

## Consolidation Versus Aeration

**T**HERE is one aspect of cultivation which is given much prominence in nearly all articles on cultivation written nowadays, and which could easily be misapplied, viz., consolidation. There are parts of New Zealand, and also certain periods of the year when consolidation should be stressed, but the young and inexperienced farmer is apt to gain an altogether wrong impression of this aspect of cultivation, especially in Otago and Southland.

If the soil is thoroughly cultivated, then under normal conditions consolidation will invariably take place in spite of all efforts to prevent it. The point is how to arrive at a thorough state of cultivation. It is doubtful if too much reliance is not being placed

on the disc harrows as a means of obtaining a fine seed bed. It is quite true that the disc harrows are useful in the early stages of preparing the seed bed, but once a fair tilth has been obtained a better seed bed would almost certainly result by using a cultivator.

### Modern Methods

Our modern methods of cultivation, using the tractor and disc harrows, are tending to drift from one of the main principles of cultivation, which is aeration of the soil. Prior to the advent of the tractor one of the most difficult problems of cultivation was to eliminate air pockets formed by ploughing, and it became common to emphasise the necessity for consolidation when what should have been emphasised

was the necessity for thorough cultivation.

In the early days when shallow ploughing gave good results there was no difficulty in this respect, but once the top soil had become exhausted, farmers found it necessary to plough deeper, not only to bring up fresh soil, but also to break the pan formed by continued shallow ploughing. This deep ploughing brought in its train the problem of the necessity of eliminating the air pockets, and often this was attempted by consolidation instead of by more, and deeper cultivation. It should be remembered that if deep ploughing is practised then deep cultivation must follow if maximum results are to be obtained.

The advent of the tractor seemed to present a solution of the problem of

*"We must  
Grow vast quantities of food  
for the  
armed forces  
of Allied Nations  
in the Pacific"*

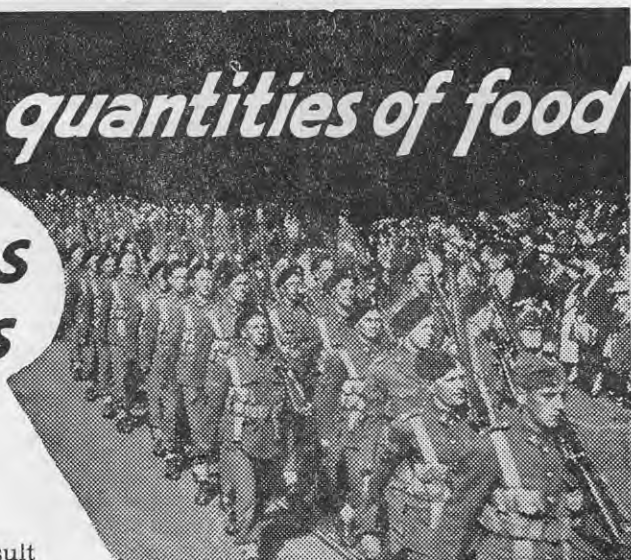
Says Mr W. W. Mulholland,  
President, N.Z. Farmers' Union.

- "Developments in the near future will result in a tremendous demand for our foodstuffs . . . everybody knows . . . that the entire South Pacific zone is becoming a great base from which the Allies will advance against Japan. This country is ideally placed to grow increasing quantities of food, not only for its own forces but also for the troops of its Allies . . ."

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