

Fertility levels of soil important

By A. W. HUMPHREY
Provincial Soil Analyst
P.E.I. Dept. of Agriculture
The whole business of agriculture is founded upon the soil and basically the latter is the

foundation of our happiness, prosperity and progress. The soil is a residue of weathered rocks, minerals and decaying organic matter. It supplies mechanical support for vegetation and raw materials for plant foods.

For thousands of years before this country was discovered, the soil of this hemisphere was sewed to the earth by roots of trees and grass. The early pioneers cut down the forests, tore up the sod, planted crops and harvested their production without too much emphasis on returning plant food to the soil. As centuries passed, farmers gradually learned that they had to return these plant foods to the soil in order to obtain good crop yields.

Today the farmer must be able to produce above average yields of high quality crops and produce them economically if his operation is to be a success. In order to do this, he must have knowledge of the present fertility levels in his soil, the fertility requirements of the crops to be grown and other measures of soil management



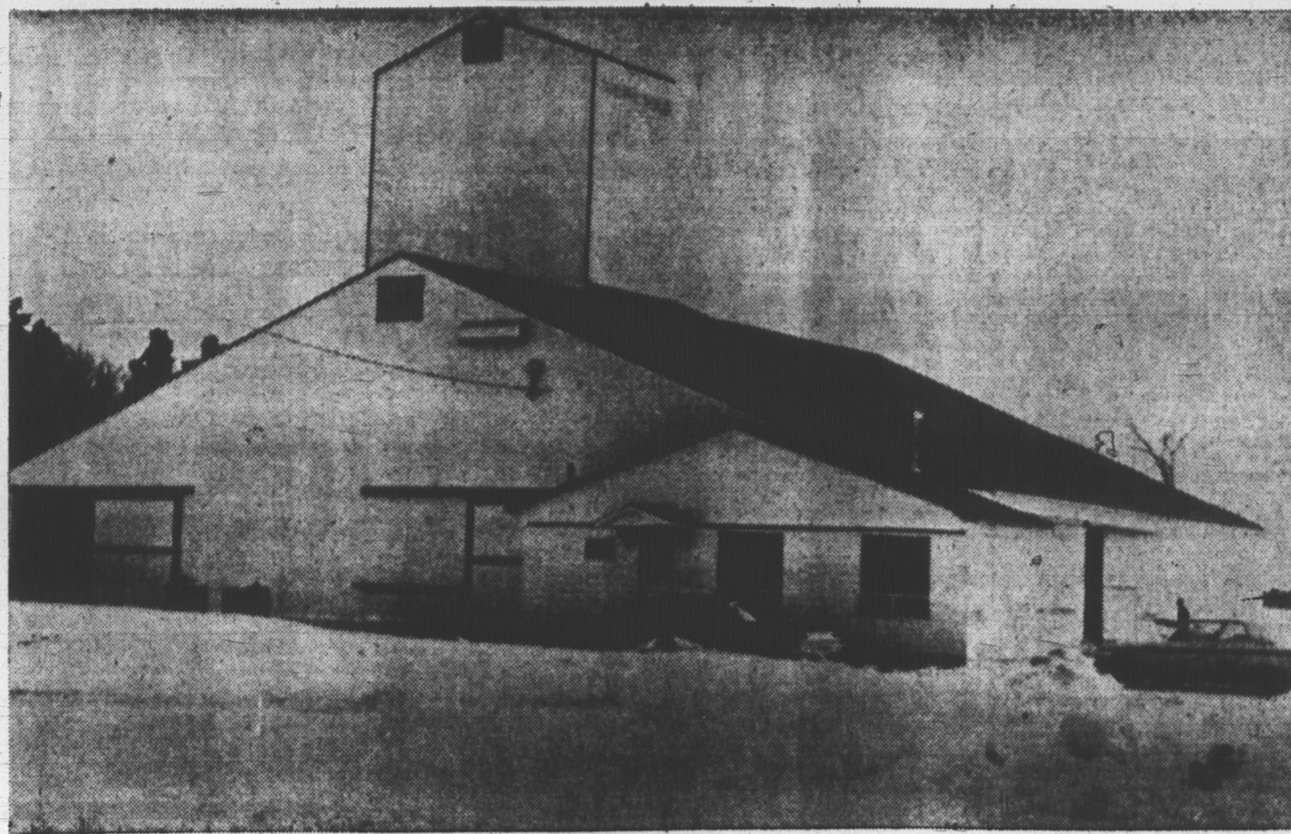
ANDREW HUMPHREY

Have your soils tested so that fertilizer recommendations can be made for each crop and specific soil conditions. If soil tests are not available, the following recommendations may be used as a general guide.

