

that were tried, alkali sulphites were found to be the most effective.

Based on the foregoing and other observations, an improved method of oxidative digestion has been developed and will be described elsewhere.

C. R. HARIHARA IYER.
R. RAJAGOPALAN.
V. SUBRAHMANYAN.

Department of Biochemistry,
Indian Institute of Science,
Bangalore,
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¹ Narayanayya and Subrahmanyam, *Curr. Sci.*, 1935, 3.

² Narasimhacharya, *J.S.C.I.*, 1935, 54, 596 (Abstract).

Exchangeable Bases in Milliequivalents per 100 gm. of Air-Dry Soil.

Head of analysis	Soil depths	Cholam*	Cumbu*	Cholam†		
				Before Sowing	At shot blade	After harvest
Soda	6"—12"	4.03	2.26	1.23	2.98	4.28
Potash	6"—12"	1.11	0.91	0.82	0.86	1.11
Magnesia	6"—12"	11.55	13.96	12.55	13.85	13.53
Total bases	6"—12"	55.31	55.23	56.10	55.70	58.10
Soda	12"—1' 6"	3.55	2.56	1.36	2.66	3.44
Potash	12"—1' 6"	0.90	0.95	1.07	1.04	0.99
Magnesia	12"—1' 6"	14.21	15.35	13.62	12.93	13.48
Total bases	12"—1' 6"	50.92	50.84	48.00	50.30	50.80

* Average of six samples.

† Average of three samples.

(ii) the increase is continuous with the growth of the Sorghum crop.

Sorghum or cholam....*Andropogon Sorghum*.
Spiked Millet....*Pennisetum typhoides*.

It is not known how exactly this increase in Sodium ion is brought about, but it goes a great way to explain the greater deflocculation and the changes in the physical condition of the Sorghum soils, more particularly their reduced permeability.

In addition, a good deal of evidence has accumulated, in the course of our work, which shows that the explanations usually offered for this phenomenon, *viz.*, soil exhaustion, particularly in nitrogen, toxicity due to the decomposition of plant residues are not in themselves adequate. For example, the injury to the succeeding crop is not seen unless the Sorghum crop is allowed to set seed. Addition of nitrogenous manures like Ammonium Sulphate did not remedy the defect nor did the incorporation of Sorghum

Injurious After-Effects of Sorghum Growing.

WHILE working at the problem of the injurious after-effects of Sorghum in the black soil tracts of the Tinnevely District, it was observed that, after Sorghum, the soils became much more compact and much harder than after the Spiked Millet and that their permeability was considerably reduced.

When examined in the laboratory, certain striking differences were observed in the cationic composition of these soils the results of which are given below.

It will be seen that—

- (i) the exchangeable soda of the soil is greater when cropped with Sorghum than when cropped with Spiked Millet and

stubbles brought from outside, give rise to the adverse after-effects.

It looks as though other causes than those abovementioned are responsible for the injury; the increase in Na-ion is probably one such.

V. RAMANATHA AYYAR.
S. KASINATH.
M. R. BALAKRISHNAN.

Agricultural College
and
Research Institute,
Coimbatore,
July 6, 1935.

On a Method of Preparing Large Thin Sections of Plants by Grinding.

IT is a well-known fact that palm-stems show a peripheral crowding of fibro-vascular bundles in their anatomical structure. This