director of Agriculture reported in 1934 that they were supporting no more than half the population they were capable of carrying a century before. To those who have eyes to see, surely the same sort of thing is happening to the high country of New Zealand.

In the United States the area of formerly cultivated land, now rendered useless by erosion, is no less than 109 million acres. And erosion in the shape of dust storms caused 50,000 farms in one area alone to be deserted.

In many of the desert borderlands in Australia the drifting sand has covered countless acres of farm land, and miles and miles of good netting fences. In some places the fences are buried four deep, each new fence having been built on top of the sand-covered one—extreme cases, no doubt, but an indication of what can happen.

"The Creeping, Dangerous Type"

However, it is New Zealand's high country erosion problem that I propose to discuss in this article. For many of us the word erosion conjures up pictures of ugly gashes torn out of hill-sides by water. Perhaps this is because such erosion is easily noticed, photographed and brought before the public eye. Many a property-owner imagines that he has no erosion because he has none of these water-torn gullies, when in reality sheet erosion may be taking steady toll of his top soil, all unnoticed.

These are the commonest types of erosion:

(1) *Sheet Erosion*.—It is the creeping, dangerous type, and is hard for the average man to detect. It is a



**THE EFFECT OF EROSION: Sometimes
It Is Less Obvious. But Just As Dangerous**

combination of water and wind that slowly removes all the top fertile earth without forming visible gullies.

(2) *Gully Erosion*.—Most of us know something about this, because it cannot be mistaken for anything other than water-torn gullies.

(3) *Wind Erosion*.—This type belongs to the drier districts, where dust and sand storms can cover up acres of good land, or blow away the top soil of good ploughed land. It is caused by river-bed erosion, wrong burning methods, rabbits, etc; and by certain dry-farming methods beyond the scope of this article.

Effect on Electric Power

The main object of this article is to interest the town and country dweller (as well as high country men), in a most important aspect of erosion that has had less notice than it deserves—namely, erosion from the uncontrolled burning of hill country. Hill country burning, in certain areas, does, in fact, directly affect townspeople, by cutting down hydro-electric power, and will have a greater and greater adverse effect as the years go by, if the evil is not checked now.

These bad effects are brought about in two ways. Firstly, the "run off" from the catchment areas not being impeded by the vegetable matter (which has been burnt), causes rivers to rise and fall rapidly, an unfavourable situation for power production, in which a gradual rise and fall is the ideal. Secondly, the unimpeded, fast-flowing water, rushing down the hill-sides, carries with it stones, debris, and silt in ever-increasing volume. All this settles in the artificial lakes that serve the electric turbines. This steadily reduces the supply of storage water in the lakes, the top layers of which are so very necessary in regulating "peak" loads. One dam in Marlborough, for example, has already been completely silted up. Another striking example of gradual silting can be seen in the Waitaki lake, which serves the largest power scheme in the South Island. This artificial lake is about five miles long, and already the top mile of it is considerably silted up, the deposits being plainly visible at low water, when part of the silt is actually above water.

I am personally convinced that some of this quick silting is due to high rents in the first instance, causing many sheep stations to be overstocked, and to be burnt far too much, in the mistaken idea that more feed was thus produced. Palatable tussock is so produced for the first season, but after that the tussocks become smaller and smaller until little is left either to burn or feed on. Rabbits, of course, bring this about far more quickly. However, politics is not my topic here.

Some History

The first hill burning appears to have been done by Tripp and Acland in March, 1856. These men pioneered the grazing of sheep on hill country, which at that time ran only wild pigs. To quote from R. M. Burdon's *High Country*:

On the eastern slopes of the Southern Alps the vegetation was much more varied than it is to-day, flax, toi toi and snow tussocks of immense size covered the slopes. Cabbage trees also grew in great profusion before they were thinned out by fire. . . . Tripp and Acland decided to burn extensively in the hope that finer grasses might grow out of the ashes of the ranker plants. The fires were so huge that, according to Tripp, the finest print could be read a mile off by the light of them.

These and similar fires were the primary cause of much of the present hill-country erosion. No blame is, of course, attachable to these early pioneers, as New Zealand hill knowledge was non-existent in 1856. Indeed, this particular fire took place at quite the wrong time of year (March), and probably with no regard to the moisture content of ground or tussock. Since these early days, large areas of tussock have been burnt every August and September, each area being burnt about once in every four or five years, depending on the seasons, stocking, etc.

Suggested Remedies

Several of the following points have been discussed with other sheep men, and I am indebted to them for their help. Many a fire has been lit on bone-dry tussock with the idea that it was safe, that a sou'-wester was developing, or that it was just coming on to

(continued on next page)