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PROCEEDINGS

of the

WESTERN FARM ECONOMICS ASSOCIATION

Sixteenth Annual Meeting

June 24, 25 and 26, 1943

University of California Berkeley, California

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Research in Progress in Agricultural Economics and Rural Sociology in the West-June 29, 1943

-Norman Nybroten-

There were two main, although related, purposes for obtaining a report on the current research in the West. The first was one of promoting more exchange of information and techniques by personnel working on similar problems in different institutions. The other was one of furnishing a guide for the subject matter to be considered at the annual meetings of the Western Farm Economics Association, which should facilitate the first purpose. It would have been desirable to have the projects classified by subject matter but the classification would have been difficult and at best somewhat superficial.

At the time of this writing all but one of the ll Western States have submitted reports on the research in progress. The coverage for all the research in the area is far from complete. Not all the States reporting covered all the departments in their State. The reports from the several institutions were edited "down" for spatial reasons. Conciseness and terseness were aimed at in the editing—perhaps resulting, in many instances, in dogmatic inadequacies not to be attributed to the orginal reports.

The war-time farm labor problem is receiving a good deal of attention. Five projects deal with requirements, two with the local supply, and two with both supply and requirements. From the standpoint of the number of projects, it seems that requirements are receiving too much emphasis relative to that put on supply, many of whose aspects are highly localized. Undoubtedly a consolidation of efforts and findings, on the part of the personnel working on requirements, — using the approach of estimating differences among areas — would lessen the job and add to the validity.

The B.A.E. study of "Agriculture's Maximum Wartime Production Capacity" has apparently brought about many interesting studies. Besides the common phases coordinated by the B.A.E., these variously entitled projects contain many interesting secondary phenomena of research.

It is interesting to note that only one project puts primary emphasis on cooperatives. One might have expected projects studying the efficacy of cooperatives in the war effort on the one hand or the impact of war on the cooperatives on the other. No doubt the main reason for the lack of this is that some other agencies are doing the main research in this field. Notwithstanding this fact, it might be expected that there would be some cooperative projects — particularly with the F.C.A.

The several departments were asked to what extent and in what way their research organization was affected by the war. It is evident from the projects that the nature of the research is affected. Departments indicated difficulty of retaining personnel. Some men have been loaned to Federal agencies, some in the army, and some teaching technical subjects in the military departments of their own institutions.

University of Arizona

I Supply Price Relationships and Trends As They Apply to Arizona Farm and Ranch Products.

George W. Barr, and Mrs. Alberta Hart.

Objectives: Assemble statistical information on production and prices of Arizona farm and ranch products and to draw such comparisons and deductions as will be useful to those who guide the directions of Arizona's agriculture.

Results to date: A study was made of the costs, returns, and profits of the Salt River Valley dairy industry. Study shows tables on historic prices received by dairymen for the several grades of milk sold, and comparisons with the U. S. farm price of butterfat, monthly, from January, 1925 through March, 1943; also tables showing the cost of feed ration, cost of labor, and "cow cost", by years, 1935 to 1943. Arizona Agr. Exp. Station Mimeographed Report No. 46, July, 1942, covers this study through June, 1942, and is entitled "Measures of Profit in Dairying, Salt River Valley, Arizona".

An analysis of production, income, and costs in Arizona's agriculture, with special emphasis on food production, was continued in the year 1942-43. Arizona Agr. Exp. Station Bulletin 188, published February, 1943, entitled "Arizona Agriculture, 1943: Production, Income and Costs".

Parity price studies were continued throughout the year on major Arizona commodities.

Analysis of commodities produced have indicated the relative wartime importance of the several commodities produced in the State.

Expected date of conclusion: This is a continuing project.

II Processes and Procedures in Community Organization: Community Participation Control.

E. D. Tetreau.

Objectives: Ascertain the extent to which families in the same occupational groupings vary from community to community in social participation, with special reference to the schooling of children and the voting of adults, with attention also to their support of organizations and institutions.

Results: Some clearer lines of the structure of communities within which changes are taking place are being determined by this study. The results of observation on the impact of war upon communities seem much clearer than might have been the case had not some basic work been done on the structure of communities. Paper, "The Impact of War on Some Communities in the Southwest" published in American Sociological Review, Vol. 8, No. 3, June, 1943.

The study of the structure of Arizona rural life, dealing with the location of centers of local importance as to elementary and secondary education, organized religion, transportation and communication, and banking in Arizona makes it possible to set up a preliminary classifi-

cation of communities.

Expected date of conclusion: This is a continuing project.

£04

LIF Methods for Economizing on the Use of Labor and Machinery in Crop and Livestock Production.

Ned O. Thompson and George V. Barr.

Objectives: Devise ways and means of making maximum use of available supplies of farm labor and farm machinery.

Results: Arizona Agr. Experiment Station Bulletin 187, "Sharing

Farm Machinery", published in January, 1943.

Information has been used in administration of the farm machinery rationing program.

Expected date of conclusion: This is a continuing project.

IV Laborer Population in Arizona and Conditions Under Which It Would Be Available for Farm Employment.

E. D. Tetreau.

Objectives: Estimate the numbers, and find locations of laborers in Arizona available for the heavier work seasons in Arizona's agriculture, with special reference to irrigated farms.

Results: Arizona Agr. Experiment Station Bulletin 186, "Wanted.

Man Power for Arozona Farms" published in November, 1942.

Arizona Agr. Experiment Station Mimeographed Report No.52, Feburary, 1943, set forth the hired labor requirements for 1943 in Arizona, in the light of announced crop goals for the year. Labor shortages in Arizona's five major irrigated farming counties were estimated at 4,000 for the months of April through August. Beginning with September, the requirements for cotton pickers very greatly increase the total shortage. Unusually large acreages of stub cotton in the spring of 1943 indicate, among other things, the farmers' unwillingness to invest large sums in another planted crop after the difficulties experienced in harvesting the 1942 crop.

Expected date of conclusion: Research continues along this line and further reports are to be released.

Colorado State College

- I Type of Farming Adjustments in Wartime.
 - L. A. Moorhouse, leader; R. T. Brudick and A. W. Epp.

Objectives: This study was undertaken to acquire a more comprehensive understanding of the agriculture of the state as a whole; to locate and delimit the different type-of-farming areas within the state; to determine the general character of farming carried on in each area; and to identify and evaluate the relative importance of the various forces and conditions which have been and are now shaping the type of farming in various parts of the state.

Results to date: This study has provided background material which has been used in dealing with agricultural problems of the state, in teaching agriculture and related subjects in colleges and public schools, in making recommendations to furners, in placing a limit upon the application of such recommendations, and in formulation land-use policies.

Expected date of conclusion: It is expected that this project will

be completed during the fiscal year 1943-44.

II The Effects of Wartime Demands upon the Economic Relationship between Colorado Ranch and Range Properties.

R. T. Burdick, leader; A. W. Epp and L. A. Moorhouse.

Objectives: Determine the changes in ranch organization and management that have resulted from recent developments in production, in markets, in financing, and in the regulation of public lands; study the effects of these changes upon ranch expenses and income; what extent the reported trend toward family-sized units is making healthy progress; ascertain some of the wartime impacts upon this enterprise; suggest desirable ranch management and organization practices that appear to be best suited to a war economy.

Results to date: Evidence points (a) to substantial increases in private ranch investment to offset effects of changes in permits on either national forest or public grazing lands; (b) to shifts in size of operation; and (c) to shift from sheep to cattle in order to adjust the ranch business to labor supply. Practical applications have been (1) to aid ranchmen in the solution of current economic problems and (2) to assist in teaching students some of the more important business phases relating to western ranching.

Expected date of conclusion: This project will be continued for 3 or more years.

III Form Business Analysis Studies as Affected by World War II.

R. T. Burdick, leader.

Objectives: (1) Assemble form management data by type-of-forming areas in order to provide County Agricultural Program Planning committees with information to guide in making practical recommendations for adjustments in agriculture, (2) furnish research information indication profitable enterprises in various areas, and (3) construct a guide for the selection of extension projects in formulation county extension programs.

Results to dome: Dry-land studies have indicated some of the problems facing those individuals who would (a) confine these areas to a grazing economy. The years 1941 and 1942 have returned incomes that exceed a generation of grazing use of these same areas; (b) certain limits in the selection of dry land crops suggested. Wheat everywhere is proving superior to corn when measured by 1941 or 1942 incomes on farms located in the eastern plains area of the state.

