

A Study of

**EXTENDING UNEMPLOYMENT INSURANCE
TO AGRICULTURAL LABOR *in Hawaii***

Conducted jointly by the

**DEPARTMENT OF LABOR AND
INDUSTRIAL RELATIONS**

and the

**LEGISLATIVE REFERENCE BUREAU,
UNIVERSITY OF HAWAII**

Territory of Hawaii

HONOLULU, HAWAII • 1957

SURVEY TEAM

HUNG DAU CHING

CHARLES F. CONGDON

NORMAN HIROSHIGE

ROBERT M. KAMINS

RUTH W. LOOMIS

MAUREEN STEVENS

BESSIE TAKAMURA

HOWARD WIIG

TERUO YOSHIDA

PHILIP BOOTH

Chief of Division of Program and Legislation

U.S. Unemployment Insurance Service

Technical Consultant

Foreword

Senate Resolution 71 of the 1955 Territorial Legislature directed the Department of Labor and Industrial Relations and the Legislative Reference Bureau to study the implications of extending unemployment insurance to agricultural employees. Our staffs have closely cooperated in carrying out the instructions of the Legislature, and it is now our pleasure to submit this report which encompasses the results of the survey.

The Bureau of Employment Security of the U. S. Department of Labor has not only provided the major portion of funds required for conducting and printing this survey but has also made available technical advice from the Division of Program and Legislation of the Unemployment Insurance Service. Sugar and pineapple companies and diversified farmers have furnished the necessary information and data. However, space limitations preclude a complete listing of the many other federal, territorial and private agencies and individuals who made a contribution to this study.

It is our hope that the report supplies adequate information for the consideration of the problems of unemployment insurance coverage for agricultural workers in Hawaii.

*E. B. PETERSON, Director
Department of Labor and
Industrial Relations*

*ROBERT M. KAMINS, Director
Legislative Reference Bureau
University of Hawaii*

February 6, 1957

List of Tables

<i>Table</i>	<i>Page</i>
1. Employment in the Sugar Industry as of December 1956	14
2. Average Annual Earnings in Pineapple and Sugar Industries	17
3. Separations from Agricultural Employment during Calendar or Crop Year 1955.	23
4. Number of Employees Separated from the Sugar Industry during 1955	24
5. Agricultural Employees Separated from the Pineapple Industry during 1955	25
6. Employees Separated from Diversified Agriculture during 1955	26
7. Percentage Distribution of Unemployment Experienced by Agricultural Employees during 1955.	27
8. Agricultural Employees Who Would Have Been Eligible for Unemployment Benefits in 1955	29
9. Percentage Distribution of Unemployment Benefits Which Would Have Been Paid to Employees Separated in 1955.	29
10. Reasons for Determination of Non-Eligibility for Unemployment Benefits for Agricultural Employees Separated in 1955.	30
11. Coverage Affected by Extending Present Hawaii Employment Security Law to Agricultural Employment.	32
12. Amount of Annual Agricultural Payrolls Subject to Unemployment Insurance Contributions in 1955	33
13. Estimated Annual Contributions by Employers on Account of Agricultural Employment, 1958-1963.	34
14. Estimated Rates of Contributions of Sugar and Pineapple Industries, 1958-1963	35
15. Estimated Annual Total Contributions of Sugar and Pineapple Industries, 1958-1963.	35

Table of Contents

<i>Part</i>	<i>Page</i>
Summary	1
 1. INTRODUCTION	
Development of Unemployment Insurance	
Coverage in Hawaii	7
Basic Provisions of Unemployment Insurance	9
The Role of Unemployment Insurance in Hawaii	11
 2. ECONOMIC BACKGROUND	
Agricultural Employment in Hawaii	13
Earnings in Hawaiian Agriculture	17
Unemployment Benefits under Collective	
Bargaining Agreements	18
Basic Questions to Be Answered	21
 3. SURVEY FINDINGS	
Separations from Agricultural Employment	22
Duration of Unemployment	26
Agricultural Employees Potentially Eligible	
for Unemployment Insurance	27
Duration of Benefit Payments	28
Why Separated Employees Would Not Have Been	
Eligible for Benefits	29
 4. ALTERNATIVE SOLUTIONS AND COSTS	
Alternatives in Unemployment Insurance	
Coverage for Agriculture	31
Benefit Costs of Extending Unemployment	
Insurance to Agriculture	36
 <i>Appendix</i>	
A. SENATE RESOLUTION NO. 71	41
B. METHODOLOGY: Sample Design and Statistical	
Treatment of the Survey Data	43
C. STATISTICS: Tables Relating to Employment	
in Hawaii	58

List of Tables

<i>Table</i>	<i>Page</i>
1. Employment in the Sugar Industry as of December 1956	14
2. Average Annual Earnings in Pineapple and Sugar Industries	17
3. Separations from Agricultural Employment during Calendar or Crop Year 1955.	23
4. Number of Employees Separated from the Sugar Industry during 1955	24
5. Agricultural Employees Separated from the Pineapple Industry during 1955	25
6. Employees Separated from Diversified Agriculture during 1955	26
7. Percentage Distribution of Unemployment Experienced by Agricultural Employees during 1955.	27
8. Agricultural Employees Who Would Have Been Eligible for Unemployment Benefits in 1955	29
9. Percentage Distribution of Unemployment Benefits Which Would Have Been Paid to Employees Separated in 1955.	29
10. Reasons for Determination of Non-Eligibility for Unemployment Benefits for Agricultural Employees Separated in 1955.	30
11. Coverage Affected by Extending Present Hawaii Employment Security Law to Agricultural Employment.	32
12. Amount of Annual Agricultural Payrolls Subject to Unemployment Insurance Contributions in 1955	33
13. Estimated Annual Contributions by Employers on Account of Agricultural Employment, 1958-1963.	34
14. Estimated Rates of Contributions of Sugar and Pineapple Industries, 1958-1963	35
15. Estimated Annual Total Contributions of Sugar and Pineapple Industries, 1958-1963.	35

<i>Table</i>	<i>Page</i>
16. Farm and Mill Earnings in the Sugar Industry, 1955	35
17. Effect of Alternative Coverage Provisions for Diversified Agriculture	35
18. Estimated Annual Benefit Costs of Covering Agricultural Employees	37
19. Ratio of Benefits to Contributions under Various Coverage Provisions for Diversified Agriculture	38
20. Estimated Net Change in Reserve Accounts at End of Each Year of Agricultural Coverage	39
B-1. Sizes of Populations and Sizes of Samples	46
2. Sample Estimates and Ranges of Error with 95 Per Cent Probability Applicable to Certain Parameters of the Population of Separated Agricultural Workers	52
3. Separations for Agricultural Employment, by Islands and Industry	52
4. Separations from Sugar Industry, by Included or Excluded Employment under Hawaii Employment Security Law, 1955	53
5. Unemployment Insurance Benefit Status of Sample of 1,469 Agricultural Workers	53
6. Equivalent Total Benefit Weeks for Which Unemployment Insurance Benefits Were Potentially Payable to Sample of 1,070 Agricultural Workers	53
7. Estimated Number of Agricultural Workers Potentially Eligible for Unemployment Insurance Benefits under Hawaii Employment Security Law, 1954-1956	54
8. Weeks of Partial or Total Unemployment Experienced by Sample of 798 Agricultural Workers Interviewed.	54
C-1. Annual Average Labor Force, Employed and Unemployed, 1939-1956	58
2. Status of Hawaii's Unemployment Compensation Fund.	59
3. Annual Average Covered Employment and Total Employment, 1940-1956	59

<i>Table</i>	<i>Page</i>
C-4. Average Monthly Employment in the Pineapple, Sugar, and Diversified Farming Industries, 1950-1956	60
5. Annual Ratio of Benefits and Reserves to Taxable Payroll, and Average Employer Contributions Rate, 1951-1955	60
6. Number of Sugar Plantations, by Average Monthly Employment, 1955	60
7. Annual Farm Payrolls on Sugar Plantations.	61
8. Average Monthly Employment of Production Workers on Sugar Plantations, 1955.	61
9. Production Workers on Sugar Plantations, by Type of Earnings	61
10. Pineapple Seasonal Workers, by Weeks Employed during 1955.	62
11. Diversified Farm Workers, by Weeks Employed during 1955.	62
12. Number of Diversified Farms Employing Workers, by Number of Employees during 1955	63
13. Number of Diversified Farms Employing Workers, by Annual Payroll in 1955.	63
14. Total Earnings and Average Individual Earnings on Diversified Farms during 1955.	63

Summary

THE BASIC QUESTIONS

What would be the probable cost in unemployment insurance contributions to employers . . . and

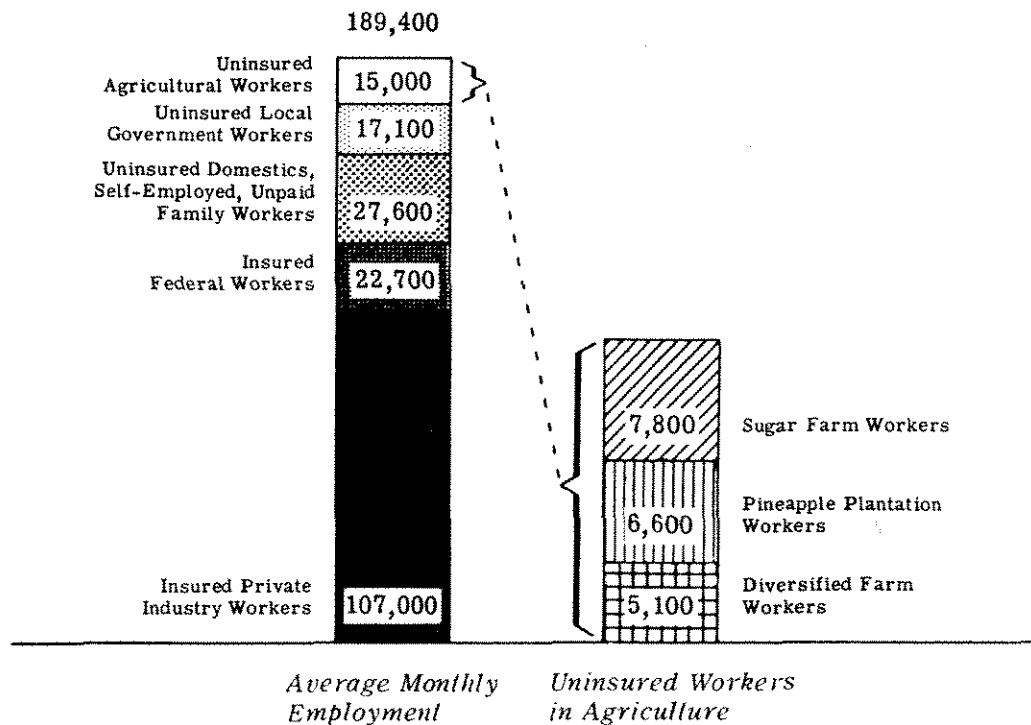
What would be the probable amounts in unemployment insurance benefits paid to farm workers . . . if

Unemployment insurance in the Territory of Hawaii were extended to agricultural workers?

BACKGROUND DATA

Workers in Hawaii have been protected against wage loss through unemployment insurance since 1937. As the result of

Figure 1. RELATIVE VOLUME OF EMPLOYMENT NOT COVERED BY UNEMPLOYMENT INSURANCE, 1955



growth of the Territory's labor force since that time and of expansion of the unemployment insurance law, the number of covered workers has increased from 79,800 to 129,700 in 1955.

However, there are approximately 43,900 workers who do not have such protection. Included in this group are domestic servants, local government workers, and workers in farm employment.

Collective bargaining contracts negotiated in 1956 by the ILWU with the sugar and pineapple industries provided private payments of unemployment benefits to regular agricultural workers who are permanently separated from employment in these two industries.

Uninsured earnings of farm workers amount to some \$45 million per year. This includes \$24.6 million in sugar plantation earnings, \$16 million in pineapple plantation earnings, and \$4.4 million earned by employees in diversified agriculture.

THE IMMEDIATE PROBLEM

During 1955, 8,288 agricultural workers were permanently or temporarily separated from agricultural employment. This

Figure 2. AGRICULTURAL WORKERS SEPARATED FROM EMPLOYMENT, 1955

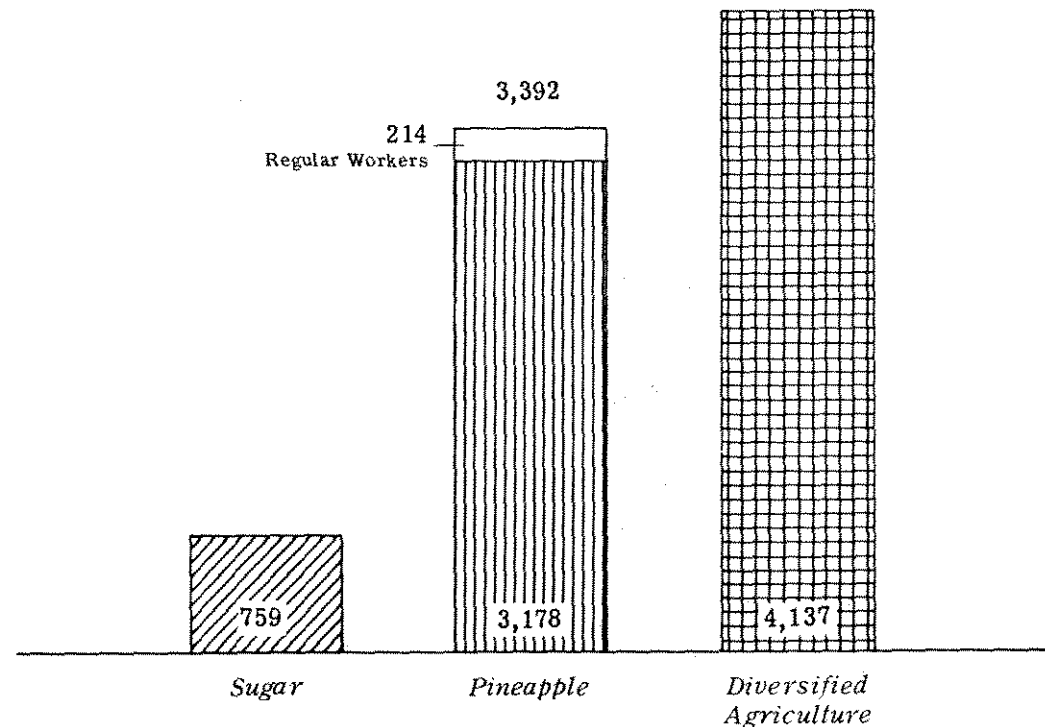
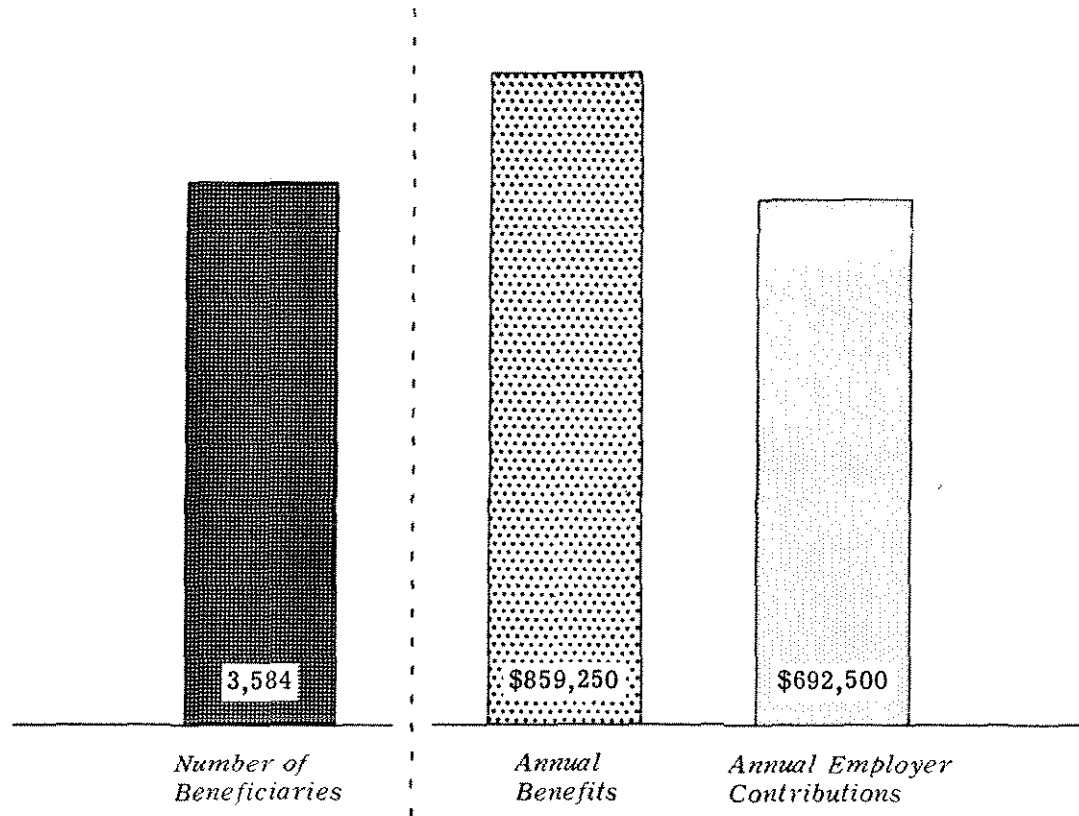


Figure 3. AGRICULTURAL BENEFICIARIES, BENEFITS AND CONTRIBUTIONS UNDER UNEMPLOYMENT INSURANCE



number comprised 42 per cent of all farm workers not presently covered by unemployment insurance.

