

THE IMPORTANCE OF THE FERTILISER ADVISORY SERVICE TO THE SUGAR INDUSTRY

BL SCHROEDER AND RD SOUTHEY

South African Sugar Association Experiment Station, Private Bag X02, Mount Edgecombe, 4300

Abstract

The aims of the Fertiliser Advisory Service (FAS) of the South African Sugar Association Experiment Station (SASEX) are reviewed. The performance of the FAS laboratory was assessed for efficiency, quality of results and number of samples processed. A trend analysis showed that the number of samples received from growers during the past few years was less than had been expected. The resulting loss of revenue, due in part to the drought years experienced, has affected the viability of the FAS as a User Pays Entity (UPE). However, the overall benefits of the FAS should outweigh the cost to the industry.

Introduction

For more than 40 years, the South African Sugar Association Experiment Station (SASEX) has provided a Fertiliser Advisory Service (FAS) with the aim of supplying cost effective fertiliser recommendations to growers throughout the sugar industry. As the present day farmer is not so much interested in whether or not fertiliser is necessary, but rather in what quantities are required for maximum profit (Farina, 1975), the benefits of such a service should clearly be of great importance to the industry and a necessary element of the extension function (Booyesen, 1994). The objectives of this paper are to investigate the viability of the Fertiliser Advisory Service as a User Pays Entity (UPE) and to identify its benefits to the sugar industry.

Functions and costs

The main tasks of the FAS are (1) to analyse the soil, leaf, irrigation water and fertiliser samples submitted by growers and by research workers at the Experiment Station, (2) to provide fertiliser recommendations, salinity/sodicity assessments and specialist advice on sugarcane nutrition, and (3) to ensure that information relating to fertiliser advice is updated regularly. In order to meet these objectives, the FAS employs 12 people, utilises 400 m² of laboratory and office space, and uses equipment with a replacement value of about R1,6 million.

According to the UPE principle, the FAS needs to recover 100% of its functional expenses, which consist of staff expenses, direct operating costs, notional leases, a portion of the costs incurred by supporting departments and any capital expenditure necessary. This currently amounts to about R980 000 per annum. During the 1995-96 season, the number of samples received from growers dropped from an average of 20 000 to 15 000 (Figure 1). As a UPE, the FAS therefore faces an under-recovery of R297 000 in the 1996-97 season. It is estimated that, over the following five years, approximately R1,2 million will need to be spent in replacing instrumentation essential to the laboratory. This includes the replacement of a 25-year old X-ray fluorescence spectrometer which is used for leaf analysis. The replacement value of the spectrometer is approximately R750 000.

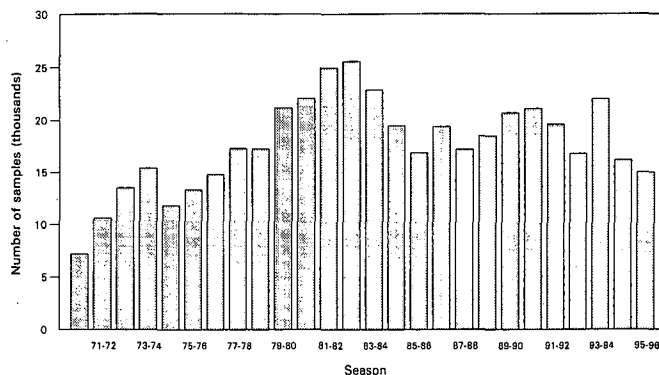


FIGURE 1: Number of growers' samples received seasonally by the FAS over the period 1970-71 to 1995-96.

In terms of efficiency within the laboratory, the calculated productivity figures show that a mean total of 28 850 samples are analysed per season in an average of 3 332 man-days. Participation in a quality assurance scheme run by the Agricultural Laboratory Association of Southern Africa (ALASA) showed that the performance of the FAS is most satisfactory.

The benefits of having a fertiliser advisory service attached to SASEX include increased and/or optimum cane yields based on realistic fertiliser recommendations, an awareness of fertility trends within the industry based on the FAS databank, the assurance of good quality analyses, and the fact that pertinent results obtained through research are directly incorporated into the recommendations made by the FAS.

Summary and Conclusions

Although a decrease in the utilisation of the FAS over the past few years can be partially ascribed to the economic constraints imposed on growers by the drought, the resulting loss in revenue has severely affected the viability of the FAS as a UPE. It is therefore suggested that partial core funding of the FAS be considered to ensure its continued existence within the sugar industry. The FAS will remain technologically sound only if the industry is prepared also to finance the replacement of laboratory instrumentation. This expenditure should be seen in relation to the R200 million spent seasonally on fertiliser by the sugar industry. The cost of a soil sample analysis and its accompanying fertiliser recommendation represents less than 5% of the average cost of fertiliser applied to one hectare in one season.

The FAS has an important role to play in ensuring optimum yields to growers throughout the industry by providing cost effective fertiliser recommendations that are based on the latest technology and research. The benefits of such a service should outweigh any costs that incur to the industry.

REFERENCES

- Booyesen, P deV (1994). Report to the Technical Advisory Committee, South African Sugar Association Experiment Station (unpublished).
- Farina, MPW (1975). Does soil testing pay in practice? *Fert Soc S Afr J* 1: 81-86.