5. An adaptor, usually made from well casing, is welded to the soil coring tube where the probe head was removed. Make sure the well casing adaptor is the correct size to slide over the coring tube head. In some cases the solid area of the coring tube head may need to be machined down.

6. Cut bayonet slots in the well-casing adaptor to fit the rolled pin that has been added to the coring tube head.

Figure 2 shows a modified soil coring tube. One adapted coring tube head can work for different size coring tubes. When modifying small tubes make sure the well-casing adaptor on the smaller coring tube is the same size as the coring tube head attached to the Bull Probe's driving head.

Cost of materials and labor is approximately $30 per tube. On some Bull Probes, additional chain slides must be added to the driving head to keep the coring tube from bending away from the driving head.

This modification saves much time, allows observation of intact soil cores and reduces the frustration of a stuck soil core.

Soil Survey in Nigeria

Don White

From September 1981 until April 1984, the U.S. Department of Agriculture assisted the Nigerian Ministry of Agriculture in the production of a General Soil Map of Nigeria and the development of a national soil survey capability. Much soil survey work was done in Nigeria but by many different workers, both European and Nigerian, using numerous different methods. Most mapping had been done by the local universities or by foreign consultants. There was no national correlation. There was only an attempt at regional correlation by a few of the more prominent local universities. As a result, similar pedons were commonly classified as one soil series in the southwestern part of Nigeria and a different series in the southeast. The Nigerians wanted to overcome these problems by adopting the use of Soil Taxonomy and by establishing a national soil survey unit. Our four-man team (three soil scientists and a cartographer) was sent to Nigeria to assist them in this effort.

Nigeria is located on the west coast of Africa between 8 and 12° N Lat of the equator. The climate is generally warm and moist. Soils throughout the country are isohyperthermic. Rainfall decreases as you move from the southern coast northward from a high of about 150 inches/year along the southeast coast to about 10 inches in the northeast near Lake Chad. Most of the country gets between 25 to 70 inches of rain. Rainfall is markedly seasonal. June through September is the rainy

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