The sugar industry, with a minimal seasonal variation in activity, experienced the lowest rate of separations—slightly under 7 per cent of its production workers. Approximately a third of those separated from sugar employment were partly covered by unemployment insurance by reason of having worked in the mills. Some four-fifths of workers in diversified farms were separated from employment. Approximately 43 per cent of these were seasonal coffee harvesters on the island of Hawaii.

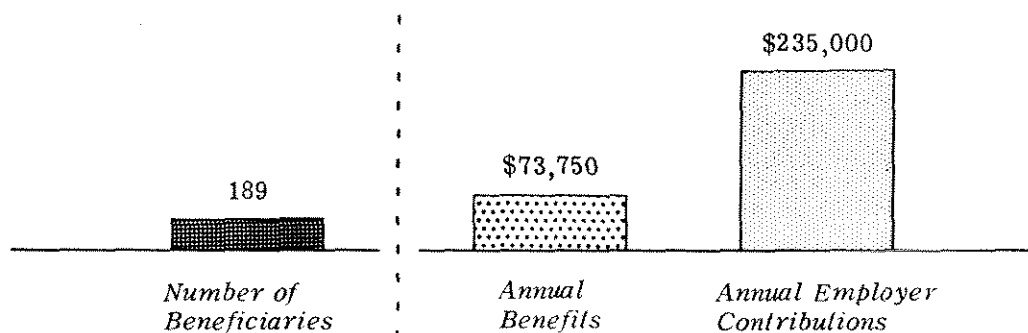
PROBABLE RESULTS OF COVERING AGRICULTURAL WORKERS

Extension of current provisions of the employment security law to agriculture would provide benefits for some 40 per cent

of farm workers. The balance would not be eligible because (1) they were students, (2) were employed immediately after separation, (3) had removed themselves from the active labor market, or (4) had insufficient earnings during the period prior to separation to qualify for benefits.

During the first five years of extended coverage, it is estimated that annual average contributions of agricultural employers would equal 80 per cent of benefits paid to their employees. However, there would be wide variations in this ratio, as well as in the rate of contributions in the different segments of agriculture.

Figure 4. ESTIMATED EFFECTS OF COVERING SUGAR FARM WORKERS UNDER UNEMPLOYMENT INSURANCE



SUGAR

Approximately 2 per cent of those employed and 25 per cent of those separated from the sugar industry would be eligible for benefits. The low separation ratio in this industry is accounted for by the stability of employment and the low ratio of eligibility is partially due to the high retirement rate of older workers. Workers eligible for benefits would receive an average of \$26 in weekly benefits for a duration of 15 weeks, or an aggregate of \$391 in benefits for the year. During the first five years of coverage, contributions of sugar firms are expected to exceed benefits by an average of \$166,000 per year.

By combining estimated farm earnings and benefits with earnings and benefits with respect to mill employment (already covered), the current reserve should be sufficient to qualify employers for an initial zero contribution rate. By the second year, however, the contribution rate would rise to 1.8 per cent. It should return to the zero rate by the end of the fifth year.

PINEAPPLE

As in the sugar industry, the number of regular full-time plantation employees eligible for benefits is negligible. This group would account for less than 2 per cent of all workers and 30 per cent of all separations. Total benefits paid to these eligible workers would amount to \$483, representing payments for 18 weeks at an average of \$27 per week.

Coverage of seasonal workers presents a different picture—where all employees are separated and 55 per cent of those separated would be eligible. The ineligible group largely consists of housewives and students. Eligible seasonal workers would receive an average of \$23 for 14 weeks for a total of \$323.

Because of the large numbers involved, however, benefits to seasonal workers would amount to 59 per cent of all benefits to farm workers in pineapple. Furthermore, because benefits paid to seasonal workers are based on earnings received during only a few months, total benefits would exceed contributions by approximately \$472,000 annually.

Under current coverage the payment of benefits to seasonal cannery workers substantially exceeds contributions and most pineapple companies make contributions at the maximum rate of 2.7 per cent. With the addition of agricultural benefits, annual contributions would amount to only 77 per cent of benefits; employers would continue to pay at the maximum rate.

Figure 5. ESTIMATED EFFECTS OF COVERING PINEAPPLE FARM WORKERS UNDER UNEMPLOYMENT INSURANCE

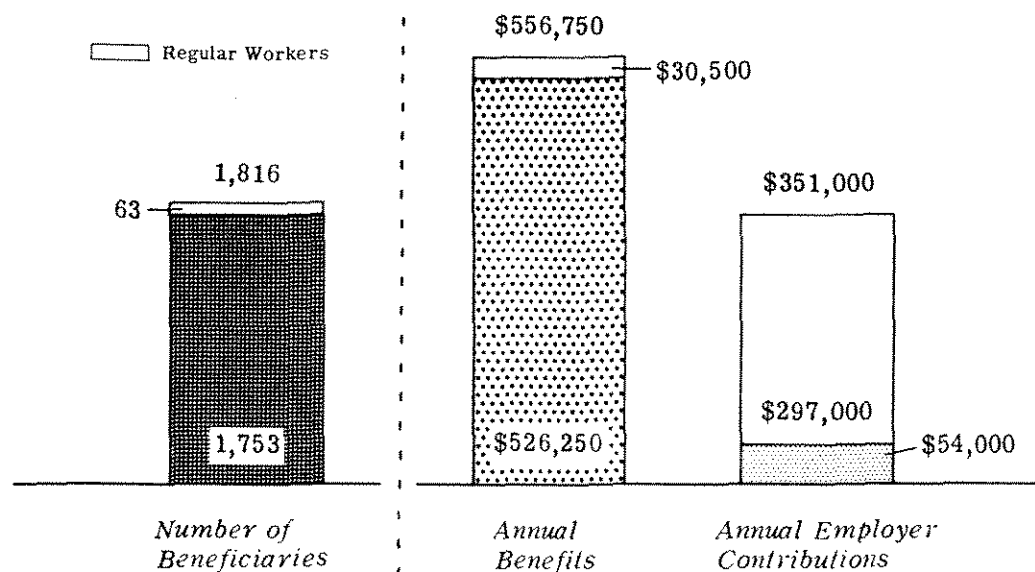
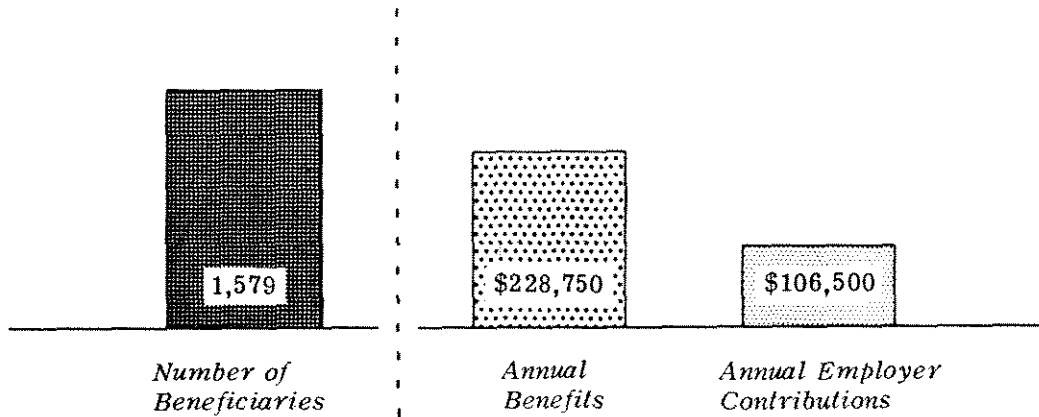


Figure 6. ESTIMATED EFFECTS OF COVERING WORKERS IN DIVERSIFIED AGRICULTURE UNDER UNEMPLOYMENT INSURANCE



DIVERSIFIED AGRICULTURE

Thirty per cent of workers on diversified farms would be eligible for benefits if they were covered under unemployment insurance. Only slight variations are noted in the ratios between employment and separations in each type of farming, such as dairies and ranches, coffee, poultry, hogs, and general truck farming.

Based on current provisions of the law (e.g. coverage of employers of one or more workers at any time), it is estimated that eligible workers would receive an average of \$19 in weekly benefits for a duration of 9 weeks—a total of \$175 annually. The total benefits for this group of workers would be considerably lower than for sugar or pineapple personnel because of relatively lower weekly benefits, resulting in turn from low annual earnings. Benefits paid to this group of employees would be more than double the contributions by their employers.

Testing of alternative coverage provisions reveals that any coverage formula based on either the number of employees or the volume of payrolls would not close this gap between benefits and contributions.

PART 1. *Introduction*

DEVELOPMENT OF UNEMPLOYMENT INSURANCE COVERAGE IN HAWAII

When the Hawaii unemployment insurance law was adopted in 1937 it brought 79,800 workers under its protection. These workers represented 55 per cent of all wage and salary workers. By 1956, about 128,000 workers, representing approximately two-thirds of all wage and salary workers, had unemployment insurance. Two major groups of workers added during this 18 year period by territorial legislation were persons employed by nonprofit organizations, covered in 1945, and maritime workers, added in 1947. Federal legislation brought in another large group when Title XV of the Social Security Act, enacted in 1954, covered federal civilian workers, of whom there are 22,000 in the Territory.

NUMBER PRESENTLY NOT COVERED IN HAWAII

Despite a 63 per cent increase in covered employment since 1937, there are still approximately 43,900 employees in the Territory of Hawaii who are not covered. These workers are employed in the following industries: 19,500 in agriculture; 17,400 in territorial and local government;* 7,500 in domestic service.

In Hawaii, just as in other states, consideration has been given to improving the effectiveness of the unemployment insurance program through closing gaps in its coverage. During recent sessions of the territorial legislature, bills have been introduced to include workers employed in agriculture. In 1955 both houses of the legislature passed a measure to extend coverage to farm workers,** but amendments made by the Senate were unacceptable to the House of Representatives and the conference committee did not reach agreement. Senate Resolution

*A separate report is being submitted to the 1957 session of the territorial legislature in accordance with Act 200, Laws of Session 1955 on the subject of extending coverage to territorial and county government employees.

**H.B. No. 17 passed third reading in the House on March 17, 1955 and third reading in the Senate on April 26, 1955.

No. 71, adopted April 29, 1955, instructed that a study be made of problems of extending coverage to farm workers and a report presented to the legislature on this subject in 1957. The present report has been prepared in accordance with that Resolution.

CONSIDERATION OF PROBLEM IN OTHER AREAS

State legislatures in Arizona, California and other states have also considered extending coverage to farm workers during recent years, and employment security agencies and advisory councils have made numerous studies of this problem.

The Federal Advisory Council on Employment Security, which advises the Secretary of Labor on employment security matters, has also been working on this subject, especially during the past five years, and has made recommendations for federal legislation to bring farm workers under unemployment insurance. During 1952, the Senate Committee on Labor conducted extensive hearings on migratory labor and in its published reports included a report on extension of coverage to agricultural labor.* However, to the present time no state has covered farm workers, nor has the Congress extended coverage to this group.

Collective bargaining contracts negotiated by the sugar and pineapple industries in 1956 provided private payment of unemployment benefits for agricultural workers who are permanently separated from employment in these two industries. The contracts are discussed more fully later in this report.

RELATION TO OTHER PROTECTIVE PROGRAMS

In considering unemployment insurance as a device for meeting the risk of loss of earnings due to involuntary unemployment, it should be noted that other risks of a similar kind have already been provided for by legislative action. Most farm workers have recently been brought under the old age and survivors insurance program, thus gaining protection against loss of wages because of old age. For many years, farm workers in the Territory, like non-farm workers, have been covered under the workmen's compensation law, and are protected against wage loss due to industrial accident and disease. Thus, extension of unemployment insurance to agriculture would assure farm

*Migratory Labor Hearings before Subcommittee on Labor and Labor Relations of Senate Committee on Labor and Public Welfare, 82nd Congress, 2nd Session, Part 2, p. 1067.

workers the same protection as nonagricultural workers against this additional risk.

BASIC PROVISIONS OF UNEMPLOYMENT INSURANCE

UNEMPLOYMENT BENEFITS

Unemployment insurance is a system of weekly cash payments to unemployed workers who have worked in covered employment sufficiently long to have earned the necessary amounts of wages to qualify for benefits. To receive such payments they must be ready, able, and willing to work, in the opinion of the administrative officials, and they must not have been disqualified for benefits by reason of voluntary leaving without good cause, misconduct connected with work, refusal to accept suitable work, pregnancy, or fraud. Under the present schedule, the weekly payments range from \$5 to \$35 and are computed for each worker according to his wages in the calendar quarter in which his earnings were highest among the last four completed quarters. Benefits for workers whose high quarter wages were between \$37.50 and \$125 would be computed at \$5 weekly, while they would be \$35 for the person earning over \$850 in his high quarter. For all except those drawing the maximum there is an additional requirement that the claimant shall have earned at least 30 times his weekly benefit amount during the four-quarter base period.

FINANCING UNEMPLOYMENT INSURANCE

The benefit expenditures referred to above have been financed by a payroll tax levied on all employers in commerce and industry with one or more workers at any time. Employer contributions were initially paid at the rate of 2.7 per cent of all wages in employment covered by the law, up to a maximum of \$3,000 per year for each worker. Since 1943, however, employers with favorable experience records have been permitted to pay contributions at reduced rates, varying from the standard rate of 2.7 per cent down to as low as zero. With the generally rising employment and wage levels and the stable employment situation in most areas of covered employment, employers' tax rates have declined substantially in recent years. As shown in Table C-5, appended, the average employer contribution rate has been less than one per cent of payrolls from 1952-1955 inclusive.

On the other hand, benefits have been higher than one per cent of payrolls in each of these years, thus reducing the balance in the reserve fund from \$23.3 million at the end of 1952 to approximately \$22 million at the end of 1955. The balance in the fund has fallen from 10.0 to 8.8 per cent of average annual benefit payments over the past four years. This decline has been somewhat greater than the national average, but Hawaii reserves have been higher than those of the system as a whole.