Conditions	Analyses*	Lbs. Per Acre
Grass or mixtures of grass and clover:		
Main pasture mid-June	6-12-12	300-400
early-August	6-12-12	300-400
Supplementary nitrogen when required	Amm. nitrate or equivalent	100-200
Limited acreage for early grazing		
Supplement when required	6-12-12	300-400
Legume sward	6-12-12	300-400
	0-20-20	300-500
BAY and SILAGE		
Legumes—early spring	0-20-20	300-500
Legume-Grass mixtures—early spring	6-12-12	400-600
—after first cut	6-12-12	300-400
Grasses—early spring	6-12-12	400-600
—after first cut	Amm. nitrate or equivalent	100-200
For alfalfa on soils low in boron apply before seeding as a spray or in dry form	BORON**	3.5-4.5
BRAIN		
On average soils seeded out to grass and legumes	6-12-12	300-500
On average soils not seeded out	10-10-10	200-300
TURNIPS		
With 10 tons manure per acre	3-15-6Bx	1000-1200
Without manure	3-15-6Bx	1400-1500
POTATOES		
Without manure	6-12-12xx	1600-2000
With 10 tons manure per acre	6-12-12xx	1200-1400
Soils high in potassium		
without manure	8-16-8xx	1200-1500
with 10 tons manure per acre	8-16-8xx	900-1150
GARDENS		
With manure	6-12-12	800-1000
Without manure	6-12-12	1500-2000
(Rate per 1000 sq. ft. with manure, 25 lbs.; without manure, 40 lbs.)		

*Higher analysis fertilizers can be used (for example 8-16-16, 10-20-20, 12-24-24) at rates to supply equivalent amounts of plant food.
**If boron is applied as a spray use a water soluble material such as "Solubor" or "Polybor-2" or a similar soluble borate material at a rate to supply the required amount of boron.
*Special fertilizers containing boron at 4.5 pounds per ton can be purchased on request for control of BROWN HEART of TURNIPS, COLLAR ROT of MANGELS, BLACK HEART of CAULIFLOWER, and other physiological disorders of plants caused by a deficiency of boron in soils.
On P.E.I., boron may render soils toxic to succeeding crops if used at rates higher than 3.4 pounds boron per acre. All fertilizers containing boron are labelled or tagged with a red tag showing the number of pounds of boron per ton.
For potatoes on very acid soils, where dolomitic limestone has not been used, it is usually better to apply mixtures containing readily available MgO.
Ground limestone should be applied when soil tests indicate need of lime. The use of dolomitic limestone (containing 30% or more MgCO₃) will prevent the occurrence of magnesium deficiency.
The use of chlorinated hydrocarbons such as Aldrin, Heptachlor, Dieldrin, etc. in fertilizer mixtures is not recommended.
Most P.E.I. island soils need lime and fertilizer so have soils tested regularly.

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which contribute to high productivity. Soil testing provides a means for determining the current fertility levels in the soil. These tests indicate the relative levels of plant foods, e.g. nitrogen, phosphorus, potassium, etc. and classifies them as low, medium or high. These tests also measure the organic matter content of the soil and the soil reaction or pH level. The results then provide a basis for recommending effective amounts of manure, limestone and commercial fertilizer to produce an optimum yield of a given crop.

The fertility requirements of crops to be grown are obtained from the research work of Experimental Farms and other Research Agencies. Research personnel are continually investigating the response of crops to applied fertilizer under various conditions. Their results have brought about a better understanding of proper plant nutrition, a knowledge of how to manage different soils and the development of new and higher analysis fertilizers. A more efficient use of fertilizer has resulted and this has helped to reduce unit production costs.

LIMING NECESSARY
In P.E.I., most of our soils are naturally strongly acid or sour. Liming is necessary to correct this soil acidity, or sweeten the soil, in order to obtain high yields of most crops. In addition, lime also supplies the two plant foods of calcium and magnesium and increases the availability of applied and residual phosphates.

The use of fertilizer to maintain and replace plant foods in the soil which have been lost through erosion, leaching and harvesting crops is another essential phase of soil management. Commercial fertilizers contain the major plant foods of nitrogen, phosphorus and potash

which play specific roles in the establishment, development and maturity of all crops. The trace elements of boron, molybdenum, copper, manganese, zinc and iron are also necessary for plant growth, although very small quantities are required. Most of these are sufficiently available in our soil, but, if deficiencies do occur, they can be corrected by the addition of small amounts of these elements to Commercial fertilizers or by foliar sprays.

Mosquito breeding should be avoided

Although they can make life miserable for outdoor enthusiasts, mosquitoes pose a much more serious problem for farmers.

Aside from causing acute distress to field workers, mosquitoes may reduce milk and egg production and adversely affect weight gains in beef cattle, says L. C. Curtis of CDA's Research Station at Kaamloops. The insects can also spread sleeping sickness among horses.

Luckily, farmers can take steps to make sure that mosquitoes do not find breeding places, the researcher adds. A water storage dug-out that is not built or maintained properly can become a breeding ground for vast numbers of the pest. Dug-out banks should be maintained as steep and clean as possible. Cattle should not be allowed to drink directly from the dug-out in order to prevent trampling of the banks.

