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potato seed is produced in cold stormy districts. In America, seed stocks come from Maine in the north-east. In Britain, Scottish seed is sought; in New Zealand, South Island lines.

Why is this? Simplified, the answer is that where it is cold and windy the insect carriers of virus disease don't thrive (they may not even exist). In the absence of these carriers virus disease or potato deterioration is so much less a major problem. Rust in cereals in North America was until a few years ago an intermittent harbinger of national calamity. In 1915 the spring-sown wheat crop in the U.S. alone amounted to 370 million bushels. In 1916 the same crop acreage produced 200 million bushels less. The decrease was attributable entirely to rust disease, initiated in epidemic form, when temperatures fell below 62deg. F. for a short period in July (North summer) when air humidity was high.

We don't know much about the so-called epidemiology of rust in New Zealand—witness, for example, practically no rust in wheat this year; in others plenty. We grow rust susceptible varieties here. I am waiting for someone to go up in an aeroplane (as they do in North America) to make spore counts of infection in the air, in those years when westerly winds are unusually prolonged at a certain period of crop susceptibility. Australia suffers rust—little less than U.S.A. Possibly we get some of their surplus infection when the wind blows this way.

Soil Climates

So much for climate. You can't do anything about it other than moan; so let's pass on to a new concept—the micro-climate.

Soil is more than "dirt"—it's living, and the part microbes play in soil fertility processes should be understood

whether you are farmer, gardener, or vaguely philosophical. Organic matter's the key whether you are a compost fanatic, a bio-dynamic farmer, a moon-planting backyard gardener, a soil conservationist, or just a farmer. Organic matter provides the working stimulus, the raw material. In breaking it down, microbes—the micro-population—create conditions, or supply materials, encouraging new growth from and on the earth crust. This micro-population includes members, useful in organic matter decomposition, but detrimental in that some of them (like two-legged forms of life) find parasitism an easy mode of existence. Soil fungi and bacteria thus often cause disease in crop plants—usually some form of root disease. Prevention of these troubles, therefore, requires ability to create soil conditions unfavourable for development of the disease producers. This means manipulating the micro-climate.

Likewise, variations in the soil moisture element of micro-climate are reflected in differing disease outbreaks. High levels of moisture encourage such soil diseases as Club root, Potato scab, Pea wilt, Celery yellow, Lettuce collar rot. But when the micro-climate is dry, different groups of organisms predominate and diseases of low moisture adaptation occur such as Wheat Ball Smut, Oat and Barley covered smut.

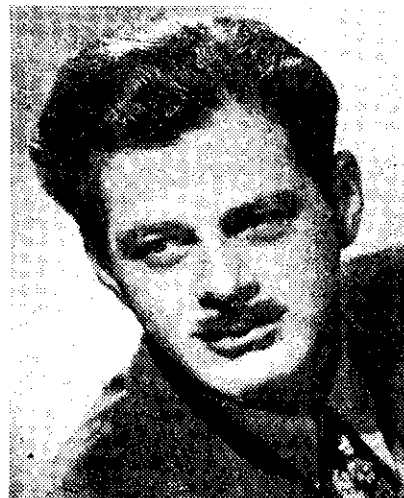
The issues have been over-simplified in some respects. But I have aimed to introduce to you some features of research studies on which extensive information on crop maladies is based. The climate above ground—the micro-climate within the soil—both influence working efficiency, health, disposition, and inter-relationship of the creatures within the influence of the elements concerned. Farmers can't do anything about climate, but many farming techniques are directly influencing soil micro-climates, with consequent results on plant growth.

CORWIN WILL VISIT N.Z.

ALREADY the holder of an award from the United States Institute of Education, as a writer who has "demonstrated the cultural, artistic, and socially important uses of radio," Norman Corwin has again been honoured, this time as the first recipient of the Wendell Willkie "One World" Award. The award takes the form of a world flight and, for New Zealanders, interest in this new distinction for Corwin lies in the fact that he will arrive in Auckland, in the course of his flight, on September 28. He will stay four days in the Dominion.

His mission, according to advice received by the Department of External Affairs, will be a cultural one, intended to facilitate the interchange of goodwill between the peoples of the world in general, and artists in particular. He will be accompanied by a technical assistant.

During the war, Corwin was a pioneer in the field of international radio with such programmes as "Transatlantic Call" and "An American in Russia," and his style of radio presentation will be familiar to New Zealanders who heard "You Can't Do Business with Hitler," "This Is War," or "We Hold These Truths," all of which have been presented from the Commercial stations. In



NORMAN CORWIN

1942 he visited England at the invitation of the BBC, and produced several shows there.

Already he has had a marked influence on other writers for radio on both sides of the Atlantic, and Derek Prentice (formerly of the BBC and now in Melbourne) has announced his intention of applying the Corwin technique to the Australian scene.

POLISHING IT OFF!

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ISSUED BY THE DEPT. OF HEALTH

WARNING Diphtheria is about

A disturbing number of cases of this dangerous disease of children has been reported. Eighty notifications were received in a single week lately—eighty children struck down by a foe they could have mastered had they been immunised.

Since then an abnormally high rate of incidence has been maintained.

If your child is not immunised against diphtheria, have him attended to at once. The best time is between the ages of 6 and 12 months.

It can be done, through the Department of Health, at schools, at pre-school clinics, and at District Health Offices; or your own doctor will do it for you.

**But don't delay—
DIPHTHERIA
CAN BE DEADLY!**

KEEP THIS ANNOUNCEMENT
FOR FUTURE REFERENCE.



FOR A HEALTHIER NATION