SEASONALITY PROVISIONS

Seasonality provisions in the Hawaii law have an effect on the reserve fund by deferring the use of wage credits earned within seasonal periods to a subsequent seasonal period, as contrasted with ordinary wage credits which may be used within the calendar quarter immediately following that in which they are earned. Generally speaking, seasonal employers do not have the same degree of control over their experience rating factors as do nonseasonal employers, and limiting the benefit rights of seasonal workers by restricting the payment of benefits to the subsequent season is a means of safeguarding the fund. The seasonality provision has been applied to employees in only two industries—all workers engaged in the processing, canning and warehousing of fresh pineapples, and those in certain occupations in connection with the canning and warehousing of tuna fish.

To determine seasonality, an industry's employment record is subjected to mathematical tests. The average weekly man-hours for the 3 four-week periods of the year in which the man-hours are highest are first established. If it is then found that there are 12 consecutive weeks in the remainder of the year in which the manhours for each week is less than 45 per cent of that average, the requirements are satisfied. Once an industry or occupation within an industry is determined to be seasonal, member firms may request opening and closing dates of the seasonal period in accordance with their anticipated seasonal activity. There may be more than one seasonal period but in the aggregate they must extend less than 26 weeks per year.

SINGLE POOLED FUND

The Hawaii unemployment insurance program operates as a single pooled fund in which all contributions are intermingled and from which all benefits are paid. If agriculture were cov-

ered, the contributions received as the result of the extension of coverage would become a part of this same fund.

NUMBER AFFECTED BY EXTENDING COVERAGE

About 9,000 employers are now subject to the unemployment insurance law; such extension could add another 552 employers. In addition, 35 employers already covered by the law because of sugar mill and pineapple canning operations would be newly liable for contributions on the agricultural portion of their payrolls, now excluded. These 35 sugar and pineapple employers employ about 28,200 workers in jobs now covered by the law and 14,400 others in farm employment. Their payrolls which are now subject to contributions approximate \$40.8 million; an additional \$36.7 million would be added by bringing their farm workers under the program.

As just noted, there are 552 employers in agricultural activities outside of the sugar and pineapple industries who are not now liable for contributions under the unemployment insurance law. Extension of the program to these employers would bring in some 5,000 workers employed by them at some time during the year. Their earnings which would be subject to contributions approximate \$4.5 million per year.

THE ROLE OF UNEMPLOYMENT INSURANCE IN HAWAII

Consideration of extension of unemployment insurance to groups not now protected, such as agricultural labor, suggests the desirability of reviewing the role which the program has played with regard to unemployment experienced by workers who are presently covered under the law.

Since 1939, approximately \$27.6 million has been paid (to December 31, 1956) to these workers for 1,404,000 weeks of involuntary unemployment. (See Table C-2, appended.) The annual amount of benefits has been as small as \$6,000 per year in 1944 and 1945, when virtually all employable persons were working full time. Benefit payments have been more than \$1 million per year since 1948, and reached \$4.3 million in 1949, the year of highest expenditures in the program's history in Hawaii. More recently, the recession unemployment of 1954 led to an increase in benefit expenditures to nearly \$4 million from approximately \$3 million in 1953.

EFFECT ON PURCHASING POWER

As a rough indication of the role of unemployment insurance in replacing lost wages during the 1949 recession, benefit payments increased by nearly \$3 million in that year over 1948, when total wages paid in covered employment dropped by \$22 million from 1948 to 1949. From these figures, it would appear that unemployment insurance benefits replaced nearly \$1 of each \$7 of the decline in wage payments. The significance of this figure is better appreciated if it is compared with 1949 average monthly retail sales of \$36.3 million*, or annual old age insurance payments of \$9 million, or the monthly payroll of \$4.4 million in manufacturing, the industry that is second in Hawaii only to wholesale-retail trade in payment of wages. Thus, the contribution of unemployment insurance in 1949 to workers' purchasing power taken as a whole was approximately the same as one month's wages in the manufacturing industry.

AID TO UNEMPLOYED PERSONS

To look at the role of unemployment insurance solely in terms of its effect on purchasing power in the economy as a whole would neglect its importance in tiding individual workers over periods of joblessness when they are without wage earnings. Benefits were paid to about 11,800 workers in Hawaii for 140,200 weeks of unemployment during 1955, at an average weekly amount of \$21.50 for about 12 weeks per claimant during the year. Since workers employed in jobs covered under the program earned about \$60 per week, on the average, their benefits amounted to 35.8 per cent of their weekly wages. It is apparent these benefits made a substantial contribution to these workers and their families in carrying them over periods of layoff with their regular employers or over periods of unemployment between jobs.

*Excluding sales to armed services.

PART 2. *Economic Backgrounds*

AGRICULTURAL EMPLOYMENT IN HAWAII

For more than 100 years sugar has been the basic industry in Hawaii's economy. It is the largest industry and largest single source of income and employment in the Territory, with a stable, nonseasonal labor force. However, while sugar is a large industry in Hawaii, it produces only one-eighth of total mainland consumption and less than 3 per cent of the world's supply.

The growing and processing the pineapple crop provides the second largest industry in Hawaii. In terms of output and number of workers employed, pineapple is about two-thirds as large as the sugar industry. Employment in the pineapple industry, unlike sugar, is highly seasonal and although it provides year-round employment to some 8,800 workers, it also provides seasonal work for several thousand persons on the plantations as well as in the canneries. Growth of the pineapple industry to a mass production level occurred later than did the growth of the sugar industry, and practically no pineapples were exported from the Territory prior to 1890. The key to expansion of the pineapple industry was the invention of the Ginaca machine in 1913 for peeling and coring of the fruit. Since that time Hawaii has been the world's greatest producer of canned pineapple with four-fifths of the total world output.

EMPLOYMENT TRENDS IN SUGAR INDUSTRY

Between 1872 and 1948 the Territory of Hawaii was faced with repeated labor shortages. The primary cause prior to 1932 was the expanding demands of the sugar industry and later the pineapple industry for a larger labor force to man their plantations. The sugar industry reached maximum expansion in both employment and acreage by 1932, however, and since that time total employment in the industry has declined. This decrease has been brought about by such forces as the continuous rise in wages and other production costs and the wartime manpower

shortages. As a result the sugar industry has changed from a "hand" industry to a highly mechanized industry with considerably reduced employment. Whereas in 1932 there were 54,000 persons employed in sugar production, there are now less than 20,000. In the 1940's several marginal plantations were unable to keep pace with rising costs and consequently were discontinued or merged with other plantations. This contributed substantially to the marked employment reduction in that decade which showed a drop from 41,350 in 1940 to 22,900 in 1950. As Table 1 indicates, there are 19,350 workers employed in Hawaii's sugar industry, of whom 7,550 are in the mills and 11,800 in agricultural employment.

*Table 1. EMPLOYMENT BY THE SUGAR INDUSTRY
AS OF DECEMBER 1956*

	<i>Sugar</i>	<i>Total</i>	<i>Percent Sugar</i>
Oahu	3,450	140,810	2.5%
Hawaii	7,080	25,430	27.8
Maui	3,740	13,340	28.0
Kauai	5,090	11,910	42.7
Territory	19,360	194,010	10.0

More than three-fourths of the industry's employment drop between 1950 and 1956 took place between 1953 and 1955. Of a 2,700 reduction during this three year period, only 15 per cent reflected layoffs due to lack of work and these were largely concentrated in a few firms on the island of Hawaii.

In spite of the decrease in employment and acreage, there has been relatively little change in sugar output during the past 25 years. The increasing and continued application of scientific methods and mechanization has made it possible for the sugar industry to maintain its production with fewer workers.

EMPLOYMENT TRENDS IN PINEAPPLE INDUSTRY

The pineapple industry is a major economic factor on every island except Hawaii. It is the primary source of income and employment on Molokai and is virtually the only source of income on Lanai. Although the sugar and pineapple growing industries are both conducted on a large-scale plantation basis, there are many things about the pineapple industry which are different from sugar with which it is often compared.

Although most of the work is done by a stable, year-round force of regular employees (numbering 3,800 in December

1956), the pineapple canning and the harvesting and planting periods require the hiring of extra seasonal workers. In 1955 there were 3,178 seasonal workers employed on pineapple plantations and 11,000 employed in the canneries. Because the harvesting and canning season varies from year to year depending upon weather and crop development, the number of extra workers required during the season varies. A sudden peak in the ripening of the pineapples compels the plantations to hire a larger number of seasonal workers.

Pineapple leaves Hawaii as a finished product ready for immediate consumption, whereas the bulk of raw sugar is shipped to the mainland for refinement there. Also unlike sugar, pineapple is sold in an open market with no quota or tariff protection. The local pineapple companies are in direct competition not only with each other but also with other pineapple producing areas and with mainland producers of fruits and juices. In contrast to most mainland canned fruit operations, in which packers buy from growers, the majority of the pineapple companies in Hawaii are both growers and packers, thereby assuming all the risks of agricultural production and market prices.

There have been sharper ups and downs in the pineapple industry than in sugar. In the past, production has been curtailed as the result of drought, insects and disease, resulting in reduced income to the industry. The depression of the early 1930's brought about a drop in prices and sales that resulted in curtailment of planting and millions of dollars in losses to the industry. Subsequent to that time there has been a considerable expansion in planting. The increase in acreage in the pineapple industry parallels the increase in pineapple production. However, while acreage and production have increased, there has been a gradual decline in the regular work force since 1947 which has been made possible by the development of improved methods and mechanization. In 1947 employment (excluding seasonal workers) on the pineapple plantations totalled 5,000. This number included 2,000 workers recruited from the Philippine Islands in late 1946 to alleviate the acute wartime manpower shortage. Since 1947 regular employment has declined to a current level of approximately 3,800.

EMPLOYMENT TRENDS IN DIVERSIFIED AGRICULTURE

An increased production of fruits and vegetables during recent years, particularly since the end of World War II, has resulted in the creation of more jobs in diversified agriculture.

In 1940 a monthly average of 1,050 workers were employed in the various types of diversified agriculture. This number increased to 1,240 in 1950 and to 2,280 in 1955. During 1955, a total of 5,137 agricultural workers—including all persons who earned \$100 or more during the year—were employed by 552 employers in diversified agriculture. This total is not directly comparable with the numbers listed in the preceding paragraph, which are monthly averages shown to point out the sizeable increase in employment by diversified farms since 1940.

Coffee is one of the principal products exported from the Territory and the largest number of diversified agricultural workers (1,839) are employed on the coffee farms on the island of Hawaii. The second largest group (1,572) are employed in dairies and ranches throughout the Territory, and 1,058 are employed on fruit and vegetable farms. The balance are in poultry and hog raising and miscellaneous types of agriculture.

EXTENT OF COVERAGE UNDER PRESENT LAW

The sugar and pineapple employers in the Territory of Hawaii employ a substantial group of workers covered by unemployment insurance in addition to the agricultural group not covered by the program. Of the 19,350 workers presently employed in the sugar industry, 7,550 (39 per cent) are covered by unemployment insurance. These workers are employed in the sugar mills located on the plantations. There is also considerable shifting of workers between the mills and agricultural work which takes place at the time of the sugar grinding season, so that some employees are covered by the unemployment insurance program part of the year, while engaged in mill employment, and the remainder of the time are not covered. Although the sugar workers engage in both agricultural and manufacturing pursuits, they are a group which lives in rural communities.

In the pineapple industry there are also large numbers of agricultural and manufacturing workers, although the cannery workers for the most part do not live in rural communities. There are 16,000 workers employed in the pineapple canneries; they are classified by the industry as being regular year-round, intermittent, or seasonal employees who are covered by the unemployment insurance law. Some 6,600 agricultural workers, comprising 29 per cent of the workers in the pineapple industry, are employed on the plantations. At present they are not covered by unemployment insurance during any portion of the year.

EARNINGS IN HAWAIIAN AGRICULTURE

Sugar and pineapple plantation employees in Hawaii are paid the highest annual agricultural wages in the world. During 1955 the sugar industry paid \$57,147,000 and the pineapple industry paid \$37,250,000 in wages—the payrolls of the two industries aggregating about one-tenth of personal income payments received in the Territory.

Table 2. AVERAGE ANNUAL EARNINGS IN
PINEAPPLE AND SUGAR INDUSTRIES

	<i>Sugar</i>	<i>Pineapple</i>
1947	\$2,323	\$2,292
1948	2,457	2,563
1949	2,472	2,443
1950	2,509	2,854
1951	2,726	3,126
1952	2,868	3,112
1953	2,960	3,032
1954	3,148	3,164
1955	3,119	3,214

Source: U. S. Department of Commerce, *Income in Hawaii*, 1952 and subsequent annual supplements. Data represents earning per full-time employee equivalent.

AVERAGE WAGES IN SUGAR INDUSTRY

During the twelve-month period from October 1954 to September 1955, sugar plantation workers whose total earnings were solely from agricultural work received an average of \$2,590. Workers on sugar plantations who received both agricultural and nonagricultural earnings averaged \$2,597, while those employed during the entire year in the sugar mills averaged \$2,937. The average annual wage for all field and mill workers was \$2,709.*

AVERAGE WAGES IN PINEAPPLE INDUSTRY

With regard to pineapple earnings, as has been previously stated, weather conditions have a direct effect upon the work requirements of pineapple plantations and therefore an effect

*The foregoing average earnings are not comparable with those shown in Table 2 since the latter include managerial and office personnel as well as field and mill workers.

upon earnings. The decrease in average annual earnings in 1952 and 1953 was largely due to adverse effect of drought on the plantation operations which cut down the amount of work.

The average annual wage for regular pineapple plantation workers in 1955 was \$2,969; seasonal workers, \$614.80. In this seasonal group students averaged \$373.79 and other seasonal workers \$670.26.

In addition to cash wages the regular pineapple agricultural and sugar agricultural workers receive a variety of benefits. These include medical protection, paid holidays, vacation with pay, retirement pay or pensions provided under various company plans, group life insurance, severance pay, and sick leave benefits. In addition, the 1955 agreement between the industries and the labor union representing their employees provide for the payment of unemployment benefits to workers permanently separated from the industry, the provisions of which are outlined below.

AVERAGE WAGES IN DIVERSIFIED AGRICULTURE

The average earnings per worker is considerably lower for the diversified group than for sugar and pineapple agricultural workers. Average annual earnings per worker in 1955 was \$863. This average is for a sector of agriculture which is characterized by a high rate of separation. (See Table 6, below.) It is therefore more comparable to seasonal earnings, as in the pineapple industry, than to earnings from full-time, year-round employment in the sugar or pineapple industries.

UNEMPLOYMENT BENEFITS UNDER COLLECTIVE BARGAINING AGREEMENTS

A recent development in labor relations in Hawaii is of consequence to this study. The most recent collective bargaining between the pineapple and sugar companies, on the one hand, and the International Longshoremen and Warehousemen's Union, representing the employees of these industries, on the other, early in 1956 negotiated contracts which provided for benefit payments to persons separated from such employment.

SEVERANCE PAY IN PINEAPPLE INDUSTRY

The basic contract between the pineapple companies and the ILWU, Local 142 which became effective on February 22, 1956

contained a section entitled "Separation Allowances." Three categories of allowances are provided for the regular fulltime employee who has completed one or more years of continuous service and is permanently terminated from employment for reasons clearly beyond his own control due to a permanent reduction in the work force. Waiver of pension rights is a condition of all three. The first is an outright payment scaled to the number of years of service by the employee.

The second category provides unemployment insurance benefits parallel to those under the employment security law for those workers who, because of the coverage exclusions in the law, are not entitled to benefits under the public program. The terminated employee must fulfill much the same eligibility conditions as for receipt of public benefits, including registration with a public employment office. He is not entitled to payments under the contract for any week in which he has received or is eligible for benefits under the public program.

