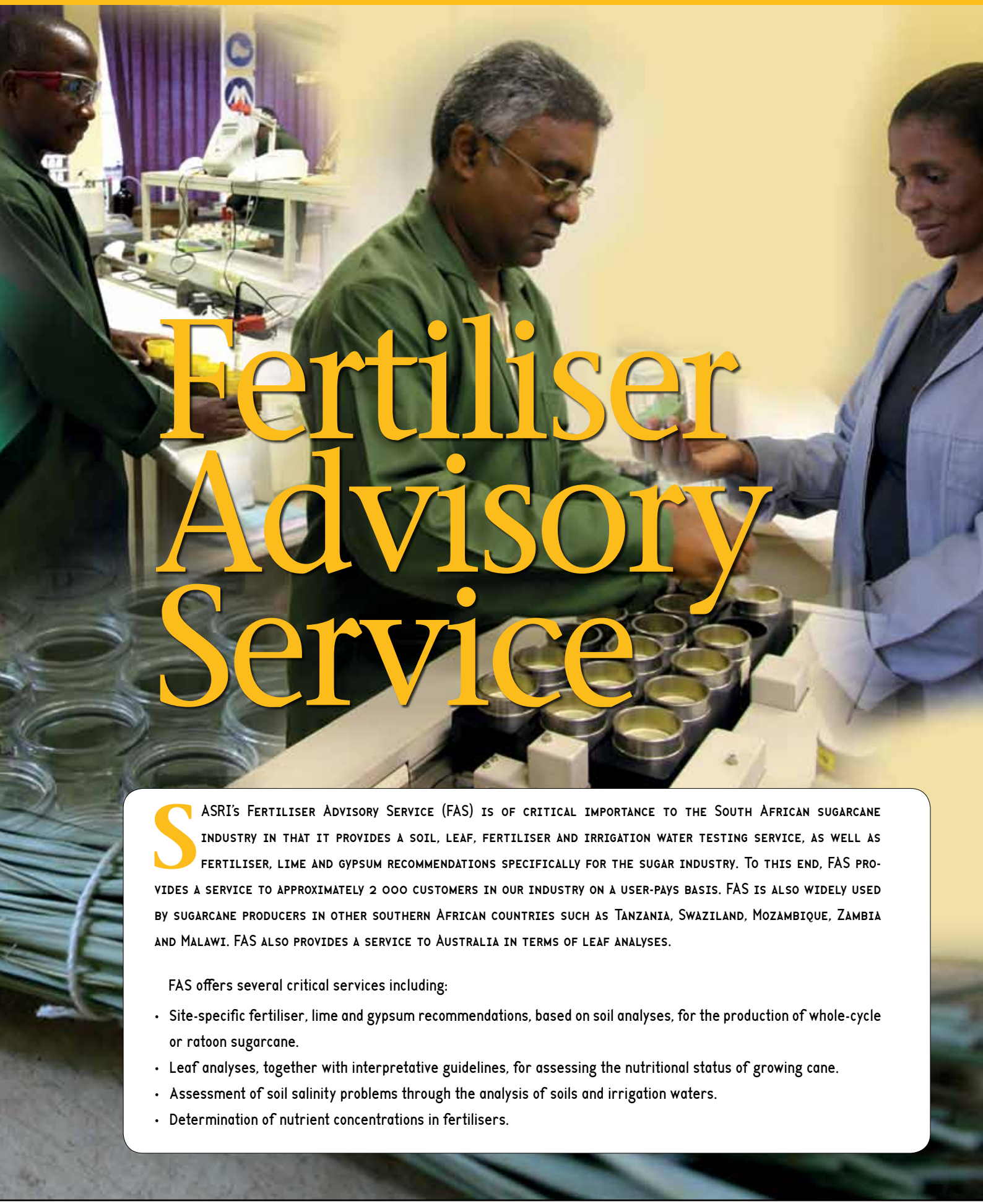

Fertiliser Advisory Service

SASRI's Fertiliser Advisory Service (FAS) is of critical importance to the South African sugarcane industry in that it provides a soil, leaf, fertiliser and irrigation water testing service, as well as fertiliser, lime and gypsum recommendations specifically for the sugar industry. To this end, FAS provides a service to approximately 2 000 customers in our industry on a user-pays basis. FAS is also widely used by sugarcane producers in other southern African countries such as Tanzania, Swaziland, Mozambique, Zambia and Malawi. FAS also provides a service to Australia in terms of leaf analyses.

FAS offers several critical services including:

- Site-specific fertiliser, lime and gypsum recommendations, based on soil analyses, for the production of whole-cycle or ratoon sugarcane.
- Leaf analyses, together with interpretative guidelines, for assessing the nutritional status of growing cane.
- Assessment of soil salinity problems through the analysis of soils and irrigation waters.
- Determination of nutrient concentrations in fertilisers.

FAS was re-launched on the 1st August 2011 to incorporate the latest soil science research findings. Analytical instrumentation and procedures were updated at the same time to ensure that FAS remains at the forefront of analytical advisory services. The new service offers numerous features focusing on improving recommendations to its customers.

Nutrient advice is now customised for each grower. Growers supply an estimate of attainable yield at harvest, and nutrient recommendations are customised according to this estimate. Recommendations are also adjusted for different harvesting systems (burn/trash) and for the impact of any green manuring practices. Furthermore, N recommendations are adjusted for potential N release from soil, and an indication of potential losses through N volatilisation from urea is provided. Fertiliser advice for P and K is also soil and yield-specific.

