

USAID and the Colombian Division of IAGS (Interamerican Geodetic Survey) are working hand in hand to provide Colombia with technical assistance in training and instruction in soil surveys and land classification. The three-man soil scientist team is attached to, and paid by, IAGS in Colombia but the expenses are reimbursed by AID. The team also provides some support in cadastral surveys, or the survey of land for tax purposes.

One of the three, Dave C. Kitterman, is currently working on on a project south of Cartagena, near the town of Arjona. This soil survey, comprising a total of 711,000 hectares, ^{and begun in 1966,} is expected to be completed this month. ^(incl a 4,000 h. extension) Mr. Kitterman's work consists of taking soil/samples, conducting field analysis, and ^{gathering} ~~compile~~ information to be used later in the compilation of the two kinds of maps issued by the Colombian Instituto Geografico. They are 1) soils survey, a scientific classification of soils by series and types; and 2) land classification, a classification of soil (land areas) with respect to their value ~~as~~ in irrigated agriculture. Mr. Kitterman is concerned primarily with the 1st class of map, (Work for the second is done mainly through contracts with private companies and in areas where INCORA, ^{the} Instituto Colombiano de Reforma Agraria, is planning irrigation projects.) though on the Arjona project, INCORA contracted with IAGS rather than with a private concern.

IAGS, the Latin American arm of the US Army's Map Service (Corps of Engineers), has the primary ~~function~~ ^{to} of topographic mapping and/or the assistance of other agencies ~~existing~~ for purposes of topographic mapping. The Officer in Charge of IAGS ^{LTC Rinden T. Bennett, Jr.} is also in charge of soil ~~mapping~~ ^{mapping} and land classification, through ~~one of the sub-divisions of his organization,~~ ^{the} that of Basic Resources section ^{of his organization.} Technical backstopping for this section comes from the National Resources Division in Panama. ~~on~~

Once Mr. Kitterman has conducted field tests on soil samples, he will forward ~~major chemical and breakdown analysis~~ ^{others} his samples to the ~~Instituto~~ laboratory

on the grounds of the Instituto ~~Geografico~~ Geografico Agustin Codazzi for ~~chemical analysis~~ detailed chemical analysis. Here, information gathered from the analysis is compiled in a volume of basic information. This is done by specified areas, such as Mr. Kitterman's current project, the Maria La Baja Project south of Arjona (and south of the Spanish-built Canal de Dique).

These volumes of basic information then are used in the compilation of soil and land classification maps which are assembled in the institute. ~~The~~ ~~these~~ ~~these kinds of maps (as described above) are available for general use~~ Colombia uses the Detailed Soil Survey (the last of three types of survey; the other two are Reconnaissance and Semi-detailed) prior to making land classifications.

The maps are used extensively by Colombia in agrarian land ~~reformation~~ ^{land re-distribution} and in the development of areas for irrigated farming. Dr. Victor M. Vaga is the Chief of the institutes Agricultural Department. Inspecting a map-in-the-making with him is Mr. George H. Hargreaven, ~~who is~~ the AID representative for the Basic Resources Survey project as well as ~~a~~ policy advisor for IAGS.

Aside from agrarian reform, the maps are also used ~~as a~~ basis for ^{and evaluation} cadastral surveys, or the survey/of land for tax purposes. There are three sources for these evaluation surveys: 1) existing soils maps; 2) new surveys made by the soils scientists as needed; and 3) private contracts ^{with} ~~for~~ the institute for surveys. A cadastral survey requires at least a Reconnaissance *soil* survey.

The institute has made the proposal that all of Colombia be given a cadastral survey. This would take four years and would require the assistance of the AID/IAGS soil scientist program.