The third type of allowance for terminated employees is limited to those who decide to leave the United States for permanent residence in a foreign country other than Canada. If the employee is eligible to receive unemployment benefits under the contract, he is entitled upon leaving the Territory to a payment equal to 70 per cent of his maximum benefit but not more than \$490. If the employee is ineligible for benefits from the company because he is eligible for benefits under the employment security law, nevertheless the company pays him 70 per cent of his maximum benefits but not more than \$490 upon his leaving the islands.

SEVERANCE PAY IN SUGAR INDUSTRY

As of April 10, 1956 each of the sugar plantation companies entered into a "Severance Allowance Agreement" with the ILWU, Local 142 covering regular fulltime employees with a year or more of service who are permanently laid off. The agreement provides for a basic severance allowance and a weekly severance benefit. To be eligible for either the employee must have waived all pension rights. The basic allowance is stated in terms of days' pay per year of service and is paid to terminated employees unless they are (a) 55 or over, or (b) 45 or over and leaving the United States, or (c) transferred to another employer with pension rights protected. The weekly severance benefit is paid to a terminated employee unless he is (a) 55 or over, or (b) 45 or over and leaving the United States, or (c) eligible and

applies for a disability pension under the company's plan, or (d) an employee who has earned all his wages from the company in employment covered by the employment security law. The terminated employee who is entitled to the weekly benefit will receive the same amount under the same conditions as if all his wages were covered under the public program less the amount of any public benefits for which he can qualify. If the company discontinues sugar operations there is provision for a supplemental severance allowance in lieu of weekly benefits. A repatriation allowance is the fourth type of payment and replaces the weekly or supplemental allowance in the case of an employee who elects to leave the United States for permanent residence in a foreign country other than Canada.

BENEFITS COMPARED WITH UNEMPLOYMENT INSURANCE

While the schedule of unemployment benefits under both the pineapple and sugar contracts is the same as under the public program, the protection afforded by the private plans is not as complete.

In the sugar industry the individual claimant who meets the requirements as to regular employment, etc. receives the same protection as if all his services for the company had been covered under the law. However, the employees in the field who suffer temporary layoffs because of weather, etc. do not receive benefits, partial or otherwise, which would be payable if their services were covered under the law.

The contract protection for pineapple workers is less complete than for sugar workers. This is because an individual otherwise eligible under the contract who has earned sufficient wages in covered employment to qualify him for public benefits finds that he has no right to contract benefits based on his non-covered work unless he continues to be unemployed beyond the duration of his public benefits. In other words, there is no supplementation of public benefits in pineapple as there is in sugar. The two contracts are similar in that neither provides benefits for the temporary and seasonal agricultural employees as well as regular agricultural employees who suffer temporary unemployment.

DISTINCTION FROM SUPPLEMENTAL UNEMPLOYMENT BENEFITS

The benefit plans provided in the sugar and pineapple industries for noncovered employees are different in purpose and

principle from the so-called "supplemental unemployment benefits" provided through collective bargaining on the mainland by the automobile manufacturers and others. While supplemental unemployment benefits are designed to augment from employer-established trust funds the benefits received by workers who are fully covered under state unemployment insurance laws, the severance pay plans in sugar and pineapple have as their purpose the private payment of unemployment benefits based on wages earned in noncovered employment.

BASIC QUESTIONS TO BE ANSWERED

Such is the present arrangement for compensation of unemployment of agricultural workers in the sugar and pineapple industries. No similar agreements exist in diversified agriculture, which is non-unionized. Here no payments would be received by unemployed persons from any fund, public or employer's, except for those few presently covered by the employment security program because they are in occupations considered to be industrial.

The ensuing portions of this report seek quantitative answers to these basic questions:

1. How much unemployment occurs within agriculture in Hawaii?
2. How much of such unemployment is presently uninsured under the employment security law?
3. How much in benefits would be received by agricultural employees if the law were to be amended to cover them?
4. How much would be added to the contribution cost of employers if such amendments were to be made?

PART 3. *Survey Findings*

SEPARATIONS FROM AGRICULTURAL EMPLOYMENT

The data required to supply the information required by Senate Resolution 71 had to be gathered from a number of sources. Employment and payrolls of the sugar and pineapple industries were readily available from the several plantations and canneries, but not the extent and duration of unemployment throughout both industries. No comprehensive data had previously been published with respect to employment, payrolls, or unemployment in ranching, dairies, coffee farms, truck farms, horticulture or other sectors of diversified agriculture.

While it proved possible to get much of the necessary statistics from records of employers, of the Bureau of Employment Security, of the Internal Revenue Service, of the territorial Tax Department, and from other sources noted in Appendix B, adequate data on the frequency and circumstances of unemployment in agriculture could be obtained, practically, only by sample interviewing. After mature consideration of alternative sampling and interviewing methods, the procedures, also outlined in Appendix B, were established. Following a period of training interviewers (upperclassmen and graduate students at the University of Hawaii), interviews were conducted on each major island between March and August, 1956. In all, 798 persons were interviewed and the eligibility status under the unemployment insurance law of 272 additional persons was determined.

THE BASIC QUESTION RAISED

While the form and content of the interview process were necessarily highly detailed, the end product sought may be simply expressed. Sought were the answers to the questions set forth above, which may be telescoped into the following query: *"If agricultural employees had been covered under the unemployment insurance program during 1955 (or the closest equivalent for a fiscal year) what costs would have been assessed and what benefits paid?"* To answer this basic question it was

necessary to ascertain for each major sector of agriculture—sugar, pineapple and diversified agriculture—the number of persons unemployed, the circumstances of their unemployment, if their wages over the year were sufficient to qualify for benefits, and whether or not they were able and available for work during their periods of unemployment. This portion of the report attempts to summarize the answers to these particular questions.

Table 3. SEPARATIONS FROM AGRICULTURAL EMPLOYMENT
DURING CALENDAR OR CROP YEAR 1955

	Pineapple	Sugar	Diversified Agriculture	Total
Oahu	1,302	90	792	2,184
Hawaii	--	457	2,749	3,206
Maui	365	119	428	912
Kauai	455	93	134	682
Molokai	579	--	34	613
Lanai	691	--	--	691
Total	3,392	759	4,137	8,288
Distribution . . .	40.9%	9.2%	49.9%	100.0%

Note: Total separations as reported by sugar and pineapple plantations; data for diversified agriculture based upon interviews.

SEPARATIONS, GENERALLY

During the period under study, some 8,288 agricultural employees in the Territory were separated from their employment. As Table 3 indicates, almost exactly half of the dismissals, layoffs, etc., occurred in diversified agriculture: the bulk of these separations were on Hawaii, the island on which diversified farming is most important. Oahu, where the largest number of seasonal pineapple workers are employed, showed the second largest number of separations, more than one-fourth of the territorial total. (It should be noted, however, that the *duration* of unemployment is not shown in Table 3, but rather in Table 7, following.)

SEPARATIONS, SUGAR INDUSTRY

The relative frequency and pattern of separations vary markedly among the three major sectors of agriculture in the

Territory. The cane sugar industry, with a minimal seasonal variation in activity, had the smallest rate of separation—slightly under 7 per cent of its production workers.* Approximately a third of the agricultural employees separated from sugar employment in 1955 had worked a portion of the year in occupations covered by the present provisions of the unemployment insurance law, i.e. part of their work was performed in or around the mill and so was deemed industrial in nature. The remaining two-thirds were in occupations presently uncovered. (See Table 4.)

Virtually all unemployment in the sugar industry stems from retirements and other permanent separations. Spot checks indicated only occasional temporary lay-offs because of heavy rainfall. The frequency of such lay-offs appears to be too small to have any significant effect upon the estimates of benefits and costs made in this study.

Table 4. NUMBER OF EMPLOYEES SEPARATED FROM THE SUGAR INDUSTRY DURING 1955^a

	<i>Some Covered Employment</i>	<i>No Covered Employment</i>	<i>Total</i>
Oahu	29	61	90
Hawaii	112	345	457
Maui	58	61	119
Kauai	24	69	93
Total	223	536	759

^aFiscal year ended September 30, 1955.

SEPARATIONS, PINEAPPLE INDUSTRY

The employment pattern in the pineapple industry is quite different. Pineapple plantations generally augment their regular work force with temporary employees, usually during the summer and early fall; their aggregate employment rolls may change by a thousand persons within a month's time. When the highly seasonal employment of the canneries is added, the resulting pattern of seasonality for the entire industry is magnified. During three of the past five years, total employment in the industry for the month of July has been more than double

*I.e., exclusive of office personnel.

that of May—and the August total approximately double that of November, when the peak of the canning season is well past. As noted previously, seasonal employment in the canneries is covered by special provisions of the existing employment security law; plantation employment is presently excluded.

Table 5. AGRICULTURAL EMPLOYEES SEPARATED FROM THE PINEAPPLE INDUSTRY DURING 1955^a

	<i>Regular Employees</i>	<i>Seasonal Employees</i>		<i>Total</i>
		<i>Students^b</i>	<i>Others</i>	
Oahu	73	165	1,064	1,302
Hawaii	--	--	--	--
Maui	84	100	181	365
Kauai	20	126	309	455
Molokai	17	105	457	579
Lanai	20	120	551	691
Total	214	616	2,562	3,392

^aCalendar year for seasonal employees, fiscal year ended August 31, 1955 for regular employees.

^bStudents working during school vacation.

With respect to field work, distinction is made in the plantations between regular employees and seasonal employees. The former are, with few exceptions, offered work the year round,* seasonal employees being added to the payroll during the months of peak operations and separated when the peak has gone. Since the bulk of harvesting comes during the summer months, a substantial number of seasonal employees are high school students on vacation—a group which would for the most part be ineligible for unemployment insurance benefits upon their return to classes, under prevalent rules of the employment security system. However, as Table 5 indicates, a larger number of these seasonal workers are not students; many of them would be eligible for unemployment benefits, as the subsequent discussion will indicate.

SEPARATIONS, DIVERSIFIED AGRICULTURE

Four-fifths of the employees in diversified agriculture were fired, laid-off or otherwise separated from such employment

*See Tables 5 and 7, however, for incidence of unemployment among regular employees.

during 1955. As Table 6 indicates, separation rates were particularly high on coffee farms, on independent sugar farms, and on farms raising more than one crop. Reference to Table 3 shows that the bulk of these separations took place on the island of Hawaii, where the larger portion of diversified agriculture is situated.

The remarkably high ratio of separations to total employment in diversified agriculture points to the seasonality of such work. From this fact, plus the evidence of Tables 9 and 10 that a large percentage of these employees had other employment in 1955, it can be adduced that jobs on coffee farms, truck farms, etc. comprises only a secondary source of income to many persons in this sector of the territorial economy.

DURATION OF UNEMPLOYMENT

IN SUGAR AND DIVERSIFIED AGRICULTURE

The survey revealed wide differences among the three sectors of agriculture with respect to the duration of unemployment experienced. Results of 798 interviews of persons separated from farm employment in 1955, computed below in Table 7, indicate these variations. Persons working on sugar plantations, when separated from that employment, tend to remain out of work for long periods. Somewhat more than two-thirds of those interviewed from this group were totally or partially unemployed for more than 50 weeks—virtually the entire year. In diversified agriculture, by contrast, a third of the number interviewed experienced less than a week of unemployment during which they were available for work; the rest showed a wide scattering of short, medium, and long term unemployment over the year.

Table 6. EMPLOYEES SEPARATED FROM DIVERSIFIED AGRICULTURE DURING 1955

	<i>Total Employed</i>	<i>Number Separated</i>	<i>Percentage Separated</i>
Dairies and ranches	1,572	933	59.4%
Coffee	1,839	1,776	96.6
Poultry	198	108	54.5
Hogs	93	57	61.3
Independent sugar planters . . .	16	16	100.0
General farming	1,058	893	84.4
More than one product	361	354	98.1
Total	5,137	4,137	80.5%

Table 7. PERCENTAGE DISTRIBUTION OF UNEMPLOYMENT
EXPERIENCED BY AGRICULTURAL EMPLOYEES DURING 1955^a

Weeks Unemployed ^b	Pineapple		Sugar	Diversified Agriculture	Total
	Regular	Seasonal			
0	11.4%	3.3%	3.2%	33.5%	17.4%
1 - 5	0.0	2.7	3.2	9.7	5.8
6 - 10	2.3	2.7	2.2	6.6	4.4
11 - 15	0.0	6.7	0.0	3.3	4.0
16 - 20	2.3	5.0	1.1	3.6	3.8
21 - 25	9.1	4.3	2.2	2.8	3.6
26 - 30	4.5	18.3	2.2	6.9	10.5
31 - 35	2.3	16.7	1.1	8.3	10.3
36 - 40	9.1	20.7	2.2	9.1	12.7
41 - 45	9.1	13.3	5.4	7.8	9.6
46 - 50	2.3	4.7	5.4	7.8	6.0
Over 50	47.7	1.7	72.0	0.6	11.9
Total ^c	100.0%	100.0%	100.0%	100.0%	100.0%

^aTable includes persons separated during calendar year for diversified agriculture and seasonal pineapple employees, during fiscal year ended August 31, 1955 for regular pineapple employees, and during fiscal year ended September 30, 1955 for sugar employees.

^bWeeks in which earnings were less than potential weekly unemployment insurance benefits

^cDue to rounding, items may not add to exactly 100.0%.

Note: Based on stratified random sample of 798 employees: 300 seasonal pineapple workers, 44 regular pineapple workers, 93 sugar workers, and 361 workers in diversified agriculture.

IN PINEAPPLE INDUSTRY

As would be expected, the average duration of unemployment among regular pineapple workers more closely resembles that among sugar plantation workers: about half of those separated in 1955 had more than 50 weeks of partial or total unemployment. Another third reported unemployment of from 21 to 50 weeks of the year. Seasonal pineapple workers, however, seldom are completely employed or completely out of work (and seeking work) during the year, only 5 per cent falling in either extreme category. The area of central tendency for this group is between 26 and 40 weeks of unemployment over the year, to judge by 1955 experience: as Table 7 shows, over half of the number interviewed reported periods of unemployment within this range of about six to nine months.

AGRICULTURAL EMPLOYEES POTENTIALLY ELIGIBLE FOR UNEMPLOYMENT INSURANCE

A basic question to which the survey was directed—how many agricultural employees would be eligible for unemployment

insurance if agriculture were included under the employment security act—has many answers, as many as the basic rules for such coverage which might be in the minds of the questioners. It is obvious that the answer will depend on the firms covered (those with eight or more employees, with as many as one employee, etc.), the level of qualifying wages required, the waiting period established, and all other pertinent factors of the law. In order to arrive at a preliminary answer to this question, it is necessary to assume *some* rules of coverage and eligibility. Those adopted for the purposes of the discussion immediately following are the rules of the present law, outlined at pages 3 and 4 above.

If the existing unemployment insurance statute had applied to agricultural employees during 1955, it is estimated that 3,584 persons, not presently covered or only partially covered, would have been fully eligible for unemployment insurance benefits. As Table 8 shows, the largest groups forming this number are seasonal pineapple workers and employees in diversified agriculture. Slightly more than half of the seasonal pineapple workers would be eligible for benefits and almost a third of those in diversified farming. In sugar, however, and among regular pineapple employees, separations are relatively infrequent and of those separated only a small fraction would qualify for unemployment insurance; the result is that less than 2 per cent of those so employed in 1955 could have received benefits, even if their occupations had been covered.

DURATION OF BENEFIT PAYMENTS

The survey indicated that the majority of persons separated from agricultural employment during 1955—except for seasonal pineapple workers—would not have received any benefits, even had the law provided them. Table 9 indicates, however, that about 57 per cent of those seasonally employed on pineapple plantations would have been eligible for at least one week of benefits; more than a third of these employees who were separated from their jobs in 1955 could have claimed benefit payments for 20 weeks, the maximum provided by the present territorial employment security law.