Expected date of conclusion: Several years.

IV A Study to Determine the Economic and Social Effects on Farms Resulting from the Operation of a Definitely Planned Program of Soil Conservation.

Kenneth H. Myers, Economics Section, Soil Conservation Service, and L. A. Moorhouse.

Objectives: Information to be used in revising and improving the agricultural conservation program in the plains area through (1) a study of farm organization, operation, and extent of erosion in two typical areas to determine (a) effect of cropping systems and farm operation, (b) relation of prevailing farm practices to needed adjustments in the area, and the cost and need of practices effective in controlling erosion and soil depletion, (c) relation of livestack preduction to the forage and range resources in

each area, (d) the most efficient size units for the dominating systems or types of farming in each area, and (e) extent of tenancy and the nature of rental agreements to soil conservation. (2) To facilitate revision of the recommendations made in connection with the regional adjustment projects in order to provide a better basis for planning and administering the agricultural conservation program.

Results to date: More time is required to grow and harvest crops on terraced and/or contour cultivated land than on untreated land, the increase amounting to 10.6 per cent in growing and harvesting wheat and 26.3 per cent in growing row crops. Amount of man labor is increased approximately 17 per cent in performing field operations on a typical wheat farm, assuming usual crop production practices and an average rate of performance. This increase is approximately 15 per cent on a typical row crop farm. These additional costs are small when compared with the estimated benefits of terraces or contour cultivation.

Expected date of conclusion: Fiscal year 1943-44

V Wartime Problems in the Marketing of Colorado Fruits and Vegetables and in the Production of Colorado Poultry Products.

A. W. Epp, leader

Objectives: Fruits,— Survey and analysis of various Colorado fruits and vegetables in order to determine (1) consumer buying and use habits and attitudes toward Colorado products, (2) effects of the present marketing system in getting the products to the consumer in good condition, and (3) attitude of brokers, jobbers, wholesalers, and retailers in Colorado fruits and vegetables.

Poultry products.— (a) Marketing channels through which poultry and eggs are distributed on their way from the producer to the consumer; (b) present marketing facilities and methods of handling and storing eggs; (c) to formulate an officially supervised marketing program which will provide the consumer with a uniform high quality product; (d) transportation difficulties due to wartime conditions and to consider means of overcoming them.

Results to date: Fruits.— Colorado peaches are readily accepted and are definitely preferred on some markets. Improvements in marketing Colorado peaches could be made by picking peaches at a somewhat riper stage, brushing all peaches, and putting out a more uniform and better pack.

Poultry products.— (1) A survey of wholesale dealers in Denver, (2) a study of the State inspection service, (3) a study of egg legislation in the United States and Canada, and (4) an analysis of markets in some country points will be made during the current year. No specific results yet.

Expected date of conclusion: This project will be continued for 2 or 3 years.

VI Health Practices and Attitudes of Rural People in a War Period.

R. W. Roskelley, leader.

Objectives: (1) Extent to which rural people observe some of the health practices that are prescribed for healthful living, (2) attitudes of rural people toward the sufficiency or nonsufficiency of their observance of these practices, (3) reasons that people do not observe approved measures more completely, and (4) general problems related to the observance or nonobservance of certain health practices.

Results to date: Heny rural people in Colorado do not eat the minimum

• variety and quantity of fruits necessary to maintain bodily health and vigor which are essential for the constructive effort required to win the war in the shortest possible time. Furthermore, very few people who eat less than the minimum express attitudes of dissatisfaction toward the food they eat. This suggests that these people either do not know what the minimum standard is or that they are satisfied with sub-standard diets.

Expected date of Conclusion: This project will in all probability be

completed during the fiscal year 1943-44.

VII Techniques and Procedure Associated with the Administration of an Overall County Agricultural Program in a War Economy.

R. W. Roskelley, leader; Paul M. Berry and L. V. Toyne.

Objectives: Analyze planning processes in two counties in an effort to discover techniques and procedures which will facilitate planning and determine what human and social factors contribute to its success or failure. More specifically, an attempt has been made (1) to determine and find answers to the major problems facing lay leaders, (2) develop a program of leadership training in the light of the problems as to methods, techniques, and subject matter, (3) evaluate the importance of leadership training in the minds of the people, and (4) ascertain how much their ability as leaders can be increased within a relatively short time by a course in leadership training.

Results to date: According to the people's own evaluation their ability to find answers to and to cope with specific problems mentioned was increased over two times. They estimated that their general ability as leaders had been increased on the average 60 per cent, and 80 per cent of the people who attended the class indicated that leadership training was of such in ortance in the county that those in charge should spend more time on this phase of work.

Empected date of conclusion: This project will be continued 1 or 2 years.

VIII Farm Population and Farm Population Movements Influenced by the War.

R. W. Roskelley and Conrad Tacuber.

Objectives: To determine on basis of an adequate and representative sample the number of persons living on farms in the State of Colorado at the beginning and end of each year starting with 1937, the number of births and deaths in the form population, and the number of persons who move to and from farms within the State during the year.

Results to date: Nature and extent of population shifts and same implications for institutional and other types of adjustments imperative in a war economy. Reason for the acuteness of many labor problems on the farm.

Expected date of conclusion: Indefinite period.

University of Idaho

I Profitableness of Diversification in the Idaho Palouse Wheat Area-Idaho, Lewis, Nez Perce, and Latah counties.

V. B. Fielder and Paul A. Ekc.

Objectives: Compare the relative profitableness of cash-grain farming with a system of farming diversified by the production of specialty crops and livestock. Possibilities of producing livestock, livestock products and special crops needed for national defense. Explore the possibility of profitable operating farms smaller than the prevailing cash-grain farm.

Results to date: About ninety farm survey records were secured last winter by personal interview. Data collected are now in process of

summarization and analysis.

Expected date of conclusion: Summer or fall of 1943.

II Economic study of the use of recently developed small-size farm tractors and supplementary equipment on irrigated farms.

Henry H. Stippler, B. A. E. and Paul A. Eke, Idaho Exp. Station.

Objectives: To determine the relative advantages and disadvantages in the use of small tractors on irrigated farms by determining capacity, efficiency, physical and monetary cost.of farm power.

Results to date: Tables have been made to show: (1) Type, age, value and depreciation of tractors, (2) performance rates on field operations, (3) comparison of average rates of performance for tractors and horse.

Expected date of conclusion: Possibly with year 1943.

III Wartime Agricultural Capacity of Idaho.

Paul A. Eke, chairman, staff of Experiment Station and Extensions Service, and B. A. E.

Objective: Sec title.

Results to date: Consulting well begun and some tentative figures determined.

Expected date of conclusion: July 31, 1943.

IV A Study of the Factors Influencing the Market Value of Real Estate in Latch, Nez Perce and Lewis Counties.

Norman Nybroten

Objectives: Land-value trends and levels by area and land quality. Capitalization rates. Differentiation by purchaser intent. Loan-campying capacities. Direct is time in property taxation. Theat yields and values. Mertgage rates, amounts, duration by size and quality of tract.

Results to date: Major objectives largely achieved. Reported in Idaho Exp. Sta. Bul. 248, Land Values, Nortgages, Rents, and Meat Yields of Northern Idaho Wheat Lands. Vork in progress largely supplementary and for trends- furnishing some data to B. A. E.

Expected date of conclusion: Indefinite - largely concluded.

V Labor Requirements for Major Crops in Idaho by Operation, Season, and Area.

Norman Nybroten and P. A. Ekc

Objectives: Information for labor administrators, farmers and possibly some background for farm man gement and cost studies.

Results to date: Scattered information from various sources compiled. Some information from other States adjusted to Idaho conditions. Production departments consulted.

Expected date of conclusion: Crop season of 1943 - possible into 1944.

VI Production Costs and Marketing of Grass, Garden and Field Seeds in Idaho.

Norman Nybroten, L. J. Fenske and P. A. Eke

Objectives: (1) Seasonal labor requirements, other costs and the comparative advantages of vegetable, condinent, and oil-producing secds grown in Idahe. Marketing and processing methods, capacities, efficiencies and limiting factors. Furnish purchasers - especially federal governmentbasis for better pricing. (2) Describe production methods. (3) Relate practices and intensities of field operations to yields and net income.

