



Spring Time is Egg Time **PRESERVE EGGS**

from September through to November.

While eggs are cheapest preserve all you can for next winter.

The Daily Dietary Pattern recommends 3-5 eggs per person per week, whenever possible. **MAKE IT POSSIBLE** by storing eggs when they are plentiful and using them when fresh eggs are both scarce and expensive.

For the family of 4 preserve a minimum of 24 dozen eggs. This will ensure each member of the family 3 eggs per week for 6 months of the year. To spread the expense buy in several lots over a period of 3 months.

Eggs are important for infants, children, adolescents, mothers and fathers, the elderly and the sick.

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5.9

Issued by the New Zealand Dept. of Health

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EXACTING ASSIGNMENT

Handling Rugby Test Broadcasts

NOW that the 1949 All Black tour of South Africa is over, listeners may be interested to know something of the efforts made by the engineering staff of the NZBS to get clear reception of commentaries in New Zealand—one of the most exacting tasks ever undertaken by a broadcasting service. New Zealand, as *The Listener* explained in an article printed in May last, is separated from South Africa by an area alive with magnetic and ionospheric storms, and this was the chief difficulty that the engineers set themselves to overcome. The South African Broadcasting Corporation did not possess a shortwave transmitter suitable for broadcasting to New Zealand, but through their co-operation arrangements were made with the South African Post Office for the use of one of its transmitters normally used on commercial traffic. For successful transmission to New Zealand, a directive aerial system beamed to New Zealand was necessary, and the South African Post Office found that it could provide this by reversing an existing aerial used for commercial traffic to the United Kingdom.

Test transmissions were started on this basis twelve months before the tourists left for South Africa, and were intensified during the three or four months immediately preceding the tour. Owing to the very weak signals from South Africa, it was necessary to find a shortwave channel clear of interference from adjacent stations, and a number of operating frequencies were tried before satisfactory results were achieved. These tests showed, however, that reasonable reception from South Africa could be expected under normal ionospheric conditions. Investigations were also made into the possibility of using a radio-telephone circuit, but it was found that there was no such circuit between New Zealand and South Africa and that one could not be arranged without considerable negotiation with other countries and at a high cost. However, as an added safeguard the help of the Australian Postmaster-General's Department was enlisted to see if they could assist the NZBS by rebroadcasting.

Initial Difficulties

During the early part of the tour radio reception conditions were unusually bad, due to the effects of a group of sunspots, which, as is now generally well known, interfere seriously with the transmission of long-distance radio circuits, and at this time practically eliminated any possibility of using higher shortwave frequencies. This resulted in a considerable amount of the shortwave traffic throughout the world congesting the lower frequency bands and thus adding to the difficulties.

On the night of the first test match all reception for the first part of the game was through the Australian relay station VLR. The Australian Post Office received the South African transmission in Byford (Western Australia) and then fed the programme by landline across Australia to Lyndhurst (Victoria), where it was rebroadcast by VLR. For this broadcast the NZBS also used a receiving site at Longbeach (near Waitati)

as an auxiliary to the station at Makara, for some early reports had pointed to reception at Longbeach being particularly good, and the Service was anxious to take advantage of any means of improving reception.

Conditions in the southern auroral zone on this night were unusually bad and it was found that the only signals direct from South Africa to New Zealand were coming by the "long path," that is, over the North Pole. During the first half of the game there was no direct reception of South Africa in New Zealand whatever. After about 30 minutes the Australian channel through VLR was failing badly and had to be abandoned, but a little later it was possible to take up direct reception from South Africa. Then it was found that there was little difference in the signal strengths received at Makara and Longbeach, but the Longbeach site was clear of some interference that was being experienced at Makara and slightly clearer reception was achieved.

Broadcasts from Rhodesia

Shortly after this the All Blacks went to Southern Rhodesia and the Post Office there carried out successful shortwave broadcasts to New Zealand, using one of their internal shortwave service transmitters. In view of their clarity arrangements were made for the Rhodesian station to carry the full commentaries on the remaining three Tests, in addition to the South African station. As the series of games progressed, transmission conditions improved steadily with the sunspot changes and for the second and third Test matches they were practically normal. Though the receiving facilities at Longbeach were retained and receivers were installed at Highcliff (Dunedin), Makara reception was superior most of the time.

For the final Test match reception conditions were normal and Makara was used with Highcliff as an alternative. This broadcast was the most successful of the whole series. NZBS engineers gratefully acknowledge the help of the South African Post Office, the Southern Rhodesian Post Office, the SABC, the Australian Postmaster-General's Department, and K. A. Mackie, of Longbeach, for making his receiving site available.

Story of Niue Island

IN May of this year Bryan O'Brien was assigned by the Commercial Division of the NZBS to visit the Kermadecs and Niue Island to compile information for a new series of Sunday night programmes. Only a short stay was made at the Kermadecs, but he put in three nights and four days at Niue, which is 1,350 miles north-east of New Zealand, and has a population of 4,300 natives of Polynesian and Melanesian stock and 30 Europeans, who look after public works and administration for the New Zealand Government. This series of programmes, called *Isles of Romance*, will be heard in 14 quarter-hour episodes on Mondays and Wednesdays at 8.30 p.m., starting at 3ZB on October 3, 1ZB on October 5, and 2ZB on October 10. It has already started at 4ZB.

N.Z. LISTENER, SEPTEMBER 30, 1949.