Regular pineapple workers, as the table also shows, when separated from their plantation jobs tend to be either completely ineligible for benefits (69 per cent) or eligible for the maximum period (25 per cent). There is a similar tendency, less accentuated, with respect to sugar employment, but those workers

Table 8. AGRICULTURAL EMPLOYEES WHO WOULD HAVE BEEN ELIGIBLE FOR UNEMPLOYMENT BENEFITS IN 1955^a

	Pineapple		Sugar	Diversified Agriculture	Total
	Regular	Seasonal			
Employed	3,461	3,178	10,295	5,137	22,071
Separated	214	3,178	759	4,137	8,288
Eligible for benefits ^b . .	63	1,753	189	1,579	3,584
Percent of employed. . .	2%	55%	2%	31%	16%
Percent of separated . .	29%	55%	25%	38%	43%

^aTable includes persons separated during calendar year for diversified agriculture and seasonal pineapple employees, during fiscal year ended August 31, 1955 for regular pineapple employees, and during fiscal year ended September 30, 1955 for sugar employees.

^bEstimated by sampling.

in diversified agriculture who might have received unemployment benefits (some 38 per cent of the total separated), more frequently were eligible for periods of intermediate length rather than the maximum of 20 weeks.

WHY SEPARATED EMPLOYEES WOULD NOT HAVE BEEN ELIGIBLE FOR BENEFITS

Finally, Table 10 summarizes the reasons for the determination, in a majority of cases, that agricultural employees sepa-

Table 9. PERCENTAGE DISTRIBUTION OF UNEMPLOYMENT BENEFITS WHICH WOULD HAVE BEEN PAID TO EMPLOYEES SEPARATED IN 1955^a

Equivalent Total Weeks ^b	Pineapple		Sugar	Diversified Agriculture	Total
	Regular	Seasonal			
0	69.0%	42.5%	75.0%	62.3%	57.3%
1 - 4	0.0	8.1	4.5	13.5	9.1
5 - 9	1.4	4.7	1.1	5.0	4.0
10 - 14	1.4	5.2	2.3	3.8	3.9
15 - 19	2.8	3.2	1.7	2.2	2.5
20 (max.)	25.4	36.4	15.3	13.2	23.2
Total ^c	100.0%	100.0%	100.0%	100.0%	100.0%

^aTable includes persons separated during calendar year for diversified agriculture and seasonal pineapple employees, during fiscal year ended August 31, 1955 for regular pineapple employees, and during fiscal year ended September 30, 1955 for sugar employees.

^b*I.e.* full weeks without earnings, or the sum of partial weeks equalling a full week, in each of which unemployment insurance benefits would have been payable.

^cDue to rounding, items may not add to exactly 100.0%.

Note: Based on stratified random sample of 1,070 employees: 407 seasonal pineapple workers, 71 regular pineapple workers, 176 sugar workers, and 416 workers in diversified agriculture.

Table 10. REASONS FOR DETERMINATION OF NON-ELIGIBILITY
FOR UNEMPLOYMENT BENEFITS FOR AGRICULTURAL
EMPLOYEES SEPARATED IN 1955^a

	Pineapple		Sugar	Diversified Agriculture	Total
	Regular	Seasonal			
Attending school	--	75	2	34	111
Moved to foreign country. .	11	4	61	2	78
Entered military service. .	3	25	3	10	41
Deceased	11	3	14	5	33
In hospital or institution . .	2	--	3	4	9
Employed through year. . .	7	10	3	112	132
Self-employed.	3	4	3	9	19
Insufficient earnings ^b	0	42	0	72	114
Illness.	4	1	7	4	16
Retired	7	0	33	3	43
Domestic duties	0	6	0	1	7
Not in labor market for other reasons.	1	3	3	3	10
Total	49	173	132	259	613

^aTable includes persons separated during calendar year for diversified agriculture and seasonal pineapple employees, during fiscal year ended August 31, 1955 for regular pineapple employees, and during fiscal year ended September 30, 1955 for sugar employees.

^bPersons who were in the labor market but had insufficient earnings to qualify for benefits.

rated from such employment during 1955 would not have received unemployment benefits, even had they been covered under the employment security program.

Approximately one-fourth of those ineligible found employment or self-employment after separation, and so could not have successfully applied for benefits. Another relatively large group, almost a fifth, were students. Seasonal pineapple workers particularly, and to a lesser extent diversified agricultural workers, are recruited from among older high school students. Minors still attending school are ineligible for unemployment benefits, since they are not considered to be available for work while in school.

About one-eighth of those agricultural employees separated from their work during 1955 included in Table 10 had left the country—and so would have left the employment security system. Most of this group had been employed on sugar plantations, and many of them returned to the Philippines. Ineligibility is not incurred, it may be noted, because of moving to the continental United States, since Hawaii's Bureau of Employment Security has reciprocal relations with similar state bureaus which permit payment on the mainland of benefits qualified for by virtue of employment in Hawaii.

PART 4. *Alternative Solutions and Costs*

ALTERNATIVES IN UNEMPLOYMENT INSURANCE COVERAGE FOR AGRICULTURE

Before considering alternative coverage provisions which might be proposed for the coverage of agricultural workers in the Territory of Hawaii, it is relevant to consider briefly the state laws presently in effect covering workers in non-agricultural employment. This review is appropriate here inasmuch as no state or territorial employment security law covers agricultural workers at the present time and the various bases of coverage which might be considered must therefore be sought in provisions for industrial and commercial employment.

Three factors are currently used to determine coverage of firms: (1) a minimum number of workers, (2) a minimum period of employment offered, and (3) the amount of payroll disbursed by the employer. These three basic considerations in varying degrees and combinations comprise coverage laws. At present 28 states cover workers in firms with four or more workers; 4 states, three or more workers; 1 state, two or more workers; and 18 states, one or more workers. Forty-three states require employment of a specified number of workers during a stated period, ranging up to 20 weeks, as the only basis of liability; 1 state in addition to a minimum number of weeks of employment also requires specified payroll levels, and 6 states require specified payroll levels only. Eight states cover employers meeting other alternative requirements.

The employment security law of the Territory of Hawaii covers employers with one or more workers at any time, with no provisions based on payroll.

NUMBER OF EMPLOYEES

Turning first to the criterion of the number of persons employed, data was gathered showing the distribution of farms in the Territory according to volume of employment. Monthly agricultural employment on individual sugar plantations ranges from 50 to 1,400 workers, while employment on pineapple

plantations ranges from 150 to 2,300. In diversified agriculture, however, over one half of all farms employ fewer than 4 persons during the year. Some idea of the number of jobs available at any given time in diversified agriculture is gained by the largest number of hired workers reported for any period of the year. In 1955, approximately 15 per cent of all diversified farms had 8 or more workers, only 3 per cent had 25 or more. Expressed in terms of the number of workers employed in each of 20 weeks of the year (a coverage formula used in some states), 6 per cent of these farms had 8 or more hired workers, 2 per cent reported 25 or more.

If the coverage provisions of the present Hawaii employment security law were applied to agricultural employers, some 22,000 persons, employed by 588 firms, would be affected. The distribution of those totals among sugar, pineapple and diversified agriculture is shown in Table 11.

Table 11. COVERAGE AFFECTED BY EXTENDING PRESENT HAWAII EMPLOYMENT SECURITY LAW TO AGRICULTURAL EMPLOYMENT

	<i>Employees Covered</i>	<i>Firms Affected</i>
Pineapple: regular	3,461)	8 ^a
seasonal	3,178)	
Sugar	10,295	28 ^a
Diversified agriculture . . .	5,137	552
Total	22,071	588

^aAlready partially covered by reason of having non-farm workers in sugar mills and pineapple canneries.

SIZE OF PAYROLL

From the data gathered in this survey it is possible to calculate the amount of additional annual payrolls which would be subject to unemployment insurance contributions, still assuming the extension of the present territorial law to agricultural employment. It is estimated that, had agricultural employment been fully covered in 1955, the contribution base would have been extended by some \$40,000,000. Table 12 presents the industrial components of this calculation.

ANNUAL EMPLOYERS' CONTRIBUTIONS

If agricultural employees were to be included under the unemployment insurance program, their employers' annual con-

Table 12. AMOUNT OF ANNUAL AGRICULTURAL
PAYROLLS SUBJECT TO UNEMPLOYMENT
INSURANCE CONTRIBUTIONS IN 1955

Pineapple: regular	\$11,000,000
seasonal	2,000,000
Sugar	23,742,000
Diversified agriculture	3,943,000
Total	\$40,685,000

tributions on agricultural earnings would aggregate some \$457,000 in the first year, almost double in the second, and then decline towards the initial level of \$457,000. This course is shown in Table 13, which assumes January 1, 1958 as the effective date for the hypothetical extension of coverage.

SUGAR AND PINEAPPLE INDUSTRIES

Pineapple and sugar firms are already partially covered, as they give employment which is non-agricultural in nature: employment in pineapple canneries and sugar mills is thus presently covered. Inasmuch as coverage provisions of the law apply on an employing unit basis, the ratio of contributions by such employers to payments of benefits from their individual accounts (i.e. their "experience rating") would include both non-agricultural and agricultural employment. In 1955, the non-farm payroll of the sugar industry approximated \$23,520,000, that of pineapple, \$17,300,000. The rates of contribution established for each of these industries would apply against their total payrolls, which include these non-farm wage payments.

The variation of contributions of the sugar industry shown in Table 13 stem from the fact that the industry's present zero

Table 13. ESTIMATED ANNUAL CONTRIBUTIONS BY EMPLOYERS ON
ACCOUNT OF AGRICULTURAL EMPLOYMENT, 1958-1963

	1958	1959	1960	1961	1962	1963
Pineapple	\$351,000	\$351,000	\$351,000	\$351,000	\$351,000	\$351,000
Sugar	0	427,355	320,516	320,516	106,839	0
Diversified . . .	106,463	106,463	106,463	106,463	106,463	106,463
Total	\$457,463	\$884,818	\$777,979	\$777,979	\$564,302	\$457,463

rate of contributions with respect to its non-agricultural employment would in the first year also apply to its agricultural payroll.* In the second year, however, the estimated benefit payments to separated sugar field workers together with the expansion of the taxable wage base of the industry would establish a rate of 1.8 per cent. The zero rating would not be again reached until the sixth year of the coverage of agricultural employees; thereafter the rate for sugar would alternate between zero and 0.45 per cent.

In pineapple, however, the rate would remain at the maximum of 2.7 per cent as long as the present pattern of seasonal employment is maintained. The same generalization may be applied to diversified agriculture.

Table 14. ESTIMATED RATES OF CONTRIBUTION OF SUGAR AND PINEAPPLE INDUSTRIES, 1958-1963

	1958	1959	1960	1961	1962	1963
Pineapple	2.7%	2.7%	2.7 %	2.7 %	2.7 %	2.7%
Sugar	0.0	1.8	1.35	1.35	.45	0.0

Applying the rates listed in the preceeding table to total taxable payrolls of these two industries yields estimates of the total annual contributions which would be made by sugar and pineapple companies. These amounts are listed in Table 15 for the first six years after the assumed extension of the present coverage of unemployment insurance to agricultural employees.

It should be noted that because of the frequent rotation of workers between mill and farm work in the sugar companies, the coverage of agricultural earnings would have the effect of increasing a separated employee's benefit right if he had mill earnings prior to his separation. Table 16 shows the number of such workers currently employed and their agricultural earnings.

DIVERSIFIED AGRICULTURE

In covering workers on diversified farms, because of the wide range of employment and payroll per farm, several alternative provisions of law may be considered. Only a few such alterna-

*The rate of contribution is based upon the ratio of reserve in an employer's account at the end of a calendar year to the average of taxable wages during the preceding three years.

Table 15. ESTIMATED ANNUAL TOTAL CONTRIBUTIONS OF SUGAR AND PINEAPPLE INDUSTRIES, 1958-1963

	1958	1959	1960	1961	1962	1963
Pineapple . .	\$818,000	\$ 818,000	\$ 818,000	\$ 818,000	\$ 818,000	\$818,000
Sugar	0	851,000	638,000	638,000	213,000	0
Total . . .	\$818,000	\$1,669,000	\$1,456,000	\$1,456,000	\$1,031,000	\$818,000

Table 16. FARM AND MILL EARNINGS IN THE SUGAR INDUSTRY, 1955

	No. of Workers	Total Earnings		Taxable Farm Earnings
		Farm	Non-farm	
Farm earnings only . . .	7,761	\$20,102,600	--	\$19,498,800
Farm and mill earnings	2,534	4,528,600	\$2,534,600	4,243,200
Total	10,295	\$24,631,200	\$2,534,600	\$23,742,000

Table 17. EFFECT OF ALTERNATIVE COVERAGE PROVISIONS FOR DIVERSIFIED AGRICULTURE

a. Coverage based on specified number of workers at any time

	1 Worker	4 Workers	8 Workers	15 Workers	25 Workers
Employers contributing	552	137	81	24	15
Employees covered	5,137	2,760	2,067	1,231	1,008
Total earnings	\$4,435,400	\$2,296,800	\$1,998,700	\$1,525,100	\$1,414,400
Taxable earnings	\$3,943,100	\$2,041,900	\$1,776,900	\$1,355,800	\$1,257,400
Contributions ^a	\$106,500	\$55,100	\$48,000	\$36,600	\$33,900

b. Coverage based on specified number of workers in each of 20 weeks

	4 Workers	8 Workers	15 Workers	25 Workers
Employers contributing	73	34	15	10
Employees covered	1,947	1,349	1,001	728
Total earnings	\$2,141,600	\$1,793,900	\$1,415,100	\$1,242,700
Taxable earnings	\$1,903,800	\$1,594,800	\$1,258,000	\$1,104,700
Contributions ^a	\$51,400	\$43,100	\$34,000	\$29,800

c. Coverage based on amount of annual payrolls

	\$2,000 or more	\$5,000 or more	\$10,000 or more	\$20,000 or more
Employers contributing	214	104	52	24
Employees covered	2,774	1,979	1,514	1,169
Total earnings	\$2,731,000	\$2,436,400	\$3,064,500	\$1,661,800
Taxable earnings	\$2,427,800	\$2,165,900	\$1,835,400	\$1,477,300
Contributions ^a	\$65,500	\$58,500	\$49,600	\$39,900

^aAt maximum rate.

tives are presented here; calculations of benefit costs and contributions for other proposals may be made from the data assembled.

Table 17 shows the number of employers, the number of employees, total and taxable earnings, and contributions bases on different coverage provisions.

As will be demonstrated later, all alternative coverage provisions presented in the above table create situations where benefit payments exceed employer contributions. Under this circumstance, the rate of contribution would remain at the maximum—2.7 per cent—for an indefinite period.

BENEFIT COSTS OF EXTENDING UNEMPLOYMENT INSURANCE TO AGRICULTURE

Some indication of the effect of varying coverage provisions upon the volume of benefits to separated employees, and resulting costs to their employers, has just been given. The initial calculation of benefit costs of covering agricultural workers under unemployment insurance assumes continuation of the coverage provisions of current law and their extension to agricultural employees. The actual steps involved in the calculations are presented in Appendix B of this report. It may suffice here to say that the labor force status and earnings of the workers were reconstructed as accurately as possible by methods outlined in the appendix. Separate calculations are presented in Table 18 for (1) pineapple seasonal farm workers, (2) pineapple regular farm workers, (3) sugar farm workers and (4) diversified farm workers—all on the assumption that the extended coverage of the present law had been in effect during the period studied.*

RATIO OF BENEFITS TO CONTRIBUTIONS

Several factors to be considered in measuring the long-range actuarial adequacy of a state's unemployment insurance law are (1) the ratio of benefits to taxable wages, commonly called the cost rate, (2) the ratio of contributions to taxable wages, called

*Benefit cost estimates for these groups were based on the experience of the following types of workers during these periods: pineapple seasonal workers who were employed sometime during calendar year 1955; pineapple regular farm workers separated from employment during fiscal year ended August 31, 1955; sugar farm workers separated from employment during fiscal year ended September 30, 1955; and diversified farm workers who were employed sometime during calendar year 1955.

