

## Saskatchewan Soil Testing Laboratory

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### Farm Sample Analysis

The farm soil sample analysis conducted in the 1972-73 fiscal year to January 31 (Table 1) showed a substantial increase over the previous year. A similar increase in volume is expected in the 1973-74 year reflecting the current buoyancy of the world grain market.

### Available Nitrogen Levels

A detailed nitrogen summary by Ag. Rep. districts was not presented in view of the Saskatchewan Advisory Fertilizer Council's decision to discontinue the extension of this type of information. This action was taken after considerable debate over the use (or abuse) of this information in the formulation of nitrogen recommendations. Generally, it was concluded that district and regional summaries promoted the use of general rather than specific nitrogen recommendations and, therefore, are of questionable value.

It was further decided that these summaries should be replaced by extension information which stresses the magnitude of  $\text{NO}_3\text{-N}$  variation from field to field and promotes the concept of soil testing for available nitrogen. This information will be channeled through the recently introduced "Soil Testing Newsletter."

### The Expected Yield Increase Concept

The inclusion of predicted yield increase information on the soil test report has been favourably received by most users. A significant problem in the new system has been the single factor approach, i.e. nitrogen responses on stubble and phosphate responses on fallow.

This problem will be eliminated in 1973-74 by including both nitrogen and phosphate response predictions in the report. No significant changes in the crops included will occur in 1973-74 because of lack of additional data on other crops. Some irrigated crops will be

Table 1

Summary of Farm Sample Submissions to the Saskatchewan Soil  
Testing Laboratory 1966 to 1972

Type of Test	Number of Fields Sampled <sup>1</sup>							
	66-67	67-68	68-69	69-70	70-71	71-72	72-73	73-74
Complete	7,868	11,472	7,386	665	672	1,015	2,250	-----
NO <sub>3</sub> -only			610	122	37	78	50	-----
Fallow-only	-----	-----	-----	-----	325	78	210	-----
Totals to January 31	7,868	11,472	7,996	787	1,034	1,171	2,510	-----
For the year	8,435	12,760	8,802	1,003	1,487	1,724	3,000?	(5,000)? <sup>2</sup>

<sup>1</sup>To January 31st of each year.

included.

### The Soil Fertility Data Bank

A soil-plant nutrient research data bank for Saskatchewan has been established in the Soil Testing Laboratory under the general auspices of the S.A.F.C. and in co-operation with CanSIS in Ottawa. A major objective in establishing the bank was to centralize all nutrient research data pertinent to soil testing and thus facilitate the periodic analysis of this data using a standard approach. Efforts to date include summaries of (1) all phosphate response data on fallow, (2) nitrogen response on stubble, (3) sulphur fertility trials, and, (4) the Soil Science five-year potassium project. The nutrient requirement guidelines for the province (general and Soil Testing) have been revised in accordance with the findings of these summaries. Future activities will include a review of phosphate response on stubble and nitrogen on fallow.

CanSIS is currently developing a standard format for the collection of field fertility research data on a national basis. It is expected that the Saskatchewan format will be revised accordingly.

### Improvements in Soil Testing

Several other developments in the laboratory are worthy of mention. All are designed to improve the service and stimulate greater participation:

1. Soil Testing Newsletter - a periodic communication directed to agronomists and fertilizer dealers has been introduced.
2. The Information Sheet - has been revised and updated.
3. A system of technical bulletins on specific soil management problems is being designed to accompany soil test reports. These bulletins will provide additional information when problems such as salinity, potassium or sulphur deficiency, etc. are indicated.
4. Three hand sampling tools - are now available at cost through

the Laboratory. Prices range from \$23.00 to \$13.00.