Measurements are now more accurate. All tests are now performed on a volume basis, thereby minimising errors resulting from variations in soil texture. In addition, FAS now measures pH in calcium chloride, which gives a more stable and reliable pH result, and new tests are used to more accurately determine P in neutral and alkaline soils.

More analyses are now conducted. Exchangeable sodium is determined routinely on all samples, and exchangeable sodium percentage (ESP) reported. This facilitates the identification of soils with sodicity problems. Soil tests for zinc, copper, manganese and iron are routinely carried out at no extra cost, and a silicon soil test value is reported for all soils. This enables the identification of soils with Si deficiencies. Sub-soil analysis is now offered with appropriate gypsum recommendations for combating subsoil acidity.

Improved reporting of results. Reports have been redesigned to allow for easy interpretation of results. For example, key indicators on the soils reports and nutrient values on the leaf reports are now all depicted graphically. Detailed soil and leaf analysis reports are posted and / or emailed. Emailed recommendation reports include a summary report listing all sample results, as well as a data file that can be used in other computer programs.

Since the roll-out of the new service, FAS has experienced a steady increase in soil and leaf sample submissions. The number of samples received for the period Aug 2011 – Mar 2012 indicates a 58% increase when compared to the same period in the previous year. This is a very positive development in that it indicates that more growers are recognising the value that SASRI and FAS are providing as well as the critical importance of taking soil and leaf samples. Ensuring that adequate nutrients are applied regularly to the crop is an essential step towards improving the profitability of operations.

FAS is committed to becoming the preferred analytical service provider for all cane growers on the African continent; it will continue to provide its customers with a state-of-the-art service that gives economically and environmentally responsible recommendations to growers.

Kerry Redshaw
Business Manager
South African Sugarcane Research Institute
South African Sugar Association

FERTILISER ADVISORY SERVICE

Tel: 031 508 7474 / 75
Fax: 031 508 7593
Email: fertiliser.advisory@sugar.org.za
Website: http://www.sasa.org.za

2012 CHARGES FOR ANALYTICAL SERVICES

(Prices subject to change 1 April 2013)

	COST (Rands) (Ex VAT)		
	Sugarcane Related		Non-Cane Related
	SA	SADC Countries	or Cane Related other Countries
A. SOIL ANALYSES			
1. ROUTINE TOPSOIL		*Cost per sample*	
pH ($CaCl_2$), phosphorus, potassium, calcium, magnesium, sodium, exchangeable acidity (Al+H), total cations, acid saturation, exchangeable sodium, zinc, copper, manganese, silicon, and volume weight. Estimates of clay and organic matter, potential nitrogen volatization and nitrogen mineralisation.	112	172	267
2. SUBSOIL		*Cost per sample (each depth)*	
Routine analysis for each depth. Includes a profile subsoil report with gypsum recommendations where subsoil analysis indicates excessive acidity.	112	172	267
3. SOIL SALINITY AND SODICITY		*Cost per sample, first depth*	
pH; exchangeable and saturation extract potassium, calcium, magnesium and sodium; electrical conductivity (EC); saturation %; sodium adsorption ratio (SAR); cation exchange capacity (CEC); salinity and sodicity status and gypsum recommendations.	117	158	175
		Thereafter for each depth, cost per sample	
	48	64	74
4. SUPPLEMENTARY		*Cost per element per sample*	
Sulphur, P fixation (PDI), clay, texture (sand, silt, clay), organic matter, C/N ratio.	68	97	112
B. LEAF ANALYSES			
1. ROUTINE			
Cane leaf (if sufficient material: 40 leaves, 30 cm lengths):		*Cost per sample*	
Nitrogen, phosphorus, potassium, calcium, magnesium, sulphur, silicon, zinc, manganese, copper, iron.	112	172	267
Cane Leaf if insufficient material is supplied (less than 40 leaves, 30 cm lengths), or if sample is cane trash or non-cane leaf:		*Cost per sample*	
Nitrogen, phosphorus, potassium, calcium, magnesium.	112	172	267
2. SUPPLEMENTARY		*Cost per element per sample*	
If insufficient cane leaf material is supplied, or if sample is cane trash or non-cane leaf, supplementary analyses can be requested for sulphur, silicon, zinc, manganese, copper, iron.	68	97	112
C. FERTILISER ANALYSES			
1. ROUTINE		*Cost per sample*	
Liquid Fertilisers and CMS: Total nitrogen, phosphorus, potassium.	155	221	250
Granular Fertilisers, Composts and Manures:		*Cost per sample*	
Moisture, total nitrogen, phosphorus, potassium, calcium, magnesium.	223	317	363
2. SUPPLEMENTARY		*Cost per element per sample*	
pH, sulphur, zinc, iron, manganese, copper, C/N ratio.	68	97	112
D. WATER ANALYSES			
1. ROUTINE		*Cost per sample*	
pH, potassium, calcium, magnesium, sodium, electrical conductivity (EC), sodium adsorption ratio (SAR), adjusted sodium adsorption ratio (ASAR), effective electrical conductivity (EEC).	112	172	267

The Fertiliser Advisory Service of SASRI is a participating member of two laboratory proficiency testing schemes, the Agri Laboratory Association of South Africa (Agrilasa) and the International Plant Analytical Exchange (WEPAL).