Rosults to date: Objectives (1) and (2) quite well achieved. Data, : especially period covered, inadequate for parts of objective (3). About 150 schedules but practices extremely varied accessitating more data. Farmers' everoptimism in their "normal" yields compared with actual yields. Partly reported in Idaho College of Agric. For Circ. 17, Prospects in Grewing Vegetable Seeds in Southern Idaho in 1943.

Expected date of conclusion: Largely concluded except for objective

(3). Pending more field work.

VII Area Analysis of the Environs of the Farragut Naval Station in Kootenai County.

Paul A. Eke for Experiment Station and Norman Nybroten et. al. for National Resources Planning Board.

Objectives: Explore rural problems. Assemble and analyze from secondary sources, data and reports on the more salient problems of the rea. Results to date: Embodied in APEL AT LYGIS OF KOOTSTLE COUNTY, with Reference to Adjaining Counties (confidential draft) National Resources Planning Board.

Expected date of conclusion: June 30, 1943.

Montana State College

MS 761: Ag. Ec. 77 - Rural Social Organizations and Institutions in Montana.

Carl F. Kraenzel

Objectives: Nature and characteristics of social organization and institutions in Montage, origin and avenues of importation of social ideas, degree of adaptation to local and environmental conditions. Whether such mal-adapted ideas are instrumental in creating social problem conditions

for agriculture in the Plains region as represented by Montana and what the nature of adjustments might be to develop and adapted social organi-

zation and institutional program for the Plains region.

Results to Date: Publication of "Northern Plains in a World of Change", a cooperative enterprise between Canadians and Americans; between colleges and experimental stations (especially Montana State College and Experiment Station) and the Rockefeller Foundation, along with the Canadian Association for Adult Education and the Northern Plains Advisory Council.

Expected Date of Conclusion: 5 years.

II MS 771: Ag.Ec.79 - Economic Aspects of Montana's Agricultural Production In Relation to War Needs.

R. R. Renne, O. A. Parsons, G. H. Craig, John C. Bower, and other members of the Department.

Objectives: To analyze the economic resconse of farm and ranch operators to the production goal program in terms of costs, prices and rationing factors. (1) Influence of the changing costs of factors of production upon attainment of production goals for individual farmers and for particular type-of-firming areas in the production goals programs. (2) Influence of price upon the shifts in production of crops, livestock and livestock products between farms and between type-of-farming areas within the state. (3) Economic feasibility of transporting feed and livestock from surplus and deficit feed areas in the attainment of production goals and minimization of post-war adjustments. (4) Influence of rationing agricultural products upon the cost of production and distribution of those commodities. (5) Effect of increased costs of public services upon land use in various type-of-farming areas.

Results To Date: Plains agriculture will probably continue to expand in 1943 and 1944 in terms of increased livestock numbers and acreage in crops. Facilities for expansion are available and the farmers and ranchers are responding to the plea for more food. In Montana and the Plains much of the increase represents recovery from drought and depression. creases are expected in acreage of corn, wheat, flax, soybeans, dry beans, potatoes, hay and roughages. Decreases in certain feed grains and especially in sugar beets are likely. Moderate increases are likely in cattle and poultry, shorp increases in hogs and little change in sheep. Labor and machinery shortages continue to be the major problems of Plains and Montana producers, but farmers and ranchers are adjusting to these conditions with the help of the draft deferment policies, machinery priority and rationing.

Expected Date of Conclusion: Expected date by the end of the war.

III MS 714: Ag.Ec.66 - An analysis of Montana Farm Taxation and Related Public Finance Aspects of Agricultural Adjustment Programs.

R. R. Renne.

Objectives: (1) Amount and location of farm the delinquency and tax deeds in the state in recent years, the effect of such forced sales upon the land ownership pattern, and the analysis of the causal factors; (2) Based on related productivity and farm management data, an estimate as accurate as possible of the true productivity value of agricultural lands, and compare such values with those used for tax assessment purposes with

a view toward analyzing relative tax burdens carried by different grades of agricultural land; (3) Analyze and determine the relative tax burdens carried by different kinds of property and by different classes of the same kind of property in the state; (4) Determine the various and net effects of agricultural readjustment programs, including the land acquisition program on local public organization and finance, including (a) change in tax revenues, (b) reduction in costs of local government through possible redistribution, (c) collection of taxes now delinquent, and (d) purpose for the lease returns and income available for public services.

Results to Date: (1) Montana counties are in the soundest financial condition in their history. Counties as a whole have a net credit balance. (2) County officials are not faced with the problem of finding suitable investment for surplus funds. (3) Current, national, fiscal policy relating to war finance is making available an excellent field of investment for counties in the form of war bonds. (4) Montana county officials lack investment experience and knowledge and desire information and guidance on sound investment policy for reserves for the post-war period. (5) National Agricultural Adjustment programs have greatly increased farm income and tax paying ability. This coupled with better crops and range conditions are a major factor in explaining the sound fiscal condition of Montana counties. (6) Montana farmers pay out a relatively large proportion of their net income in the form of taxes compared with most other groups in Montana.

Expected Date of Conclusion: One year.

IV MS 753: Ag. Ec. 69 - Farmer's Cooperatives In Montana

H. F. Hollands, and John C. Bower

Objectives: General characteristics of farmers' cooperatives in Montana including: 1. Legal status, date and type of organization. 2. Nature and volume of business. 3. Favorable and unfavorable characteristics. 4. Salary of manager. 5. Type and quality of education rogram. 6. Policies regarding dividends on capital stock and patronage dividends. 7. Price and credit policy. 8. Analysis of available audit reports.

Results to Date: Methods of sale and type and sizes of containers in which it was sold by various producers were determined. Larger producers sold most of their honey in small containers for sale to consumers without repacking by the retailer. Small producers sell to wholesalers in 60 pound containers. Honey producers are not particularly interested in marketing honey cooperatively as long as prices are as favorable as at present.

Expected Date of Conclusion: One year.

V MS 754: Ag. Ec. 70 - Grain Marketing In Montana.

John C. Bower

Objectives: Factors affecting the successful operation of farmers' elevators and the prices the elevators can return producers for their grain.

Results to Date: None

Expected Date of Conclusion: End of this fiscal year.

VI MS 755: Ag.Ec. 71 - Marketing Montana Livestock and Livestock Products.

H. F. Hollands and John C. Bower

Objectives: 1. Most profitable present and probable future market for Montana livestock and livestock products, under verying conditions and at varying periods of the year, with reference to (a) demand conditions in each major market receiving Montana livestock and livestock products, (b) price making forces operating within and between markets, and (c) relative transportation costs, including shrinkage and losses.

2. Most profitable grades and classes of livestock and livestock products for Montana producers, with respect to (a) time and place of marketing, and (b) demand and price making forces as affecting grade and class differentials.

Results to Date: Forty-four per cent of hogs in the sample were marketed at weights of less than 200 pounds. Eight per cent were marketed at weights between 141 and 160 pounds. In general the methods of operation of the several wool pools were quite similar with some significant differences.

Expected Date of Conclusion: Five years.

VII MS 756: Ag. Ec. 72 - Montana Egg and Poultry Marketing

John C. Bower

Objectives: 1. Marketing outlets and solutions to problems associated with marketing eggs and boultry in Mohtana. 2. Types of marketing organizations that will best serve the egg and poultry producers in view of their production and marketing opportunities.

Results To Date: Egg producers living near Bozeman are sympathetic to idea of pooling eggs for marketing. Prices received in Bozeman by producers are lower for brown than for white eggs. There was an indication that farmers received lower prices for graded eggs than for ungraded eggs.

Expected Date of Conclusion: Three years.

VIII MS 757: Ag. Ec. 73 - Montana's Agricultural Prices, Production and Income.

J. J. Livers, H. F. Hollands, H. G. Halcrow

Objectives: 1. Present a comprehensive analysis of monthly and annual prices received by Montana farmers and ranchers. 2. Describe the physical productive plant of Montana's agriculture, showing comparative year to year changes in crop and livestock production, and general causes and results of such changes. 3. Show amounts and trends of money income, purchasing power, and general levels of living of Montana farmers and ranchers, and general causes and economic implications or results of such trends.

Results to Date: Possible effects of the tariff in the livestock industry in Lontana. Also an analysis of effects which might occur in case of rapid or extensive reductions on the United States tariff on South American Deef.

It is hoped to secure monthly cost-of-living prices in five or six

of goods farmers buy and a comparison of cost of living levels in Montana communities with those in other selected communities.

