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Agricultural Extension Service

UNIVERSITY OF CALIFORNIA
COLLEGE OF AGRICULTURE
AGRICULTURAL EXPERIMENT STATION

PROJECT No. 1481 Pg. 1

R. Earl Storie
Project Leader

AGR:SOILS Berkeley
Campus and Division or Department

DATE February 13, 1952

Title SOIL SURVEY OF EASTERN FRESNO COUNTY

Personnel Gordon L. Huntington, John Pehrson and J. A. Bedford.

Location of work Valley lands of Eastern Fresno County covering about 1250 square miles in the valley, and 450 square miles in the foothills.

University units co-operating Division of Soils

Co-operation of other agencies USDA Division of Soil Survey, BPTISAB; Fresno County
U. S. D. A., Industries, Growers, other Experiment Stations, etc.

Funds used Agriculture: Soils; USDA, Division of Soil Survey; Fresno County
University, Federal, Grants, etc.

Probable duration 5 years

Research Advisory Committee R. C. Crouch County Director and Farm Advisor

Arthur Pillsbury Head, Division Irrigation and Soils, UCLA

Frank T. Bingham Division of Soils, Riverside

Lloyd Brown Extension Specialist, Berkeley

John Conrad Professor of Agronomy, Davis

Project Record

Approved Signatures

Suggested by Various groups in Fresno County

Date suggested February, 1950

Date begun July 2, 1951

Date of last revision

Date concluded

R. Earl Storie Feb 20, 1952
Project Leader Date

G. S. Lockman 21 Feb '52
Division Chairman Date

Campus Agric. Dean or Director Date

Paul L. Shroy Mar 12, 1952
Director, Agric. Experiment Station Date

Outline of the Investigation—On succeeding pages present an outline of the proposed project following the directions sets forth on the reverse side of this form.

Essentials of an Experiment Station Project Outline in Order of Arrangement

Title. A brief, clear, specific designation of the subject of the research. Words such as "Study of" or "Investigation of" are usually superfluous.

Objectives. A clear, complete, and logically arranged statement of the specific objectives of the project; points to be investigated; specific questions to be answered.

Reasons for Undertaking the Work. A statement as to (1) the importance of the problem to the agriculture or rural life of the State or region, (2) any groups of citizens that have requested the research, and (3) the expected use to which the results might be applied.

Previous Work and Present Outlook. A brief summary covering previous research on the problem (citing the more important publications), the status of current research, and the additional information needed, to which the project is expected to contribute.

Procedure. A concise summary of the essential working plans and methods to be used in attaining each of the stated objectives. Wherever appropriate, the procedure should assure data susceptible of statistical analysis. The phases to be undertaken currently should be designated and outlined in detail. The location of the work and the facilities and equipment needed and available should be shown.

Literature. Give list of existing publications or leading references to the subject. Start a new page in listing publications.

Notes.

1. Whenever any material change in the objectives or procedure of a project is found advisable, a new or revised project outline should be prepared and submitted for approval. It is expected that in any case the period of time between project revisions will not exceed five years. The revision should list phases completed, continuing phases, and new phases begun.

2. Progress Reports:

A. Regular reports on white progress report paper. These reports constitute the basic record of the work on the project and every effort should be made to make sure that the files contain all pertinent information concerning the work. The record should be such that an investigator reading the report many years after it was written would get a clear idea of what was done. A record of negative as well as positive results is of value as well as a record of ideas which later experiments might tend to prove or disprove. Forward from time to time copies of all pages which have been completed. If running reports of progress are not sent at intervals through the year, then annual reports of progress are due each February 1. Copies required: 1 for the office files of the Director of the California Agricultural Experiment Station, 1 for the office files of the campus Agricultural Dean or Director, and additional copies for the files of the division and for the use of the project leader as divisional requirements may indicate.

B. Annual summary reports on green summary report paper. This report is in addition to and not in place of the regular reports of progress submitted on white progress report paper. It should be a clear, concise, one-page statement of the significant results obtained during the preceding year (Jan. 1 to Jan. 1). It is due February 1 of each year. Copies required: 1 for the office files of the Director of the California Agricultural Experiment Station, 2 for the Federal Office of the Experiment Stations—to be sent to the Office of the Director of the California Agricultural Experiment Station, 1 for the office files of the campus Agricultural Dean or Director, 1 to be sent to each member of the research committee by the project leader, and additional copies for the files of the division and use of the project leader as divisional requirements may indicate.