CLEAR POND WEEDS
As another safeguard, the pond should be kept free of water weeds which, if allowed to grow and break through the sur-

face of the water, could afford shelter for mosquito wrigglers. On irrigated farms, likely breeding spots are to be found where there is seepage from a leaky flume ditch and at the low end of a field if there is an accumulation of surplus water. Correcting these conditions not only helps control mosquitoes but also saves water and allows good land to be returned to profitable service.

FILL WITH SOIL
Slough and naturally swampy sections are other areas that produce lots of mosquitoes but no income, the researcher observes. These can be put to use for crops by filling them with good soil. If this is not feasible they should be drained.

The barnyard can be a source of trouble if biting midges known as "punkies" or "no-see-ums" are allowed to breed there. Mr. Curtis points out. Although mosquitoes require still water in which to breed (hundreds of them can develop in a single water-filled hole of print), the midges multiply in highly polluted mud around watering troughs and where the

bar drainage seeps into the soil. The researcher suggests cementing the area around a trough and providing a run-off for spilled water. Barn drainage should be arranged so as to empty into a deep rock pit.

Brucellosis screening nears close

Preliminary testing of Canada's 12 million cattle for brucellosis will be completed this year and the prospect centers attention on two screening programs aimed at providing an effective and continuing check on the disease.

The Brucellosis Ring Testing (for dairy cattle) and Market Cattle Testing programs were introduced by CDA's Health of Animals Branch to provide speedy detection of new outbreaks of brucellosis in areas which had been certified after the initial testing and removal of infected animals.

In addition to their role in detecting infection, the programs are designed to provide data and information needed to certify the areas, eliminating the necessity of visiting large numbers of farm premises to collect blood samples.

Under the BRT program, samples of milk and cream from each producer are collected at all dairies, creameries and cheese factories in an area and tested for signs of brucellosis. This is done at least three times a year. If a test indicates suspicion of infection, the producer's herd

is blood tested and, if brucellosis is diagnosed, eradication measures are undertaken. Negative ring tests are credited to the herd and area of origin.

In the MCT program, cows four years of age or older and being shipped for slaughter are identified by a numbered back tag. At the packing plant, a blood sample is taken from each of the tagged animals and tested. If a suspicious sample is uncovered, the herd from which the animal came is tested.

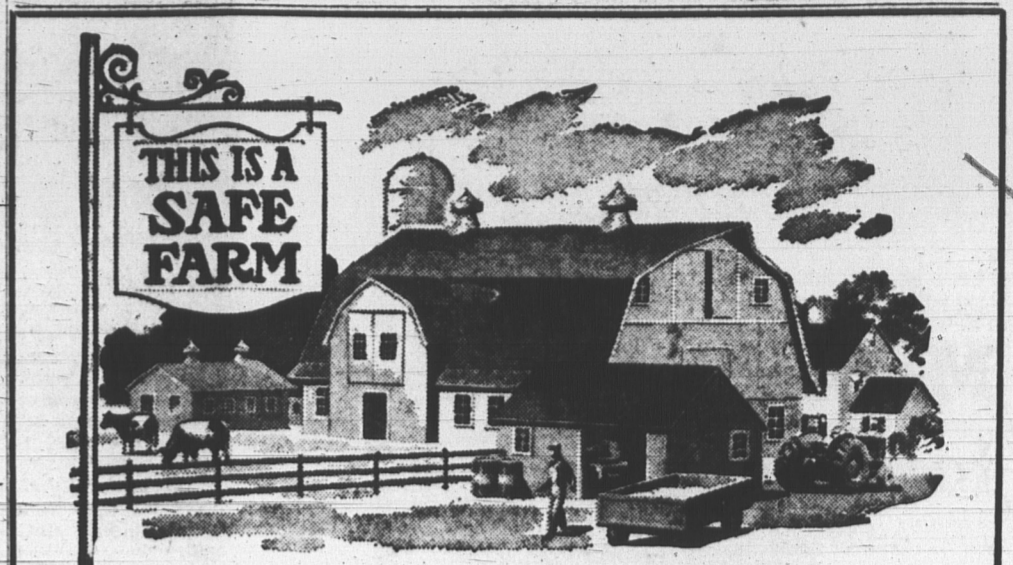
Negative test results, as in the BRT program, are credited to the herd and area of origin.

For the dairy farmer and beef cattleman alike, the programs spell continuing assurance that, should infection somehow be introduced into his herd it can be detected quickly and eliminated before it has a chance to spread.

CHAOS WILL HAVE TO GO
LINGFIELD, England (CP) None of the roads in this Surrey village have fixed names, and several are known by different names to the residents, and

others have duplicated numbers. What most people call Station Road used to have 30 numbers. But municipal council now may enforce a simple system, after an ambulance had difficulty answering an emergency call.

WORDS HARK BACK
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