Expected Date of Conclusion: Three years

IX MS 758: Ag.Ec. 74 - Economic Studies of Montana Crops and Livestock

Harold G. Halcrow and J. J. Livers

Objectives: Analyze the comparative growth, changes, and economic status of Montana's crops and livestock industries in order to: 1. Help determine the future of various crops and livestock enterprises.

2. Help determine the probable best land use and farm organization for different areas.

Results to Date: 1. A series of livestock numbers has been computed showing definite age groups on the first year that livestock entered the State to the present time. 2. A handbook of wheat acreage and production by Hontana crop reporting districts and by counties for the period 1916 to 1942 has been prepared by the State Statistician of the BAE in cooperation with the department.

Expected Date of Conclusion: Three years

X MS 759: Ag. Ec. 75 - Economic Study of Ranch Operations in Montana

G. H. Craig

Objectives: Development of a knowledge of the present conditions in terms of management practices and ranch organization on Montana ranches. Effects of recent adjustments on operating ratios and ranch practices as they are likely to contribute to successful ranch management in the future.

The individual objectives divide themselves into four sections: 1. Describe the natural operating conditions as they affect ranch organization and production. 2. Describe and analyze (a) tenure and taxation conditions as they affect particular operating ranch units; (b) Certain operating practices with respect to breeding, feeding, and marketing of stock as they relate to successful operation; (c) Internal ranch adjustments which have followed the drought, depression, and government policies of the thirties.

Results to Date: Budgets established to show the use of labor, capital, land and management. Appears that the large ranches produce much more beef than the small ones for the same input of labor and capital. The small ranches use much more land per animal. In general the medium sized ranches have more profits per animal but in gross profit fail to reach as high a figure as the large ones. Ranches are finding many methods of substituting other factors for labor; land is being used more fully; peak labor needs are being spread over a longer period. Greatest flexibility in adjusting to critical changes occurs among the medium sized ranches.

Expected Date of Conclusion: Three years.

XI MS 760: Ag. Ec. 76 - Montana Farm and Ranch Tenancy

R. R. Renne and G. H. Craig

Objectives: 1. Analyze the relationship between tenure status and

farm practices in Montana. 2. Most frequent or model terms of leasing arrangements now in operation for various types of farming and for major farming areas within the state.

Results to Date: Plus results reported one year ago, certain new developments are occurring. Due to wartime conditions, many stockmen have purchased county and private lands within the grazing districts which eventually may break up several of the State Grazing Districts. On the other hand, Soil Conservation Districts are increasing in number and size. 2. State school lands have not been managed scientifically in the years past and there are many ways by which revenue from these lands can be increased and at the same time lease changes and lease contracts with ranchers and farmers made more suitable for farm and ranch operating conditions.

Expected Date of Conclusion: Two Years

XII MS 769: Ag. Ec. 78 - Farm Labor Conditions in Montana

H. H. Plambeck and Carl F. Kraenzel

Objectives: 1. Analyze characteristics of the present form labor situation as to: (a) extent of labor needs for various types of agricultural activity, (b) availability of farm laborers and other workers to work on forms, (c) acceptability of other than experienced form help for work on the form. 2. Analyze changes in form practices which have resulted from the labor shortage. 3. Describe and analyze methods used by Nontana farmers and communities in recruiting labors and in fitting laborers to meet the jobs. 4. Estimate the need of labor force in 1943.

Results to Date: In this sample two out of every three operators were affected by an actual or anticipated labor shortage in 1942. Somewhat less than one-half of the operators experienced an actual labor shortage during the first seven menths of 1942. Of 179 operators who indicated they would have hired additional help had any been available, only 78 attempted to secure help through the U. S. Employment Office. The greatest shortage was experienced during haying and grain-harvesting seasons. General farm work, beet work, irrigation, and lambing followed in that order.

Further analysis is in process.

Expected Date of Conclusion: One year.

XIII MS 772: Ag.Ec.80 - An Analysis of Economic Factors Affecting Farm Organization and Management Practices on Montana Farms.

O. A. Parsons, Carl. E. Kraenzel.

Objectives: 1. Collect, tabulate and analyze dryland and irrigated farm records for various types of farming areas in the state, to determine: a. Outgo and income for various enterprises in farm organizations and for farm units as a whole. b. Nost profitable combination of the factors of production for various size farms and different managerial abilities. c. Present and prospective readjustments in organization and management practices resulting from change-costs and prices. 2. To collect, tabulate and analyze other data and information from published and unpublished sources necessary for a complete and well rounded analysis for the determination of a., b., and c. above.

of Size, Type and Tenure Relationships for 565 Low Income Farm Security Households in Montana. Master's Thesis of LeRoy Sands.

Development of adapted statistical technique for treatment of more statistical data in farm management and family-living phases related to determination of inter-relationships.

Expected Date of Conclusion: Two years.

New Lexico State College

- I Ranch Organization and Management Practices in Southeastern New Mexico
 - H. B. Pingrey, P. W. Cockerill

Objectives: A five-year study to determine the factors affecting the successful management of cattle, sheep and a combination of cattle and sheep ranches, calf and lamb crop percentages and range livestock practice.

Results to date: Yearly preliminary reports indicate that the cash cost of maintaining a cow year-long approximated \$\frac{1}{2}10.35\$ while the total cost, including non-cash items, averaged \$22.41 a head for the year 1940. Calf ero raised averaged 75 per cent, and with a average weight of 358 pounds a head, the cost of calf produced was \$8.34 a hundredweight.

Conscrvative grazing of the range, caning of calves so as to allow the mother cow a rest period and the feeding of a mineral militure are important factors affecting the calf crop percentage.

Expected date of conclusion: Data for a five-year period have been collected and are in process of tabulation, and analysis preparatory to publication.

- II A Study of Market Outlets and Local Uses of Fruits, Vegetables and Field Crops Produced in New Mexico.
 - P. W. Cockerill, H. B. Pingrey.

This project was divided into five phases two of which have been completed and one temporarily discontinued. The completed projects are as follows: "Market Outlets for New Mexico Onions" published as Experiment Station Bulletin 277; "A study of the Organization and Operation of New Mexico Cotton Gins", published as Experiment Station Bulletin 293.

The two active projects under this project are (a) A study of the Local Utilization of Alfalfa in the Feeding of Livestock for Market, (b) Study of Chili Marketing in New Mexico.

"A Study of Local Utilization of Alfalfa in the Feeding of Livestock for Market."

Objectives: Profitableness of marketing alfalfa hay through the feeding and wintering of livestock on farms in the Pecos and Mesilla valley in comparison to cash sale of this roughage, and to study the feeding practices followed by practical feeders.

Results to date: The aspects of lamb feeding published in New Mexico Experiment Station bulletin 285 intitled "Lamb Feeding in the Irrigated Valleys of Southern New Mexico," shows that lamb feeders secured \$13.24 a ton for hay fed to lambs for the period 1936 to 1940. This return was approximately 20% above the cash market price of hay.

A bulletin in process of publication will present data of marketing hay by feeding it to cattle. The data indicate that the feeding of calves for slaughter and the wintering of stocker and feeder steers have been more profitable than that of yearlings, two-year old and of common grade slaughter cattle, so far as securing a price above the cash market for the hay fed.

Chili Marketing in New Mexico.

P. W. Cockerill.

Objective: Methods used by growers in the marketing of chili and the characteristics and extent of demand for New Mexico chili.

Results to date: Only a few growers are in a position to choose the most profitable outlet for this product because of lack of knowledge of outside markets, failure to organize, lack of a definite system of grading and failure to recognize the market requirement as to variety and quality demanded by processors.

III Labor Needs for Seasonal Operations on New Mercico Farms.

P. W. Cockerill.

Objectives: Present the seasonal farm labor requirements in the production of essential war-time livestock and crop enterprises.

Results: Data are presented of labor requirements for various crop enterprises for New Mexico areas by crop operations, and published in Experiment Station Bulletin 299 entitled, "Labor Needs for Seasonal Operation on New Mexico Farms."

IV The effect of Agricultural Adjustments for Purpose of Soil Conservation and Acreage Control upon Farm Organization, Farm Practice, and Farm Income.

P. W. Cockerill, H. B. Pingrey, Morris Evans.

Objectives: The securing of input-output data of three cash crop areas, - wheat, beans, and cotton - for the possible adjustments in farm organization after the war period.

Results: Data are being collected from farm record cooperators and these data will be analyzed for the specific purpose of application to representative types of farms in each area as regards the most feasible farm organization and management adjustment.