Table 18. ESTIMATED ANNUAL BENEFIT COSTS OF
COVERING AGRICULTURAL EMPLOYEES^a

	Pineapple		Sugar	Diversified Agriculture	Total
	Regular	Seasonal			
Annual benefits					
currently payable. . .	\$ --	\$ 40,000	\$ 10,250	\$ 47,500	\$ 97,750
Additional benefits					
currently excluded. . .	30,500	526,250	73,750	228,750	859,250
Total	\$30,500	\$566,250	\$84,000	\$276,250	\$957,000
Average per eligible claimant	\$483	\$323	\$445	\$175	\$267

^aEstimate based on 1955 experience for period shown in footnote a of Table 9.

the tax rate, (3) the ratio of fund reserves to taxable wages, and (4) the ratio of benefits to contributions. The relation between the cost rate and tax rate directly bears upon the ratio of reserves to taxable wages; a relatively high cost rate results in a decrease in fund balance, and vice versa. For the Territory as a whole, experience between 1951 and 1956 shows an increase in cost rates, a decrease in tax rates, and consequently a reduction in the reserve ratio.

Pineapple. In the pineapple industry the cost rate of covering *agricultural workers alone* would equal 4.28 per cent as compared with the present rate of 2.9 per cent. With the tax rate at 2.7 per cent, benefits would exceed contributions by an estimated 58 per cent.

For the industry as a whole (i.e. including both cannery and field employment) the cost rate would amount to 3.4 per cent, with the tax rate remaining at 2.7 per cent. Jointly these two factors, result in benefits exceeding contributions by 29.58 per cent. Industry accounts would then show an anticipated negative balance increasing from 1.2 per cent in 1958 to 3.6 in 1961.

Sugar. In the sugar industry, the cost rate for benefits derived from agricultural earnings, would approximate 0.31 per cent.

When all segments of sugar employment are considered, it is estimated that the cost rate would remain stable at 0.22 per cent. The employers' contribution rate, in the meantime would decrease from 1.8 per cent in 1959 to 1.35 in 1960, and then to zero in 1963. The result would be an increase in the ratio of total reserves in the industry accounts to taxable wages from 4.0 per cent in 1958 to 7.8 per cent in 1963.

Diversified Agriculture. In the application of the several alternative methods of covering diversified farm workers considered previously, Table 18 illustrates the effect of the various coverage formulas upon the ratio of benefits to contributions.

The cost rate of covering diversified farm workers on the basis of the number employed at any time ranges from 5.8 per cent if coverage is based on one or more to 3.8 per cent based on 25 workers or more. Similarly, the rate ranges from 4.9 per cent on coverage of 4 or more workers in each of 20 weeks to 3.1 per cent based on 25 or more workers under the same criteria. If coverage were based on the annual farm payroll the cost rate would amount to 5.5 per cent on payrolls of \$2,000 or more and 3.8 per cent on payrolls of \$20,000.

Table 19. *RATIO OF BENEFITS TO CONTRIBUTIONS
UNDER VARIOUS COVERAGE PROVISIONS
FOR DIVERSIFIED AGRICULTURE*

	<i>Ratio</i>
a. Employed at any time	
1 or more	215%
4 or more	239
b. Employed in each of 20 weeks	
4 or more	181
8 or more	150
c. Annual farm payroll	
\$3,000 or more	202
5,000 or more	162

EFFECT OF EXTENDED COVERAGE ON CURRENT RESERVES

The overall effect of extending unemployment insurance to agricultural workers upon the territorial unemployment insurance reserve of \$22 million would be one of decreasing the fund during the first two years, increasing it during the following two years, again decreasing the fund at the end of the fifth year after inception of the extended program.

Although the reserve would be decreased somewhat by coverage of the pineapple and diversified farm industries, the reduction should be offset by surplus contributions in the sugar industry, as Table 20 demonstrates.

Table 20. ESTIMATED NET CHANGE IN RESERVE ACCOUNTS AT
END OF EACH YEAR OF AGRICULTURAL COVERAGE

	<i>Pineapple</i>	<i>Sugar</i>	<i>Diversified Agriculture^a</i>	<i>Net Change</i>
1958	\$- 242,000	\$- 107,000	\$-122,000	\$-471,000
1959	- 484,000	+ 637,000	-244,000	- 91,000
1960	- 726,000	+1,168,000	-366,000	+ 76,000
1961	- 968,000	+1,699,000	-488,000	+243,000
1962	-1,200,000	+1,805,000	-610,000	- 5,000
1963	-1,452,000	+1,698,000	-732,000	-486,000

^aBased on coverage of one or more workers at any time.

As will be observed in Table 20, the chronic deficits to be anticipated by covering agricultural employees in the pineapple industry and in diversified farming would be more than equalled by the surpluses in the accounts of the sugar plantations during the third and fourth years of extended coverage. The reduction in the contribution rate of the sugar industry would again create an overall deficit with respect to agricultural coverage in the fifth year. Thereafter, the cumulative deficit from this source would increase annually, fluctuating from year to year with changes in the contribution rate for the sugar industry. The deficit would presumably grow as long as the employment conditions of 1955 were approximated.

Even with coverage of agricultural labor the fund balance could be maintained by (1) limited coverage, (2) more stringent eligibility requirements for benefit claimants, (3) a higher rate of employer contributions, (4) adopting seasonality provisions which would place some restriction on the payment of benefits to seasonal workers, or (5) a combination of two or more of these methods. Alternatively, agricultural benefits could be financed in part by the contributions of other sectors of the economy. The insurance principle inherent in a pooled fund assumes that industries with low levels of unemployment will help carry the cost of unemployment in industries with less stable employment.

APPENDIX A. *Senate Resolution No. 71*

WHEREAS, the Committee on Labor of the Senate of the Twenty-Eighth Legislature of the Territory of Hawaii held many hearings on the matter of extending the benefits of the unemployment compensation law to employees of agricultural industries in Hawaii; and

WHEREAS, following such hearings, it was the determination of that Committee and of the Senate to so extend such benefits; and

WHEREAS, there were presented to that Committee and to the Senate certain arguments and points of view respecting the extent of the benefits under the unemployment compensation law which should be available to seasonal and itinerant workers in certain industries in Hawaii; and

WHEREAS, these arguments and points of view were representative of widely divergent theories concerning the underlying principle of unemployment compensation; and

WHEREAS, the data presented to that Committee were in some respects inconclusive as to which of the several proffered solutions to the problem was the correct one; and

WHEREAS, it appears that the action taken by the Senate in respect to such agricultural and such itinerant and seasonal workers will fail of final passage in this session of the Legislature; now, therefore,

BE IT RESOLVED by the Senate of the Twenty-Eighth Legislature of the Territory of Hawaii that the department of labor of the Territory of Hawaii and the legislative reference bureau are hereby requested to make a study of the coverage under the existing unemployment compensation law of the Territory of itinerant and seasonal workers, of benefits available to such employees under existing law, of the soundness of such coverage and benefits, and of the changes in such law which would be required to extend the coverage and benefits thereof to employees in agricultural industries on a sound basis; and

BE IT FURTHER RESOLVED that the said department of labor and the legislative reference bureau are requested to submit their reports on such study to the next Legislature of the Territory of Hawaii; and

BE IT FURTHER RESOLVED that duly authenticated copies of this Resolution shall be transmitted to the director of the department of labor and to the director of the legislative reference bureau of the Territory of Hawaii.

THE SENATE OF THE TERRITORY OF HAWAII

Honolulu, T. H., April 29, 1955

We hereby certify that the foregoing Resolution was this day adopted by the Senate of the Twenty-Eighth Legislature of the Territory of Hawaii.

Sgd. William H. Heen
President of the Senate

Sgd. William S. Richardson
Clerk of the Senate

APPENDIX B. *Methodology*

SAMPLE DESIGN AND STATISTICAL TREATMENT OF THE SURVEY DATA

At the time this study of agricultural unemployment was planned, the only reliable data available were the names, social security numbers, and certain periods of employment of persons separated from sugar and pineapple employment. In the case of diversified agriculture, there were available employers' reports of wages paid to all employees. No information was at hand regarding work history or earnings after an employee's separation from agricultural employment. It was not known whether or not the record of unemployment would be different among the various sectors of agriculture, or whether or not unemployment experience would vary among islands.

It was decided to secure the missing data by means of a sample of workers who had been separated from agricultural employment within a period of one year. The desired information regarding work history was to be secured through a personal interview with each worker in the sample. It was recognized that an attempt to reconstruct a work history of intermittent employment for a period as long as a year through personal interviews would encounter not only the problem of faulty memories among the respondents, but also failure to locate some of the individuals selected for the sample.

Given these conditions, the problem of the survey was to secure data which would be (1), adequate for estimating the cost of benefits if agricultural workers had been included under the unemployment compensation law, and (2), be representative of the work history of all separated agricultural employees in the Territory for the period under study.

The first of these two problems is related to the size of the sample, and the second to the distribution of the individual cases in the sample.

SIZE OF THE SAMPLE

The following conditions or requirements were assumed to govern the optimum number of persons to be interviewed:

1. The average number of weeks of unemployment would vary significantly from one agricultural industry to another.
2. The average number of weeks of unemployment would vary significantly from one island to another.
3. The measures found in the sample ought to have a range of error narrow enough to permit a reasonable estimate of what the cost of coverage would have been had agricultural workers been included in the coverage of the unemployment compensation law.
4. The cost of making the number of interviews in the sample should not be excessive.

To allow for the first assumption, that workers in different agricultural industries have differing unemployment records following separation, the sample was calculated independently for four agricultural categories: seasonal pineapple, regular pineapple, sugar, and diversified farming. This study, then, really encompassed four different surveys which contribute to the final estimate. For reasons of economy, interviews were all taken on the same trip to a specific area and at the same time for all four categories, but the data were tabulated and estimates made separately for each category, or industry.

The second assumption, that differences would be found from one island to another, was allowed for by weighting the sample size by two factors: (1), the number of persons separated from the industry on each island, and (2), by the variation believed to exist within each island.

The sample design may be described as a disproportionate sample stratified by islands. The term "disproportionate" refers to the fact that the number of persons interviewed was not merely proportional to the population of separated workers on each island, but was also adjusted for an expected variation in unemployment experience. A tentative estimate of the variation in unemployment experience for each island was secured from a set of small sample surveys made by local offices of the Territorial Employment Service.

As it turned out, the results of the interviewing program failed to confirm the hypothesis of a significant difference between islands for mean weeks of unemployment. It was decided, therefore, to omit the variance factor of weighting in later treatment of the data. The relative size of each island sample was retained as a weighting factor.

The formula for calculating the size of each sample for each island was:

$$n = \frac{N \left(\frac{\sum W \sigma}{S} \right)^2}{N + \left(\frac{\sum W \sigma}{S} \right)^2}$$

derived from

$$S = \sqrt{\frac{\sum W \sigma^2}{n}}$$

with an adjustment factor for the size of the sample relative to the size of the population,

$$\frac{N - n}{N}$$

in which, S = Estimated standard error of Mean in the population

N = Number in the population of separated workers

n = Number in the sample

W = Weight for population in the stratum

o = Standard deviation in the stratum sample

The third condition, that of range of error in the estimate, is the prime element in the determination of sample size. It is dependent upon "S" in the formulas above. How large a range of error is desirable is a matter of judgment.

In the case of these four samples, the desired range of error was centered upon mean weeks of unemployment. The objective set up might be stated: "We would like a sample of such size that we may feel confident that the mean number of weeks of unemployment found in the sample will not be more than one week smaller nor more than one week larger than the true figure for the whole population from which the sample was taken."

The degree of confidence with which this assertion is made might be stated: If 100 samples of the same size from the same population were interviewed in separate surveys, 95 of

these samples would fall within the range of error of one week, plus or minus.

The effect of a range of error of plus or minus one week with 95 per cent probability is to give "S" a value of 0.5 (one-half week) in the preceding formulas. The other elements in the formulas vary according to the industry for which the sample size is being determined.

The fourth condition, that of interviewing costs, acts as a limit upon the judgment of what range of error is desirable. While, in general, the more cases in the sample, the more accurate the estimate of the true measure in the population, there is a rapidly diminishing value for additional cases. For example, in order to cut the range of error in half, it may be necessary to quadruple the number of cases in the sample.

Table B-1 shows the population of separated workers in each industry, the size of sample for each, and the actual number of interviews secured.

Table B-1. SIZES OF POPULATIONS AND SIZES OF SAMPLES

	<i>Pineapple</i>		<i>Sugar</i>	<i>Diversified Agriculture</i>
	<i>Regular</i>	<i>Seasonal</i>		
Population of separated workers . .	214	3,178	759	4,137
Sample size by formula	76	362	204	616
Sample size actually chosen	111	554	222	582
Eligibility determinations made . . .	71	407	176	416

REPRESENTATIVENESS OF THE SAMPLE

In order to assure that the sample will truly reflect the characteristics of the population from which it was taken, the selection of individual cases is best made at random. Random selection has the further advantage that it is the type of sample for which a range of error may be calculated by formula.

For the surveys of sugar and pineapple workers, the social security numbers of the individuals were used as the device for random selection. The mechanics of selection introduced some modifications into the sample design. For seasonal pineapple employment, the digits 3 and 8 were picked and the pineapple companies were requested to submit the name of every seasonal worker separated during the period whose social security number ended in 3 or 8. Theoretically one digit would have yielded one-tenth of the population; that is, 318 names, but the

sample design called for 362 names, so two digits were used and 554 names were the result.

In regular pineapple employment, the employers were asked to submit all names whose social security numbers ended in 1, 5, or 9, for Oahu and Maui. Since there were fewer than 25 separated workers on each of the islands of Lanai, Molokai and Kauai, all the names from these places were designated for the sample. This raised the sample actually chosen to 111 cases as against an objective of 76 in the design, but only 71 determinations of eligibility for unemployment insurance were made.

The names for the sugar sample were secured from the Hawaii Employers Council. The terminal digits used were 1, 2, 3, 6, 7. The list so secured was over-weighted for the island of Hawaii, so the names for Hawaii were arranged alphabetically and every fifth name thrown out.

For the survey of diversified agricultural workers, a list of wage returns (Form C-2) for individual workers was secured from the territorial Tax Department. The names on this list were numbered serially and the sample was selected, using a table of random numbers. This sample constituted approximately 11 per cent of the population.

FIELD INTERVIEWS

The interviews with the workers in the samples were made by a group of 15 University of Hawaii seniors and graduate students who were trained for this particular survey.

Beginning in March, 1956 and continuing until August, interviews were secured at central points on the different islands; for example, a crew of nine interviewers went to Kauai and interviewed respondents at Lihue, at Anahola, and so on. Persons who did not show up on the first attempt at an interview were followed up. By way of example, one call-in of respondents for interviewing was set for a Saturday morning, notice having gone out by registered mail. On Saturday afternoon interviewers went to the addresses of respondents who did not show up in the morning at the school building where the interviews had been scheduled to be held. On Sunday, another attempt was made to locate those cases still missing.

Before each interview, the interviewer was supplied with a questionnaire form which had the name and address and some personal information filled in. In addition, the work history of the respondent, as secured from employers' records had already been entered. The interviewer's job was to find out from

the respondent what he was doing during the time periods not accounted for. If the respondent was unemployed at any time, he was asked the circumstances as a basis for a later determination of eligibility for unemployment insurance.