3. Research Committees. A research committee should be established by the proposers of the project on a broad, scientific, subject matter and commodity base, cutting across departmental and campus lines. If a project falls within the particular interest of an Extension Specialist, he should be included on the research committee.

4. Prior to submission to the Director, the project statement and outline should be submitted to the members of the research committee for their suggestions. This can be done at a meeting of the committee or by mail. Suggestions made should be considered; but the responsibility for adopting the suggestions rests with the project leader and the department head.

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REPORTED BY R. Earl Storie
AGR:SOILS Berkeley
Campus and Division or Department
DATE February 13, 1952I. OBJECTIVES:

A detailed study and mapping of the soils of Eastern Fresno County considering origin, formation, and specific characteristics of the soils including slope, erosion, alkali, drainage, and irrigation, and a correlation and classification for the specific needs of cooperating agencies, with special reference to crop rotations, fertilizer requirements, and land use.

II. REASONS FOR UNDERTAKING THE WORK:

To complete the inventory of the soil resources of eastern Fresno County. This inventory is needed for the Agricultural Experiment Station in connection with its agricultural activities, and for a comprehensive soil survey of the State. In addition, it is needed to complete the detailed soil survey work of the San Joaquin Valley. This survey has been requested by a large number of agencies, and individuals, in Fresno County including the Farm Bureau, Chamber of Commerce, Irrigation Districts, Banks, Real Estate Brokers, Fresno State College, and the County Assessor's Office. The survey will be used as a basis for the location and execution of experimental work in the County including soil fertility, the equalization of land assessments by Fresno County, and in planning the development of the lands of the County.

The County Board of Supervisors of Fresno County has appropriated \$7500 to be used in this soil survey.

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III. PREVIOUS WORK AND PRESENT OUTLOOK:

The last soil survey covering lands in this portion of Fresno County was the old Reconnaissance soil survey of the Middle San Joaquin Valley, which was made in 1916. This survey was of a generalized nature (map scale of one inch equals two miles), and does not meet the current detailed needs of land use, and developments, although it has been very useful. Present soil survey technique is based on the use of aerial photographs as base maps, and detailed study of soils in the field, laboratory, and greenhouse.

Detailed soil surveys have been completed in the adjacent counties during the past 15 years (e.g., Soil Survey of Kings County; Soil Survey of the Visalia Area; Soil Survey of Madera County).

IV. PROCEDURE:

This work is to be done by the University of California in cooperation with the Division of Soil Survey, Bureau of Plant Industry, Soils, and Agricultural Engineering, USDA. Mr. Gordon L. Huntington will be chief of the soil survey party in the field, assisted by Mr. John Pehrson, who is employed from Fresno County funds. Field transportation, for at least the first year of this survey, will be supplied by Fresno County.

Mr. J. A. Bedford was assigned to field work in Fresno County, on February 12, 1952, by the Division of Soil Survey, USDA.

Field soil mapping will be done on aerial photographs (scale 1-20,000), with transfer of the data to topographic maps as soon as such maps are available.

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Laboratory work will be handled by the University of California at Berkeley, or at the field laboratory of the Agricultural Extension Service in Fresno.

All participation in this survey by the University of California will be directed by R. Earl Storie or/and Frank Harradine. Inspection and correlation work will be handled by Mr. Storie and Mr. Harradine, representing the University, and Messrs Ray Roberts, and Robert A. Gardner, representing the Division of Soil Survey, USDA.

Following completion of the field work, the University staff will compile the soil map of Eastern Fresno County, and publish 1000, or more, copies of this special soil survey release. The maps will be published in black and white.

The survey data will also be compiled into units necessary for publication by the Bureau of Plant Industry, Soils, and Agricultural Engineering, USDA.

It is estimated that the field work will take about three years to complete, and the writing of the report another six months.

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IV. LITERATURE:

Reconnaissance Soil Survey of the Middle San Joaquin Valley, California. 1915.

Revision of the Soil Rating Chart, 1948.

Natural Land Classification, Part IV. Rural Appraisal Memorandum, State
Board of Equalization, 1940.

Soil Survey Manual, USDA, 1951.

Soil Survey of Kings County, California.

Soil Survey of the Visalia Area, California.

Soils of Western Fresno County, California.

Soil Survey of Madera County (manuscript form).