- V Production to Meet Var Needs.
 - P. W. Cockerill, Morris, H. 3. Pingrey.

Objective: To determine shifts in production in response to war needs and the obstacles to such shifts. To determine the inaddicte financial sifest of such shifts and the relationship to the state of such shifts and the relationship to the such shifts and the relationship to the such shifts and the relationship to the such shifts and the such shifts are shifts as a shift of the such shifts and the such shifts are shifts as a shift of the such shifts are shifts as a shift of the such shifts are shifts as a shift of the such shifts are shifts as a shift of the such shifts are shifts.

desirable farm organization.

Current information on trends in production is being collected from key counties which will aid in the national study of "Agriculture's Maximum Vartime Production Capacity."

Expected date of conclusion: This project will continue for the

duration of the present emergency.

Utah State College

- I A study of Types of Farming in Utah.
 - V. P. Thomas, G. T. Blanch, D. A. Broadbent

(Begun in 1933, five sub-projects have been completed and five are still in progress.)

A An Economic Study of Farms Having Dairy Enterprises in Ogden Milk-Shed Area.

G. T. Blanch, D. A. Broadbent, W. P. Thomas

Objectives: 1. Ascertain the place that dairy cows should occupy in the organization of forms in the irrit ted valleys of northern and central Utah. 2. Study the factors offecting the cost and returns from the dairy enterprise.

Results to date: The factors most closely and positively related to the amount of the labor earnings were: 1. size of the farm business; 2. rates of cross and livestock production; 3. efficiency in the use of man labor; and 4. the proportion of the farm resources devoted to intensive

cash crops.

The average returns from the milking enterprise for men labor was 330 per cow or 18.4 ¢ per hour. The most important factors related to the returns for man labor were: 1. the production of butterfat per cow; and 2. the price at which the butterfat sold, which was largely a matter of whether the milk was sold for distribution as whole milk or whether it was sold for processing.

Expected date of conclusion: 1943.

- B. An Economic Study of Sheep Production
 - D. A. Broudbent, George T. Blanch, and W. P. Thomas

Objectives: To study the organization and practices of ringe sheep outfits in southwestern Utah, and to determine the relationship of differences in organization and practices to the economic success of the business.

Results to date: Annual reports for 1939, 1940, and 1941. Factors in ranch management were cross classified.

A detailed analysis of the ranch records for all three years has been begun.

- C. Study of Land Utilization and Fram Organization in Range Areas in Utah
 - W. P. Thomas, George T. Manch, Day J., Broadbont, Clyde E. Stewart

Objectives: 1. Classification of agricultural lands in Utah according to present and potential productivity and use, including special consideration to methodology and technique in classification of land in irrigated and range areas. 2. To identify and analyze the types of farm organization and methods of most profitable production under present and prospective future conditions. 3. To measure and appraise current changes in farm organization, farm income, and adjustments to economic and physical forces, and to suggest desirable adjustments.

Results to date: Over 300 farm records taken and ready for analysis. Land-use data obtained from Federal agencies and progress report made

on this phase.

- D. A Study of the organization of Turkey Farms and the cost of Producing Turkeys in the state of Utah.
- Dec. A. Broadbent, W. P. Thomas, Gcorge T. Blanch, Carl Frischknecht

Objectives: 1. To ascertain the place turkey production should occupy in the organization of farms in the state of Utah. 2. To study the factors affecting the cost and returns from the poultry enterprise.

Results to date: The record books issued, through personal contact, to about 100 Turkey producers in 4 counties were checked during February and March of this year. These records are now being checked and summarized. No definite results to date.

Expected date of conclusion: Fall of 1943

- E. Labor Requirements for Agricultural Production in Utah
 - W. P. Thomas, George T. Blanch, Dec A. Broadbent

Objectives: 1. To determine the amount of productive labor required for agricultural production in the state of Utah. 2. To provide farmers and agencies dealing with farm labor in the state of Utah with factual data on which farm labor program could be developed. 3. To determine the influence of the adoption of labor saving machinery, and changes in farm organization, and adoption of better practices of agricultural production on labor requirements.

Results to date: Currently accumulated data, reports from processers and agencies adjusted upon consultations with production departments resulting in estimates of labor requirements for State, crops, and season in order to meet war production goals. For the State, the peak require—

ments come in June.

Expected date of conclusion: Report for 1943 for this study will be made during the early part of 1943-44.

II A Study of the agricultural Resources of Utah and Their Utilization.

Sub-project D - Economic Phases Sub-project D - An Economic Classification of the Irrigable Lands of the Reservation Area of the Uinta Basin.

George T. Blanch, W. P. Thomas, representing the Utah Experiment Station. Clyde E. Stewart representing the Durcau of Agricultural Economics, Land Economics Division.

Objectives: 1. Develop adjustments of highest and best use of agricultural resources both from the viewpoint of individuals and society.

- 2. Develop techniques in land classification to serve objective "1".

 Results to date: Techniques, maps and other instruments of presentation. Major results on the irrigable land in the reservation area, Uintæ Basin, Utah published in Utah Experiment Station Bulletin #303.
- III Farm Mortgages, Land Values and Transfers
 - H. H. Cutler and W. P. Thomas

Objectives: 1. To show extent of mortgaged farm land in the leading agricultural sections of the state. 2. To show the shift in source of long-term loan funds which took place from 1920 to 1935. 3. To show change in amount of farm mortgage debt in areas studied.

Results to date: A tabulation of data from county records was made for four counties. These data showed the amount of mortgage debt represented by first and second mortgages in each of the above counties, the acreage covered, and a distribution of mortgage debt by several classes of mortgages for the years ending Dec. 31, 1920, 1925, 1930, and 1935.

Expected date of conclusion: 1943

- IV Marketing of Utah Fruits and Vegetables
 - W. P. Thomas and George T. Blanch

Objectives: a. Volume and quality of fruits and vegetables marketed from Utah. b. The geography of Utah's markets, and the economic factors that may affect or change this distribution. c. Competition on various markets and opportunity and ability of Utah to meet it. d. Efficiency in marketing functions and practices of the agencies handling Utah's fruits and vegetables. e. Other economic factors and influence bearing on efficient marketing of Utah's fruits and vegetables.

Results to date: Market middlemen interviewed. Marketing methods in more than 60 markets studied and analyzed. Volume, trend, and efficiency for Utah and competitive areas analyzed.

State College of Tashington

I Land Classification and Land Usc Studies

Ben H. Pubols and C. B. Harston

Objectives: (1) Classification of the lands in different counties of the state in order to determine the broader uses to which they may be put from the standpoint of the best economic and social advantages. The land will be classified as adapted to agriculture, forestry, recreation, residence, game preserves, watershed, etc. (2) Determine the best use of agricultural lands in certain creas through the application of form management analysis coupled with soil surveys and other methods.

Results to date: Soil surveys of numerous counties; land classification of Kitsay County; numerous tables and maps on land ownership, tax delinquency, and the like.

Expected date of conclusion: Indefinite

II The Farm Debt Problem in Unshington

E. F. Dummeier

Objectives: Ascertain the present farm debt situation in Weshington, the causes of that situation, and the efforts which are being made to remedy it, and to evaluate the possibilities of different proposed remedies.

Ecsults to date: Assembly and tabulation of primary data. Expected date of conclusion: Indefinite

III Forming Systems in Vestern Vashington

W. W. Rufener, B. H. Pubols, I. C. Pheeting, Orlo H. Haughan, Earl W. Carlean.

Objectives: (1) Desirable changes by type-of-farming areas in the agriculture of the State with a view to conserving agricultural and other resources. (2) Relationship of form tenure upon the utilization and permanency of the agricultural resources of the State. (3) Desirable changes in farming systems for a more permanent and profitable agriculture. (4) Factors influencing the prices and supplies of various types of livestock and the place of livestock on the forms of the State. (5) Input and cost factors under various systems of farming and their relationship to the permanency of the agriculture of the State.

Results to date: Farming Systems in King and Snohomish Counties, Washington, 1939, Washington Agricultural Experiment Station Bulletin No.

424, October 1942, pp. 86

Farm Loan Experience in Vestern Veshinston (Lanuscript) Expected date of Conclusion: 1943

Land Usc Adjustments in Tashington IV

3. H. Pubols, and T. W. Rufener

Objectives: Desirable changes in land use and farming in Vashington Results to date: Farm surveys of Spokene and Thurston counties; miscellaneous work in other counties.