The work history recorded on the questionnaire prior to the interview was used as a check on the respondent's own account of his employment and also as an aid to focus the respondent's memory of his activities during the periods of time not accounted for on the questionnaire form. It was part of the interviewer's function to help the respondent straighten out inconsistencies and to recall gaps in the work history by dovetailing the missing information into the known employment periods, but not himself to determine eligibility for unemployment benefits.

ELIGIBILITY FOR UNEMPLOYMENT BENEFITS

The completed interview forms were returned to the territorial Department of Labor and Industrial Relations, where each one was treated as if it were in fact an application for unemployment benefits. A determination was made for each case according to the rules in force for employment covered by the unemployment insurance act. All the determinations were made by one staff member.

STATISTICAL TREATMENT OF THE SURVEY DATA

Resulting data were tabulated and analyzed separately for regular pineapple, seasonal pineapple, sugar, and diversified agricultural employment. The procedures followed were:

1. The standard deviation was calculated for the mean number of compensable weeks for each island represented in the sample. The formula used was

$$\sigma = \sqrt{\frac{\sum f d^2}{N}}$$

2. The estimate of the population mean for the Territory was calculated by the formula

$$M = \frac{\sum N_s \bar{X}}{N}$$

in which, M = Territorial mean

N = Population in the Territory

N_s = Population in the stratum (island)

\bar{X} = Mean of the stratum

3. The hypothesis that the island means were not significantly different from the territorial mean was tested by analysis of variance.

4. The calculation of the standard error of the estimated territorial mean was calculated by the formula

$$S = \sqrt{\frac{\sum N_s^2 (\bar{X} - M)^2}{N^2}}$$

5. The range of error of the estimated territorial mean was calculated for 95 per cent probability, using plus and minus 1.96 S , unless N were less than 30, in which event the "t" table was used.

6. For those measures expressed as a percentage, the determination of a percentage estimate for the territorial population was calculated from the formula

$$P = \frac{\sum N_s P_s}{N}$$

in which, P = Estimated percentage for the Territory

P_s = Sample percentage for stratum

N_s = Population in the stratum

N = Population in the Territory

7. The hypothesis that there was no significant difference between percentages for the strata was tested by taking the two extreme percentages and testing their difference by the formula

$$\sigma_{\text{diff}} = \sqrt{\frac{p_1 q_1}{n_1} + \frac{p_2 q_2}{n_2}}$$

in which, n = Size of the sample in the stratum

8. The range of error for the estimated territorial percentage was calculated for 95 per cent probability, using the formula

$$S = \sqrt{\frac{1}{N^2} \sum N_s (N_s - n) \left(\frac{p}{n} q\right)}$$

THE PROBLEM OF COMBINED EMPLOYMENT

Among sugar and pineapple workers, there were some individuals who had worked in occupations included under the unemployment insurance law as well as in occupations presently excluded. To estimate the additional cost arising from inclusion of all agricultural employment it was necessary to segregate these workers and determine what proportion of their potential benefits could be attributed to work already included under the Employment Security Act.

In the case of regular pineapple employment, the number of workers with a combination of included and excluded employment was so small that it was decided to ignore the difference in coverage. In sugar, however, there was a significant difference in mean weeks of compensable unemployment between workers separated from jobs excluded from coverage and workers whose work history involved excluded and included employment during the base year. These two groups were treated as separate populations for calculation of means and ranges of error, but the resultant measures were added to secure the estimated total benefit costs for the industry. To arrive at an estimated figure for additional benefit costs arising from the inclusion of all agricultural workers, the proportion of benefits attributable to work already included under the act was subtracted from the total.

THE PROBLEM OF NON-RESPONSE

For several persons in the sample it was impossible to determine the eligibility for unemployment insurance because the individuals could not be located. If these persons were significantly different from the persons who were interviewed, there could be a difference in the total estimated cost of the program. Whether this difference would raise or lower the cost is a matter of guess work.

The assumption made was that these persons who could not be found would show characteristics of work history similar to

those who were interviewed. If the non-respondents are distributed in the same ratio as the respondents, the only effect upon the estimated measures might possibly be to reduce the range of error because the addition would increase the size of the effective sample. Since the sample size was not so adjusted for non-response, the persons who could not be located were, in a sense, ignored in calculating the results.

It should be noted that follow-up visits were made for non-respondents and in some cases a determination was possible from information supplied by relatives or friends; for example, information about deceased persons, persons in hospitals, and so forth.

THE RANGE OF ERROR OF THE ESTIMATE

Each cost estimate in this report is derived from two primary factors: (1), the percentage of separated persons who were determined to be eligible for unemployment insurance, and (2), the mean dollar benefit per eligible person.

Since these two factors were secured from a sample survey, each estimate is subject to a range of error which is related to the number of cases in each sample. In other words, the measure derived from a sample cannot be taken as the absolutely correct answer. Allowance must be made for the fact that a different sample of the same size and from the same population might have given a higher figure and another sample might have given a lower figure. However, it is possible to place reasonable limits on how much higher or how much lower these other estimates are likely to be.

For example, in the case of regular pineapple workers, the average number of compensable weeks was found to be 19.3 weeks. We are confident that 95 out of 100 other samples from the same population would not have yielded an average of less than 18.3 weeks nor more than 20.3 weeks. Therefore, we say that the range of error with 95 per cent probability is from 18.3 to 20.3 weeks. (Since the Employment Security Act of the Territory limits unemployment insurance to the equivalent of 20 weeks, that number of weeks would, of course, be the highest estimate for this measure regardless of the statistical theory.)

The ranges of error for the three most important measures for the Territory, as well as the sample estimate, are shown below.

Table B-2. SAMPLE ESTIMATES AND RANGES OF ERROR WITH 95 PERCENT PROBABILITY APPLICABLE TO CERTAIN PARAMETERS OF THE POPULATION OF SEPARATED AGRICULTURAL WORKERS

	<i>Pineapple</i>		<i>Sugar</i>	<i>Diversified Agriculture</i>
	<i>Regular</i>	<i>Seasonal</i>		
Percentage of separations eligible for unemployment compensation				
Sample estimate . . .	29.4%	56.4%	24.9%	38.2%
Range of error	±9.6	±4.7	±4.4	±4.7
Mean equivalent weeks of compensation				
Sample estimate . . .	19.3	15.7	15.9 ^a	9.4 ^a
Range of error	±1	±1	±2	±3
Mean total benefits per eligible worker				
Sample estimate . . .	\$ 483	\$323	\$445	\$175
Range of error	±52	±25	±65	±28

^aFor workers having excluded farm earnings only.

Table B-3. SEPARATIONS FROM AGRICULTURAL EMPLOYMENT BY ISLANDS AND INDUSTRY^a

	<i>Regular Pineapple</i>		<i>Seasonal Pineapple</i>				<i>Sugar</i>		<i>Diversified Agriculture</i>		<i>Total</i>	
			<i>School</i>		<i>Non-school</i>							
	<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>
Oahu	73	34.1	165	26.8	1,064	41.5	90	11.9	792	19.1	2,716	29.2
Hawaii	-	-	-	-	-	-	457	60.2	2,749	66.5	3,423	36.9
Mauai	84	39.3	100	16.2	181	7.1	119	15.7	428	10.4	1,102	11.9
Kauai	20	9.3	126	20.5	309	12.1	93	12.2	134	3.2	742	8.0
Molokai	17	8.0	105	17.0	457	17.8	-	-	34	.8	614	6.6
Lanai	20	9.3	120	19.5	551	21.5	-	-	-	-	691	17.4
Total	214	100.0	616	100.0	2,562	100.0	759	100.0	4,137	100.0	9,288	100.0

^aTable includes persons separated during calendar year 1955 for diversified agriculture and seasonal pineapple employees, during fiscal year ended August 31, 1955 for regular pineapple employees and during fiscal year ended September 30, 1955 for sugar employees.

Table B-4. SEPARATIONS FROM SUGAR INDUSTRY, BY INCLUDED OR EXCLUDED EMPLOYMENT UNDER HAWAII EMPLOYMENT SECURITY LAW, 1955^a

	Workers Included ^b	Workers Excluded	Total
Oahu	29	61	90
Hawaii	112	345	457
Maui	58	61	119
Kauai	24	69	93
Total	223	536	759

^aFiscal year ended September 30, 1955

^bWorkers with sufficient included work history may be eligible for unemployment insurance benefits.

Source: Hawaii Employers Council.

Table B-5. UNEMPLOYMENT INSURANCE BENEFIT STATUS OF SAMPLE OF 1,469 AGRICULTURAL WORKERS^a

	Pineapple				Sugar		Diversified Agriculture		Total	
	Regular		Seasonal							
	No.	%	No.	%	No.	%	No.	%	No.	%
Eligible for benefits	22	19.82	234	42.24	44	19.82	157	26.98	457	31.11
Not eligible.	49	44.14	173	31.23	132	59.46	259	44.50	613	41.73
Eligibility unknown:										
Moved to mainland . . .	16	14.42	24	4.33	9	4.05	4	.69	53	3.61
No information	24	21.62	123	22.20	37	16.67	162	27.83	346	23.55
Total	111	100.00	554	100.00	222	100.00	582	100.00	1,469	100.00

^aTable includes persons separated during calendar year for seasonal pineapple employees, during fiscal year ended August 31, 1955 for regular pineapple employees, during fiscal year ended September 30, 1955 for sugar employees and diversified farm workers employed during calendar year 1955.

Table B-6. EQUIVALENT TOTAL BENEFIT WEEKS FOR WHICH UNEMPLOYMENT INSURANCE BENEFITS WERE POTENTIALLY PAYABLE TO SAMPLE OF 1,070 AGRICULTURAL WORKERS^a

	Pineapple		Sugar	Diversified Agriculture	Total
	Regular	Seasonal			
0	49	173	132	259	613
1 - 4	0	33	8	56	97
5 - 9	1	19	2	21	43
10 - 14	1	21	4	16	42
15 - 19	2	13	3	9	27
20 (max.)	18	148	27	55	248
Total	71	407	176	416	1,070

^aTable includes persons separated during calendar year for seasonal pineapple employees, during fiscal year ended August 31, 1955 for regular pineapple employees, during fiscal year ended September 30, 1955 for sugar employees and diversified farm workers employed during calendar year 1955.

Table B-7. ESTIMATED NUMBER OF AGRICULTURAL WORKERS
POTENTIALLY ELIGIBLE FOR UNEMPLOYMENT
INSURANCE BENEFITS UNDER HAWAII EMPLOYMENT
SECURITY LAW, 1954-1956^a

	Pineapple		Sugar	Diversified Agriculture	Total
	Regular	Seasonal			
Employed	3,461 ^b	3,178	10,295 ^c	5,137	22,071
Separated	214	3,178	759	4,137	9,288
Estimated eligible . .	63	1,753	189	1,579	3,584

^aTable includes persons separated during calendar year for seasonal pineapple employees, during fiscal year ended August 31, 1955 for regular pineapple employees, during fiscal year ended September 30, 1955 for sugar employees and diversified farm workers employed during calendar year 1955.

^bEstimated number employed during fiscal year ended August 31, 1955.

^cProduction workers only.

Table B-8. WEEKS OF PARTIAL^a OR TOTAL UNEMPLOYMENT
EXPERIENCED BY SAMPLE OF 798 AGRICULTURAL
WORKERS^b INTERVIEWED

	Pineapple		Sugar	Diversified Agriculture	Total
	Regular	Seasonal			
0	5	10	3	121	139
1 - 5	0	8	3	35	46
6 - 10	1	8	2	24	35
11 - 15	0	20	0	12	32
16 - 20	1	15	1	13	30
21 - 25	4	13	2	10	29
26 - 30	2	55	2	25	84
31 - 35	1	50	1	30	82
36 - 40	4	62	2	33	101
41 - 45	4	40	5	28	77
46 - 50	1	14	5	28	48
Over 50	21	5	67	2	95
Total	44	300	93	361	798

^aPartial week of unemployment defined as a week in which earnings were less than potential weekly unemployment insurance benefit in dollars.

^bTable includes persons separated during calendar year for seasonal pineapple employees, during fiscal year ended August 31, 1955 for regular pineapple employees, during fiscal year ended September 30, 1955 for sugar employees and diversified farm workers employed during calendar year 1955.

EMPLOYMENT HISTORY CALENDAR

NAME _____ KEY: _____
 TYPE OF WORKER _____ EMPLOYED _____
 HISTORY UNKNOWN (blank)

Week ending 1953	4 Jul	11 Jul	18 Jul	25 Jul	1 Aug	8 Aug	15 Aug	22 Aug	29 Aug	5 Sep	12 Sep	19 Sep	26 Sep	3 Oct	10 Oct	17 Oct	24 Oct	31 Oct	7 Nov	14 Nov	21 Nov	28 Nov	5 Dec	12 Dec	19 Dec	26 Dec	
Week ending 1954	2 Jan	9 Jan	16 Jan	23 Jan	30 Jan	6 Feb	13 Feb	20 Feb	27 Feb	6 Mar	13 Mar	20 Mar	27 Mar	3 Apr	10 Apr	17 Apr	24 Apr	1 May	8 May	15 May	22 May	29 May	5 Jun	12 Jun	19 Jun	26 Jun	
Week ending 1954	3 Jul	10 Jul	17 Jul	24 Jul	31 Jul	7 Aug	14 Aug	21 Aug	28 Aug	4 Sep	11 Sep	18 Sep	25 Sep	2 Oct	9 Oct	16 Oct	23 Oct	30 Oct	6 Nov	13 Nov	20 Nov	27 Nov	4 Dec	11 Dec	18 Dec	25 Dec	
Week ending 1955	1 Jan	8 Jan	15 Jan	22 Jan	30 Jan	5 Feb	12 Feb	19 Feb	26 Feb	5 Mar	12 Mar	19 Mar	26 Mar	2 Apr	9 Apr	16 Apr	23 Apr	30 Apr	7 May	14 May	21 May	28 May	4 Jun	11 Jun	18 Jun	25 Jun	
Week ending 1955	2 Jul	9 Jul	16 Jul	23 Jul	30 Jul	6 Aug	13 Aug	20 Aug	27 Aug	3 Sep	10 Sep	17 Sep	24 Sep	1 Oct	8 Oct	15 Oct	22 Oct	29 Oct	5 Nov	12 Nov	19 Nov	26 Nov	3 Dec	10 Dec	17 Dec	24 Dec	31 Dec
Week ending 1956	7 Jan	14 Jan	21 Jan	28 Jan	4 Feb	11 Feb	18 Feb	25 Feb	3 Mar	10 Mar	17 Mar	24 Mar	31 Mar	7 Apr	14 Apr	21 Apr	28 Apr	5 May	12 May	19 May	26 May	2 Jun	9 Jun	16 Jun	23 Jun	30 Jun	
Week ending 1956	7 Jul	14 Jul	21 Jul	28 Jul	4 Aug	11 Aug	18 Aug	25 Aug	1 Sep	8 Sep	15 Sep	22 Sep	29 Sep	6 Oct	13 Oct	20 Oct	27 Oct	3 Nov	10 Nov	17 Nov	24 Nov	1 Dec	8 Dec	15 Dec	22 Dec	29 Dec	

OTHER EMPLOYMENT DURING _____ ANSWERS IN ITEMS _____

OTHER INFORMATION WHILE EMPLOYED BY:

<u>Item No.</u>	<u>Employer</u>	<u>Item No.</u>	<u>Employer</u>	<u>Item No.</u>	<u>Employer</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

T. H. Department of Labor & Industrial Relations
Bureau of Employment Security

STUDY ON EXTENSION OF
UNEMPLOYMENT INSURANCE BENEFITS TO AGRICULTURAL WORKERS

Interviewer assigned _____ Schedule No. _____
Island _____ Date _____
Reason cannot contact interviewee: _____ Time started _____
1st attempt: Date _____ Time _____
2nd attempt: Date _____ Time _____

Section A: Identifying Data:

1. Name _____ 2. SS No. _____
3. Address and/or how located _____
4. Phone _____ 5. Sex _____ 6. Marital status _____
7. Age or Birthdate _____ 8. Employee Bango No. _____ 9. No. of Dependents _____
10. If veteran: Date of entry _____ Date of Discharge _____
Mustering out pay \$ _____

Section B: Determination of Labor Force History - Periods of employment:

11. From _____ to _____ Check one: F/T _____ Less than F/T _____
Firm name _____ Type of business _____
Address _____ Nature of work performed _____
Rate of Pay \$ _____ per hr day wk mo (circle one) Other (state) _____
Total earnings during period _____ Normal working arrangement _____

Comments: _____

12. From _____ to _____ Check one: F/T _____ Less than F/T _____
Firm _____ Type of business _____
Address _____ Nature of work performed _____
Rate of Pay \$ _____ per hr day wk mo (circle one) Other (state) _____
Total earnings during period \$ _____ Normal working arrangement _____

Comments: _____

SECTION C: PERIOD NOT EMPLOYED

From _____ to _____

- a. Did you work during this period? Yes () No ()
If yes, complete section B.
- b. Were you sick during this period? Yes ~~x~~ () No ()
- c. Were you ready and willing to work at all times? Yes () No ~~x~~ ()
- d. Did you work for yourself or did you do any farming? Yes ~~x~~ () No ()
- e. Were you offered any work? Yes ~~x~~ () No ()
- f. Did you look for work during this period? Yes () No ~~x~~ ()
- g. Did you leave the island? Yes ~~x~~ () No ()
- h. (Females only) Were you pregnant during this period? Yes () No ()
If yes, date of childbirth. _____
- i. (Females only) Do you have minor children? Yes () No ()
If yes, who cares for them while you are working?