Expected date of conclusion: Indefinate

Types of Farming for the Columbia Basin Reclimation Area

B. H. Pubols (Chairman), E. F. Dummeier, M. E. Ensminger, E. V. Ellington, E. G. Schafer, E. J. Overholser, I. J. Saith, J. S. Carver, H. P. Singleton, T. U. Fuhriman, R. J. Newell, and R. F. Bessey

Objectives: Types of farming and land use best suited to different

parts of the Columbia Basin reclamation area.

Results to date: "Types of Farming for the Columbia Basin Irringation Project", A Report on Problem No.2, Columbia Basin Joint Investigations: Part I. A Prospectus for Agriculture on the Columbia Basin Irrigation Project, Vashington, March 1942, Mimeo. Part II. Types of Farm Economy Suited to the Columbia Basin at the Mature

Stage of Development, October 1942, Minco.

Part III. Form Economy During the Development Period, With Particular Reference to the First Blocks Designated for Irrigation, January 1943, Mimeo.

Summary of Findings and Conclusions, May 1943, Mineo.

Expected date of conclusion: 1943

VI Farming Systems in the Yakima Valley

A. E. Orr, B. H. Pubols, and Edgar B. Hurd

Objectives: Principal physical and economic organizational features of fams in the Yakima Valley, and to analyze these features in the light of economic returns.

Results to date: Economic Conditions and Problems of Agriculture in the Yakima Valley, Vashington—The Agriculture and Its Setting, Vashington Agricultural Experiment Station Bulletin 377, July 1939, pp 82.

<u>Economic Conditions and Problems of Agriculture in the Yaking Valley, Vashington—The Yaking-Tieton Irrigation District, ashington Agricultural</u>

Experiment Station Bulletin 393, Dec. 1940, pp 56.

Economic Conditions and Problems of Agriculture in the Yakima Valley, Washington, Part III. Fruit Farming, Schington Agricultural Experiment Station Bulletin 409, October 1941, pp. 97

Economic Conditions and Problems of Agriculture is the Yokima Valley, Washington, Port IV. Hop Farming, shington Agricultur 1 Experiment Station Bulletin 414, July 1942, pp. 39

Economic Conditions and Problems of Arriculture in the Yeltima Valley, Lashington, Part V. The Sunnyside Division of the Yakima Project, Washington Agricultural Reperiment Station Bulletin 428, January 1943, pp 48

Economic Conditions and Problems of Agriculture in the Yakima Valley, Unshington, Part VI. The Irrigation Project of the Yakima Indian Reservation, Hanuscript

Expected date of conclusion: 1943

VII Livestock Marketing and Feeding in Washington

M. T. Buchanan

Objectives: 1. Volume of the various types and classes of livestock marketed through the Old Union Stockyards in Spokane, Mashington—their origin, destination, and the prices obtained—and, based on these and other data. 2. Profitability of livestock feeding.

Results to date: Data for 1937 tabulated and placed on punch cards.

Assembly of data for 1942 about one-half completed.

Expected date of conclusion: 1944

VIII Adjusting the Turkey Industry of Vashington to Maintime Needs

II. T. Buchanan, Carl N. Berryman, J. S. Carver, and R. II. Turner

Objectives: Production area, production methods, costs of production, marketing methods, costs of marketing, and net returns to producers of turkeys in the State of Tashington; effect on net returns of different production and marketing methods; fessible contributions of the turkey industry to the Nartime meat supplies of the State and Nation.

Results to date: More than 150 farm survey records obtained. Tabulation of data under way.

Expected date of conclusion: 1944

IX Land Use and Types of Farming and Possibilities for Settlement and Development of Lands in Washington During and After the War.

B. H. Pubols, Carl N. Berrymen, and M. T. Buchanan

Objectives: Status of land use in Vashington, to analyze the principal factors underlying major land uses and types of farming, to locate and describe the principal farm enterprises and types of farming, and to present information helpful to prospective farm settlers during and after the War.

Results to date: Preparation of basic tables and maps well under way.

Expected date of conclusion: Indefinite

X Wartime Labor Requirements for Crops and Livestock and Machinery Requirements for Crops.

A. W. Peterson, M. T. Buchanan, and C. F. Reuss

Objectives: Seasonality, and crop and livestock demands on labor; machinery efficiency and costs; the effect on the foregoing by types and sizes of farms and machinery, kind and quality of land, yields, etc.; changes in labor supply and farmer attitudes toward labor programs.

Results to date: Tractor Costs in Western Washington and Food Production

in 1943, V Circular No. 11, April 1943, pp. 4

Tractor Costs in Eastern Vashington and Future Food Production, V Circular No. 12, May 1943, pp. 8.

The Labor Situation on Washington Farms, Manuscript, to be published as a V Circular

Expected date of conclusion: 1944

XI A Comparison of the Productivity, Efficiency, and Income of Different Systems of Farming in Eastern Washington.

A. W. Peterson, B. H. Pubols, M. T. Buchanan, Carl N. Berryman, and M. Ensminger

Objectives: Combination of enterprises resulting in greatest production per man during war, greatest long-time returns with soil maintained. Variations in combinations dependent on soil, slope, climate, prices, farm size, market, etc. Best methods to attain suitable systems of farming.

Results to date: Field work well under way. Expected date of conclusion: Indefinate

XII Post-War Planning Survey of Snohomish County

Carl F. Reuss, State College of Washington, John L. Nordmark, Washington State Planning Council

Objectives: Determine workers and skills available for effective post-war planning program for Snohomish County; ascertain major consumer needs and trade center patterns; keep data useful application by post-war planning groups.

Results to date: Approximately 10,000 schedules have been collected from Snéhomish County families by school children cooperating in the survey.

Expected date of conclusion: January, 1944

XIII Farm Labor Problems in Vashington

Carl F. Rouss

Objectives: Ascertain severity of labor problem on individual farms; learn farmer reactions to proposed remedial measures; estimate farm worker efficiency of workers of different ages and sex.

Results to date: Data gathered, preliminary reports prepared.

Expected date of conclusion: 1943 phase, August 1. Other phases to be studied for 1944 application.

XIV Adjustment of Youth to a Changing Society.

Paul H. Landis

Objectives: To contrast activity roles of Washington youth in depression and war time society.

Results to date: An analysis based on 16,000 schedules shows the major patterns of territorial and occupational mobility of Washington youth during the last ten years.

Expected date of conclusion: December, 1943

University of Wyoming

I Range Sheep Production

A. F. Vass and Assistants

Objectives: To determine the economic factors contributing to the profits and losses of the range sheep industry and methods for their improvement.

Results to date: Some of the results have been reported in:
(1) Station Bulletins No. 156, 226, (2) Extension Circular No. 60, (3)
Papers for National Wool Grower: Vol. XVIII—No. 6 June 1928; XVIII—No. 7 July 1928; XX—No. 7 July 1930; XX—No. 9 Sept. 1930; XXII—No. 10
Oct. 1931. Papers have been presented at Tariff, Public Lands, and Tax hearings in the state and in Washington.

Expected date of conclusion: We date set for conclusions. Changing conditions result in new and interesting findings. Not all areas of the state have been covered by detailed ranch analysis as yet.

II Range Beef Cattle Production.

A. F. Vass and Assistuats

Objectives: (1) To study the range cattle industry as it exists on our prairie and mountain valley ranches. (2) To determine the better practices of management that will give the best returns to the operator in a given area over a period of years.

Results to date: Some of the results have been given in We. Station Bulletins 147, 197 and 226. Extension Circular No. 30. The Producer, American National Livestock Assoc. Vol. XI No. 1 June 1929: Vol. XI No. 5

Oct. 1929; Vol. XII No. 4 Sept. 1930; Vol. XIII Mo. 3 Aug. 1931; Vol. XIII No. 10 March 1932; Vol. XVII No. 11 April 1936; Vol. XXI No. 12 May 1940. Papers have been given at Tariff, Public Lands, I.C.C. and Tax horrings.

Expected date of conclusion: No set date for closing.

III Land Use.

A. F. Vass and Roice Anderson

Objectives: To determine: (1) the most efficient use of lands in the different areas of the state. (2) the approximate expenditures that can profitably be made for water conservation, irrigation and drainage. (3) the influence of past and present use in crop yields, soil fertility, soluble salt concentration, water efficiency and crossion.

Results to date: liuch of the soluble salt concentration has been

due to the inefficient use of water.

Bulletin: Control of Vestern Grazing Lands, published by the American National and the two Typming livestock associations gives some of the results on grazing lands.

Expected date of conclusion: Much work remains to be done.

IV Taxation.

A. F. Vass and Edward J. Talbot.

Objectives: To study the rate, amount and distribution of the tex

load of the state over a period of years.

Results to date: The greatest malidjustment occurs between individual agricultural producers rather than between agriculture and other industries. The tax-free investment-free public lands in the state complicate the tax problem. The general property tax per cattle unit (including land, live-stock, etc.) on one ranch may be five times the against paid by another another in the same county.

Expected date of conclusion: No set date for completion.

V Influence of Organization and Management on Irrigated and Dry-land Farms.

Telbot, A. F. Vass, R. H. Anderson.

Objectives: To study the different types and methods of farming used by the farmers and to determine which are the best systems and methods to use in the different areas. To determine the most important factors in influencing profits and losses on the individual farms, and to suggest methods for their improvement.

Results to date: Youring Station Bulletin No. 205; "Youring Station

Bullctin No. 228; Tyoming Extension Circular 30.

Expected date of conclusion: 1945

VI Food Resources and Livestock Adjustment on Grazing Lands.

Robert Land, A. F. Vass, E. J. Talbot, and Roice H. Anderson.

Objectives: To determine (1) the influence of different degrees of grazing on the type and stand of our native grassos, (2) the most efficient use of our grazing resources, (3) carrying capacity of the different grazing creas, and (4) most efficient use of our feed resources, etc.

Results to date: Hone

Expected date of conclusion: 1945

State of Colifornia

Stanfard University -- Food Research Institute

I Contract work for governmental agencies: It is the policy of the Institute so far as possible to hold its staff together and to eng ge in services to the wer agencies in the spot where research anterials are readily available and term—work is feasible, rather than to accept individual appointments in the governmental services. In pursuance of this policy, two contracts with governmental agencies have been concluded, both of confidential type. One has been completed. Regular research programs have necessarily been adjusted to meet the circumstances.

II Study of International agreements on foodstuffs and raw materials. Past experience under such agreements, and related national controls, are being extensively analyzed.

J. S. Davis, V. D. Vickizer, and K. E. Knorr. J. Tomasevich temporarily

Objective: Improve the basis for sound decisions on national and international policy, as to whether, under what circumstances, how far, and on what to ms international commodity agreements may be helpful or harmful to the world connewy after the war. Secondary objectives: illumination of various specific aspects such as (a) procedures for making and modifying agreements, (b) the structure and province of administrative agencies, and (c) conditions favorable to wise decision in matters of detail.

Results to date: A book on International Agreements on Conservation of Marine Messurces, by Toursevich has already appeared; so has a study of New International Theat Agreements, by Davis, and several journal articles. A book The Merid Coffee Messures on: international ten control, international rubber regulation, sugar and its international regulation, international tin regulation, international regulation of wood, international beef regulation, and on the general problem of international commodity agreements, are in various stages of advancement. All or most of these seem likely to be ready for publication within a year, though scheduling has to be adopted to the fluctuating pressures of work for war agencies.

III Remaining Research Effort

Objectives: (a) developments in the food situation in all parts of the world; (b) the progress on and plans for international food relief; and (c) agricultural and nutritional policies and their interrolations, especially in the United States.

Results to date: Published partly in Theat Studies, which in wartime

appear in six numbers a year instead of eight as formerly. Partly they are published in our WAR-PEACE PARPHLETS, of which the latest, now in press, is Brandt's <u>Fats and Oils in the War</u>. Partly the results appear in journal articles.

Expected date of conclusion: Cannot be indicated at this time.

Each staff member works also as tile and circumstances permit upon one or several projects beyond those destined for publication either as studies of international commodity agreements, as numbers in the sevies of VHEAT STUDIES or of VAR-PEACE PARCHETS, or as journal articles. Examples of the inquiries under way are: "Gassava as a Food Resource" (Dennett); "The Voild Potate Economy" (Brandt): "Gensumption Economies" (Davis); "The World's Food" (Bennett); and "Agriculture in the Development of the Argentine Economy" (Timoshenko). Some of these are the projects of individuals and some involve collaboration. Probable dates of completion cannot be indicated at this time.

Oregon State College

I Transportation Costs in Their Effects Upon the Major Agricultural Enterprises in the State of Ovegon.

W. H. Dreesen and E. L. Potter.

Bankhead Jones No. 12.

YII Public Expenditures in Oregon by Spending Units and Major Functions as Heasured by Tax Levies Imposed upon General Property.

W. H. Dreesen

Bankhead Jones No. 16.

III An investigation and study into the factors affecting the quality of Oregon grown Irish potatoes offered for sale to consumers.

D. B. DeLoach

Bankhead Jones No. 19.

IV A study of specific problems in the marketing of Oregon farm products attributable to the nation's war program.

D. B. DeLoach

Bankhead Jones No. 21.

University of California (Giannini Foundation and Department of Agricultural Economics)

- I Factors Affecting the Supply, Demand and Prices of Important California Farm Products
 - S. W. Shear and Geo. M. Kuznets

Objectives: To discover, measure, and explain the major factors and relationships of factors that have to do with trends, cycles, and annual and seasonal variations in acreage (or size of flocks and herds), production (quantity, variety and quality), shipments, utilization, exports, imports, inventories, consumption, demand and prices of important California farm products in the past in such a way that they may have prediction value for growers, processors, and distributors.

Results to date: Ten publications or releases have been issued or are on the press by seven different authors.

Expected date of conclusion: Continuing.

II A Study of the Work of the United States Bureau of the Census and Service in an Advisory Capacity to the Director of the Census

M. R. Benedict

Objectives: To analyze the methods and product of the Bureau of the Census with a view to proposing improvements in method, content, and form of presentation, this work to pertain especially to the census of agriculture. To develop a better understanding of the work of the Bureau and a wider and more effective use of its data.

Results to date: As member of Advisory Board, Bureau of Census, determines character of material to be secured and released by the Census, with particular reference to adaptation of work of the Census to the needs of the wer agencies.

Expected date of conclusion: Indefinite.

III An Analysis of Selected Population Problems

D. S. Thomas

Objectives: To fill in gaps in previous analyses of social aspects of population phenomena. To prepare an analysis of the characteristics and changing composition of the California population.

Results to date: None released to date.

Expected date of conclusion: Indefinite.

IV The Economics of Conservation with Particular Reference to Agriculture in the United States

S von Ciriacy-Wantrup

Objectives: The considerable volume of legislation and the large expenditures of public funds for the purpose of agricultural conservation in recent years, and the expectation that in the future farmers themselves individually and through cooperative effort with or without public assistance will find it "economical" to carry on conservation -- this is the implied basis of part of the activities of various governmental agencies -- make it imperative that the economic aspects of conservation be studied from the private as well as social angle. At present, knowledge of the technical aspects of conservation is much further advenced than knowledge of the economic aspects. As a guide for public conservation policies the latter are of equal if not of greater importance. This importance is increased rather than less ened by the national defense program. Although the final decision about the priorities of public expenditures will be made for reasons outside of the economic sphere, economic analysis may well be consulted in their execution. The wasteful exploitation and needless spoilation of land and other resources between 1914 and 1920 serve as a lesson for the present. Furthermore, it seems desirable that the economic criteria and the institutional machinery for public action be worked out sometime before a large-scale public conservation:program is put into effect in the postdefense period with similar purposes as in the post-depression period, 1933-1938. Many costly lessons had to be learned in the latter period.

Results to date: None.

Expected date of conclusion: Indefinite.

V Dislocations and Relocations of Population Groups in California in Relation to the Changing Distribution of Resources

D. S. Thomas

Objectives: To define and analyze the predisposing factors in voluntary and involuntary migration. To analyze factors in the adjustment of the supply of human resources to the occupational opportunities afforded by the exploitation of the state's resources.

Results to date: None.

Expected date of conclusion: Indefinite.

VI Factors Affecting Organization and Operation of California Tarns and Ranches

R. L. Adams, David Weeks, and R. J. Smith

Objectives: To improve the existing organization and operation of California farms and ranches for the purpose of bettering farm life. To aid in the attainment of desired national goals through the adjustment of

individual farms and groups of farms with particular emphasis upon price and cost changes, changes in technology, and governmental activities. To define, evaluate, and clarify basic economic principles involved in the organization and operation of farms and ranches. To develop practical means for increasing farm incomes.