1 Interviewer: Explain every starred item below.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.

APPENDIX C. *Statistics*

TABLES RELATING TO EMPLOYMENT IN HAWAII

*Table C-1. ANNUAL AVERAGE LABOR FORCE, EMPLOYED
AND UNEMPLOYED, 1939-1956*

	<i>Total Labor Force</i>	<i>Employed</i>	<i>Unemployed</i>	<i>Percent Unemployed</i>
1939	169,373	160,373	9,000	5.3
1940	180,796	173,564	7,232	4.0
1941	183,961	177,461	6,500	3.5
1942	197,287	194,857	2,430	1.2
1943	206,768	204,882	1,886	0.9
1944	210,490	208,890	1,600	0.8
1945	215,612	214,112	1,500	0.7
1946	195,653	193,520	2,133	1.1
1947	190,683	187,730	2,953	1.5
1948	193,752	184,304	9,448	4.9
1949	191,408	169,972	21,436	11.2
1950	187,773	170,075	17,698	9.4
1951	191,678	183,400	8,278	4.3
1952	194,067	185,645	8,422	4.3
1953	196,142	186,600	9,542	4.9
1954	197,376	185,617	11,759	6.0
1955	199,276	189,352	9,924	5.0
1956	201,745	192,738	9,007	4.5

Table C-2. STATUS OF HAWAII'S UNEMPLOYMENT COMPENSATION FUND^a

	Trust Fund Balance	Change from Preceding Year	Contributions Collected	Benefit Payments	Contributions Less Benefits	Interest Earned
1939	\$ 4,913,906	+ 51.2%	\$1,851,178	\$ 286,382	\$ 1,564,796	\$ 99,427
1940	6,608,759	+ 34.5	1,830,178	276,561	1,553,617	141,235
1941	8,935,514	+ 35.2	2,297,091	159,466	2,137,625	189,131
1942	11,545,169	+ 29.2	2,532,408	158,146	2,374,262	235,393
1943	14,144,938	+ 22.5	2,365,007	28,084	2,336,923	262,846
1944	16,168,047	+ 14.3	1,744,507	6,446	1,738,061	285,049
1945	18,368,522	+ 13.6	1,878,282	5,924	1,872,358	328,117
1946	20,092,460	+ 9.4	1,521,400	167,225	1,354,175	369,763
1947	22,191,599	+ 10.4	2,144,226	461,549	1,682,677	416,462
1948	23,698,131	+ 6.8	2,596,196	1,571,378	1,024,818	481,714
1949	22,271,409	- 6.0	2,424,570	4,342,147	(-1,917,577)	490,854
1950	21,664,856	- 2.7	2,427,388	3,375,851	(- 948,463)	341,909
1951	22,956,754	+ 6.0	2,640,930	1,815,064	825,866	466,033
1952	23,276,397	+ 1.4	2,148,915	2,336,303	(- 187,388)	507,032
1953	23,145,940	- .6	2,188,326	2,858,205	(- 669,879)	539,422
1954	21,939,237	- 5.2	2,212,990	3,960,637	(-1,747,647)	540,943
1955	22,018,410	+ .4	2,339,860	2,764,875	(- 425,015)	504,189
1956	22,354,775	+ 1.5	2,733,140	2,995,687	(- 262,547)	598,912

^aDecember 31, 1939-1955 and June 30, 1956

Table C-3. ANNUAL AVERAGE COVERED EMPLOYMENT AND TOTAL EMPLOYMENT, 1940-1956

	Total Employment	Covered Employment	Percent Covered
1940	173,564	60,856	35.0
1941	177,461	79,275	44.6
1942	194,857	98,075	50.3
1943	204,882	78,980	38.5
1944	208,890	75,587	36.1
1945	214,112	77,149	36.0
1946	193,520	82,277	42.5
1947	187,730	93,598	49.8
1948	184,304	93,953	50.9
1949	169,972	90,547	53.2
1950	170,075	90,698	53.3
1951	183,400	96,024	52.3
1952	185,645	98,477	53.0
1953	186,600	99,166	53.1
1954	185,617	98,609	53.1
1955	189,352	124,762	65.8
1956	192,738	128,096	66.4

Table C-4. AVERAGE MONTHLY EMPLOYMENT IN THE PINEAPPLE, SUGAR, AND DIVERSIFIED FARMING INDUSTRIES, 1950-1956

	Sugar			Pineapple			Diversified Farms ^a
	Farm	Mill	Total	Farm	Mill	Total	
1950	14,080	8,813	22,893	4,803	7,531	12,334	INA
1951	13,766	8,658	22,424	5,058	8,467	13,525	9,648
1952	13,670	8,676	22,346	5,432	7,658	13,090	9,497
1953	13,631	8,591	22,222	5,250	7,579	12,829	10,033
1954	13,337	8,414	21,751	4,899	7,056	11,955	10,306
1955	12,670	8,241	20,911	4,933	7,428	12,361	10,425
1956	12,042	7,902	19,944	4,787	7,731	12,518	10,940

^aIncludes farmers and unpaid family workers.

Table C-5. ANNUAL AVERAGE RATIO OF BENEFITS AND RESERVES TO TAXABLE PAYROLL, AND AVERAGE EMPLOYER CONTRIBUTIONS RATE, 1951-1955

	1951	1952	1953	1954	1955
Ratio of benefits to taxable payroll . . .	.8	1.0	1.2	1.7	1.1
Average employer contributions rate . . .	1.2	.8	.9	.9	.9
Ratio of reserves to taxable payroll . . .	10.4	10.0	9.7	9.3	8.8

Table C-6. NUMBER OF SUGAR PLANTATIONS, BY AVERAGE MONTHLY EMPLOYMENT, 1955^a

	Oahu	Hawaii	Maui	Kauai	Territory
1 - 100	-	-	-	1	1
101 - 200	-	3	-	1	4
201 - 300	1	2	1	1	5
301 - 400	1	6	-	2	9
401 - 500	1	2	-	1	4
501 - 600	-	-	1	-	1
601 - 700	1	-	-	-	1
701 & Over	-	-	1	1	2
Total	4	13	3	7	27

^aFiscal year ended September 30, 1955.

Table C-7. ANNUAL FARM PAYROLLS ON
SUGAR PLANTATIONS

<i>Annual Payroll</i>	<i>Plantations</i>
\$ 1 - 250,000	1
250,001 - 500,000	5
500,001 - 1,000,000	13
1,000,001 - 1,500,000	5
1,500,001 - 2,000,000	2
2,000,001 - 2,500,000	0
2,500,001 - 3,000,000	0
3,000,001 & Over	1
Total	27

Table C-8. AVERAGE MONTHLY EMPLOYMENT OF PRODUCTION
WORKERS ON SUGAR PLANTATIONS, 1955^a

Farm Earnings Only.	7,761
Both Farm and Non-Farm Sugar Earnings	2,534
Total All Workers	10,295

^aFiscal year ended September 30, 1955

Table C-9. PRODUCTION WORKERS ON SUGAR PLANTATIONS,
BY TYPE OF EARNINGS

<i>Annual Earnings</i>	<i>Farm Only</i>	<i>Farm and Non-Farm</i>
\$ 1 - 500	2.1%	-%
501 - 1,000	1.2	.8
1,001 - 1,500	1.5	-
1,501 - 2,000	5.5	8.2
2,001 - 2,500	34.4	32.0
2,501 - 3,000	32.6	40.2
3,001 - 3,500	16.9	16.4
3,501 - 4,000	4.8	1.6
4,001 - 4,500 . . . . .	.9	.8
Total	100.0%	100.0%

Table C-10.

*PINEAPPLE SEASONAL
FIELD WORKERS BY WEEKS
EMPLOYED DURING 1955^a*

<i>Weeks</i>	<i>Percent</i>
1	3.0
2	3.7
3 .....	.3
4	2.0
5	5.3
6	3.7
7	2.3
8	4.0
9	4.3
10	5.0
11	3.3
12	2.3
13	3.7
14	4.7
15	5.0
16	3.0
17	10.3
18	2.7
19	3.7
20	1.3
21	2.7
22	7.0
23	8.3
24	2.7
25	1.0
26 .....	.7
27	1.7
28	1.7
29	0.0
30	0.0
31 .....	.3

^aBased on stratified random samples of 300 workers interviewed and excludes students.

Note: Due to rounding, items may not add to exactly 100.0%.

Table C-11.

*DIVERSIFIED FARM
WORKERS, BY WEEKS
EMPLOYED DURING 1955^a*

<i>Weeks</i>	<i>Percent</i>
1 - 5	26.2
6 - 10	12.4
11 - 15	11.4
16 - 20	7.5
21 - 25	3.9
26 - 30	3.9
31 - 35	2.5
36 - 40	3.2
41 - 45	3.0
46 - 50	3.9
51 - 52	22.1

^aBased on random sample of 534 persons who were interviewed or for whom work histories were available from employers.

Table C-12. NUMBER OF DIVERSIFIED FARMS EMPLOYING WORKERS,
BY NUMBER OF EMPLOYEES DURING 1955

Employees On Farm	Dairies, Ranches	Coffee	Poultry	Hogs	Sugar ^a	Other Farms	General ^b	Total
1	4	18	9	6	-	30	4	71
2	4	20	7	3	-	13	6	53
3	7	18	4	2	-	17	4	52
4	7	25	3	4	-	14	3	56
5	7	26	1	3	-	5	3	45
6	3	15	1	2	-	4	3	28
7	5	18	3	-	-	6	2	34
8	2	16	-	1	-	4	-	23
9	5	9	1	-	-	4	1	20
10	3	7	-	-	-	5	1	16
11	5	11	2	1	-	2	1	22
12	5	7	-	-	-	2	2	16
13	1	4	-	1	-	2	1	9
14	1	10	-	-	-	2	2	15
15	4	7	-	-	-	5	-	16
16	1	3	1	-	1	4	-	10
17	1	8	-	-	-	1	-	10
18	-	1	1	-	-	4	-	6
19	2	3	-	-	-	-	-	5
20	1	2	1	-	-	1	-	5
21	1	1	-	-	-	1	-	3
22	1	-	-	-	-	1	-	2
23	1	-	-	-	-	-	-	1
24	-	3	-	-	-	1	-	4
25	2	-	-	-	-	1	-	3
26 & Over	14	3	1	-	-	5	4	27
Total	87	235	35	23	1	134	37	552

^aIndependent planters.

^bMore than one type of product.

Table C-13. NUMBERS OF DIVERSIFIED FARMS EMPLOYING WORKERS,
BY ANNUAL PAYROLL IN 1955

	Dairies, Ranches	Coffee	Poultry	Hogs	Sugar ^a	Other Farms	General ^b	Total
\$ 1 - 500 ...	3	40	2	-	-	24	9	78
501 - 1,000 ...	4	53	4	4	-	18	6	89
1,001 - 5,000 ...	16	129	17	13	-	58	13	246
5,001 - 10,000 ...	20	11	5	6	1	19	7	69
10,001 - 20,000 ...	25	1	5	-	-	8	-	39
20,001 - 30,000 ...	3	1	1	-	-	4	1	10
30,001 - 40,000 ...	2	-	-	-	-	1	1	4
40,001 - 50,000 ...	1	-	-	-	-	-	-	1
50,001 - 60,000 ...	2	-	1	-	-	1	-	4
60,001 - 70,000 ...	-	-	-	-	-	-	-	-
70,001 - 80,000 ...	1	-	-	-	-	-	-	1
80,001 - 90,000 ...	1	-	-	-	-	-	-	1
90,001 - 100,000 ...	1	-	-	-	-	-	-	1
100,001 - 110,000 ...	1	-	-	-	-	-	-	1
110,001 - 120,000 ...	-	-	-	-	-	-	-	-
120,001 - 130,000 ...	1	-	-	-	-	-	-	1
130,001 - 140,000 ...	-	-	-	-	-	-	-	-
140,001 - 150,000 ...	3	-	-	-	-	-	-	3
150,001 & Over ...	3	-	-	-	-	1	-	4
Total	87	235	35	23	1	134	37	552

^aIndependent planters.

^bMore than one type of product.

Table C-14. TOTAL EARNINGS AND AVERAGE INDIVIDUAL
EARNINGS ON DIVERSIFIED FARMS DURING 1955

<i>Employees On Farm</i>	<i>Employers</i>	<i>Employees</i>	<i>Total Earnings</i>	<i>Average Per Worker</i>
1	71	71	\$ 62,881	\$ 885.56
2	53	106	65,086	614.01
3	52	156	115,943	743.22
4	56	224	152,467	680.65
5	45	225	118,639	527.28
6	28	168	59,798	355.94
7	34	238	136,600	573.95
8	23	184	66,073	359.09
9	20	180	103,344	574.13
10	16	160	76,005	475.03
11	22	242	125,396	518.16
12	16	192	112,514	586.01
13	9	117	67,297	575.18
14	15	210	63,255	301.21
15	16	240	115,524	481.35
16	10	160	79,187	494.91
17	10	170	105,404	620.02
18	6	108	79,778	738.68
19	5	95	46,576	490.27
20	5	100	57,479	574.79
21	3	63	16,840	267.30
22	2	44	70,879	1,610.88
23	1	23	34,181	1,486.13
24	4	96	37,885	394.63
25	3	75	44,839	597.85
26 & Over ...	27	1,490	2,421,542	1,625.19
Total	552	5,137	\$4,435,412	\$ 863.42

PRODUCTION NOTE: This publication was designed and prepared for reproduction by Pacific Services: William S. Ellis, Jr., design and general supervision; Trixie Ichinose, paging, paste-up, and table production; Dorothy Tsutsumi, composition. Text and tables were composed in 13.3 pt. IBM Boldface roman and italic, the text reduced to 11 pt., text footnotes and some tables to 9 pt., table footnotes and some tables to 6.7 pt. Display composition (Alternate Gothic, Spartan Bold, and Commercial Script), offset reproduction, and binding by Advertiser Publishing Company, Ltd.