Results to date: Seven publications by four different authors have been released or are in process in 1942 and 1943.

Expected date of conclusion: Indefinite.

VII Factors Affecting Efficiency in the Marketing of California Fam Products

H. E. Erdman and J. M. Tinley

Objectives: To define and clarify basic economic principles involved in the marketing of farm products. To develop standards or norms for the measurement of efficiency in the marketing of different types of farm products. To discover imperfections in the present methods of marketing California farm products and to develop practical means for correcting them.

Results to date: The following publications were completed -

Calhoun, W. T., (BAE) H. E. Erdman and G. L. Mehren. Improving the San Francisco wholesale fruit and vegetable market. Berkeley, California. University of California, College of Agriculture cooperating with U. S. Bureau of Agricultural Economics. 1945. 72p. Processed.

Tinley, J. M. Wartime transportation and distribution of foods. Food in wartime series.

Expected date of conclusion: Indefinite.

VIII Basic Input-Output Data Pertaining to the Determination of the Relative Efficiency of California's Agriculture Products in the War Effort

H. R. Wellman and others

Objectives: To determine the input requirements in producing and packing the various products.

Results to date: None.

Expected date of conclusion: Indefinite.

Bureau of Agricultural Economics, U.S.D.A.*

I Production Capacity Studies

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C. P. Heisig, leader; W. U. Fuhriman (Idaho), Philip Greisinger (Arizona), E. B. Hurd (Utah), E. F. Landerholm (Washington), H. E. Selby, Donald T. Street (Oregon), Henry H. Stippler (California), and Rex E. Willard (Nevada).

Objectives: To determine maximum wartime production capacity for crops and livestock under assumptions that labor, machinery, etc. will be supplied. Work is being done in cooperation with Experiment Stations and Federal Agency people in each state and under a State Committee in most states. Assignment of EAE personnel to each state will continue to the completion of a State Report.

Results to date: Work is in progress in each of the seven Western States from the Berkeley Regional office.

Expected date of conclusion: Each State Report to be completed and in Washington, D. C. by July 31, 1943. National Report to be completed August 20.

II Farm Wage Rates

Varden Fuller

Objectives: To analyze the structure of wage rates and employment in typical areas in order that factors that influence wage rates may be measured.

Results to date: Reports have been prepared on wage regulation and function of wage boards, experience of wage board for California and Arizona in determining prevailing wages in connection with U.S.D.A. farm labor-transportation program. The preliminary reports include one for the citrus area of Southern California and the asparagus area in the Sacramento Delta.

Expected date of conclusion: Indefinite

III Central Valley (California) Studies

Marion Clawson, field representative; Wendell T. Calhoun, W. U. Fuhriman, Varden Fuller, Walter R. Goldschmidt, C. P. Heisig, J. Karl Lee, Mary Montgomery, Charles N. Reynolds, H. E. Selby, Ralph B. Wertheimer, and Edwin E. Wilson.

Objectives: To develop for the Reclamation Service, guides for the development of the Central Valley Project, California, along lines most

^{*}Includes work underway in Arizona, California, Idaho, Nevada, Oregon, Utah and Washington only.

useful for the public welfare. The work is divided into twenty-four problems and BAE has responsibility for leadership on four, and participates in consideration of ten of the others.

Results to date: Preliminary reports have been submitted on two problems and others are in progress.

Expected date of conclusion: 1945.

IV Land Market Survey

Tyr V. Johnson and Harvey V. Stonecipher.

Objectives: To determine the effects of war on land markets and rental values, quarterly, in twelve counties in the seven Western States, in order to help forestall undesirable increases in land values. (in cooperation with the State Agricultural Experiment Stations in Washington, Idaho, and Nevada.)

Results to date: Quarterly administrative reports issued showing results. One state at least (California) is launching an intensive educational program on the subject. (July)

Expected date of conclusion: Continuous.

V Irrigation Investigations in the Sacramento Valley (California)

H. E. Selby, W. U. Fuhriman, and Alexander Joss

Objectives: To determine the economic and social feasibility of irrigation development on certain tributaries of the Sacramento River, in the interests of the general welfare, for the Corps of Engineers, U. S. Army.

Results to date: This activity is just being inaugurated. Preliminary discussions indicate the desirability of cooperation between the U.S. Engineers and the Reclamation Service; thus BAE would be able to utilize results obtained on both the Central Valley Studies for the Reclamation Service, and the materials obtained under this activity.

Expected date of conclusion: November 30, 1943.

VI Community Organization in Wartime

John S. Page

Objectives: To determine the effectiveness of various types of county and community organizations in mobilizing rural people in the war effort.

Results to date: Four reports have been released recently, one for

each of the following California counties:

Kern Tulare San Joaquin Sutter

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These materials have been used by O.C.D. and others. The data have also been of use to the War Board.

Expected date of conclusion: June 30, 1943.

VII Appraisal of Public Works Projects

H. E. Selby and E. F. Landerholm

Objectives: To establish criteria against which various public works projects relating to agriculture for the post-war period may be measured.

Results to date: None; just being inaugurated.

Expected date of conclusion: Uncertain.

VIII Feed Utilization

C. P. Heisig and E. B. Hurd

Objectives: To determine amount of feed supplies, livestock numbers, and feed requirements by states and for the region; to determine facts concerning use or lack of use of pea-vine hay in the Blue Mountain area.

Results to date: Administrative report on each subject prepared.

Pea-vine Hay Report has been followed up by FSA, Extension Services, and others, to provide more effective utilization. Feed Utilization Report is being used in each state in connection with maximum production capacity.

Expected date of conclusion: June 30, 1943.

IX Rural Trends

William H. Metzler

Objectives: To determine possible shifts in manpower and other production adjustments, and to discover attitudes, social problems, and changes in rural institutions which are of significance in the war effort.

Results to date: Various reports have been prepared and submitted to Washington, which have been consolidated into National Reports which have been released.

Expected date of conclusion: Indefinite.

X Farm Machinery Studies

Henry H. Stippler

Objectives: To determine performance rates for tractors of various sizes and makes with different cultural and harvesting operations on irrigated farms in Idaho, in cooperation with Dr. Paul A. Eke, Idaho Experiment Station.

To determine availability of combine harvesters, performance rates, custom and cooperative operations, with particular reference to flax harvesting, at the request of the California War Board, and in cooperation with County War Boards.

Results to date: Information on combines supplied to the California War Board. Tractor study in Idaho will probably be completed in the winter of 1943-44 with publication of the results by the Idaho Experiment Station.

XI Flood Control Studies

Edwin E. Wilson, Martin Maevers, and Claude Naffziger.

Objectives: To determine the economic and social feasibility of various flood control proposals in the Pacific Intermountain Region. Much of the work was done in cooperation with the Forest Service and the Soil Conservation Service. There was close consultation with the Corps of Engineers, U. S. Army, on this activity.

Results to date: Work has been completed on 68 projects and confidential reports have been submitted.

Expected date of conclusion: June 30, 1943

XII Post-War Planning

Rex E. Willard (Arizona, Idaho, Oregon, Utah, and Washington), Donald T. Griffith, Philip Greisinger, Marion Clawson (California and Nevada), and Edwin E. Wilson.

Objectives: As members of Regional Post-War Planning Committees, to participate in the formulation of post-war plans for agriculture, and assist in the development of material basic to such plans, working with the colleges and various Federal agencies. Three Regional Committees of U.S.D.A. are involved, including the groups of states as follows:

Arizona, Colorado, New Mexico, and Utah; California and Nevada; Idaho, Oregon, and Washington.

Results to date: Material has been developed on the following subjects:

Atlas (including basic material from various sources)
Long-time Goals and Objectives
Assumptions for the Post-War Period
Condition of Agriculture at the Peak of War Production

Expected date of conclusion: Indefinite.

XIII Rehabilitation of the Wenatchee (Washington) Fruit Area

Rex E. Willard and E. F. Landerholm

Objectives: As chairman of a subcommittee of the U.S.D.A. Field Coordinating Committee to appraise and evaluate various phases of the work undertaken by the Department and report to the Chairman of the Field Committee (George T. Hudson), and make comments, suggestions, or appraisals of activity. To assist in the coordination of activities as undertaken by the Department's representative.

Results to date: Several subcommittee meetings have been held and several phases of the operations have been analyzed, and suggestions made to the Secretary's representative.

Expected date of conclusion: Indefinite.