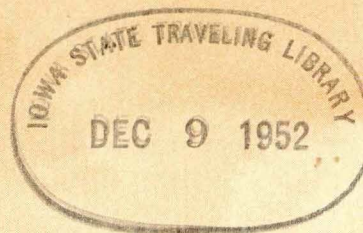


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IOWA LAND PRODUCTIVITY



A GRAPHIC SUMMARY OF IOWA LAND PRODUCTIVITY

ISSUED BY

IOWA DEPARTMENT OF AGRICULTURE

Harry D. Linn, Secretary

Cooperating With

U. S. DEPARTMENT OF AGRICULTURE

BUREAU OF AGRICULTURAL ECONOMICS

AND

RESEARCH MARKETING ADMINISTRATION

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A GRAPHIC SUMMARY OF IOWA LAND PRODUCTIVITY

INTRODUCTION

Marketing

Iowa is the greatest surplus food producing area in the world and her agriculture is one of the most highly commercialized. In such a situation, marketing plays an important role in determining the net reward that goes to the farmer. On the average, marketing costs for agricultural products exceed production costs. This fact highlights the need for exhaustive research directed toward the discovery and adoption of more efficient marketing practices. Agriculture as a primary producer has a vital interest in the ultimate marketing goal of transferring the maximum quantity of goods to consumers with the minimum charge for processing, transportation and storage.

One important purpose of this bulletin is to provide the basic data that will pin point the location and extent of Iowa's important farm crops since they are the first link in a production and marketing chain that leads from the Iowa farm to someone's dinner table. Any marketing study or research that expects to smooth and speed the flow of farm products through the marketing channels should logically start at the source with the primary product.

This bulletin presents an accurate visual picture that highlights the surplus crop producing areas of the State. The graphic maps provide both relative and absolute comparisons since the figures given are in bushels per acre of land in farms, and these may be translated into county production totals by expanding the per acre figures on the basis of total land in farms shown in figure 14. If desired, this process could also be duplicated at the township level since the acreage of land in farms by townships is available from the files of the Iowa Crop and Livestock Reporting Service at 1019 High Street in Des Moines. In addition, since the averages presented are on a land in farm basis they

reflect both factors of total production, that is yield per crop acre, and the per cent of all farm land in a particular crop.

Measuring Land Productivity

At the dawn of history when nomadic tribes first settled at a fixed location, one of the fundamental factors determining the site of their permanent camp was the ability of the surrounding country to feed their herds and flocks. From that early day to the present, our civilization has become infinitely more complicated and agriculture has changed from a way of life to a commercialized business. However, down through all the centuries of time the basic concept of value in agricultural land has continued to be its ability to produce. This ability or power is ordinarily called productivity. A commonly accepted measure of productivity is yield per *crop* acre. The weakness in this measure is that productivity of any area larger than one acre is a function of both yield per crop acre and the percentage of the total land in crop. A simple method of reducing these two variables to a common unit is to compute yield on a per acre of land in farm basis. This concept requires some adjustment in our standards of evaluating yield per acre figures since in the past we have almost universally accepted yield figures on a per crop acre basis. However, from the standpoint of utilizing productivity as a guide in establishing land value, the Iowa Crop and Livestock Reporting Service feels that the innovation of presenting yield per acre of land in farms will prove valuable.

Crop Production Index

The crop production index presented in figures 7, 8 and 9 is based on the composite average annual value of all grain and seed crops pro-

duced during the period 1944 through 1948. The mathematical process is a standard one used in constructing indexes. Prices are introduced simply to facilitate deriving a common unit. It is difficult to equitably add together a bushel of corn, a bushel of wheat and a bushel of clover seed. However, if each crop production unit is multiplied by its dollar value then it is a simple matter to add the total number of dollars. Prices used were the weighted seasonal State average price received by Iowa farmers for each commodity during the period 1944 through 1948. Crops included in the index are corn, wheat, oats, soybeans, barley, rye, flaxseed and popcorn, plus timothy, red clover and alfalfa seed.

The crop production index as computed and the absolute dollar values as shown in figures 11 and 12 are useful tools in judging the relative and actual cash crop potential of a township or county. However, the following limitations should be attached to the use of the data:

1. The index does not cover the value of hay and pasture.
2. The index makes no allowance for intangible values accruing to land because of location, buildings and other similar factors.
3. Individual farms or tracts may vary widely from the township or county average.

Period Covered

The yield data presented are weighted averages for the five-year period 1944 through 1948. In publishing information of this type it is usually more desirable to use an average for a series of years in order

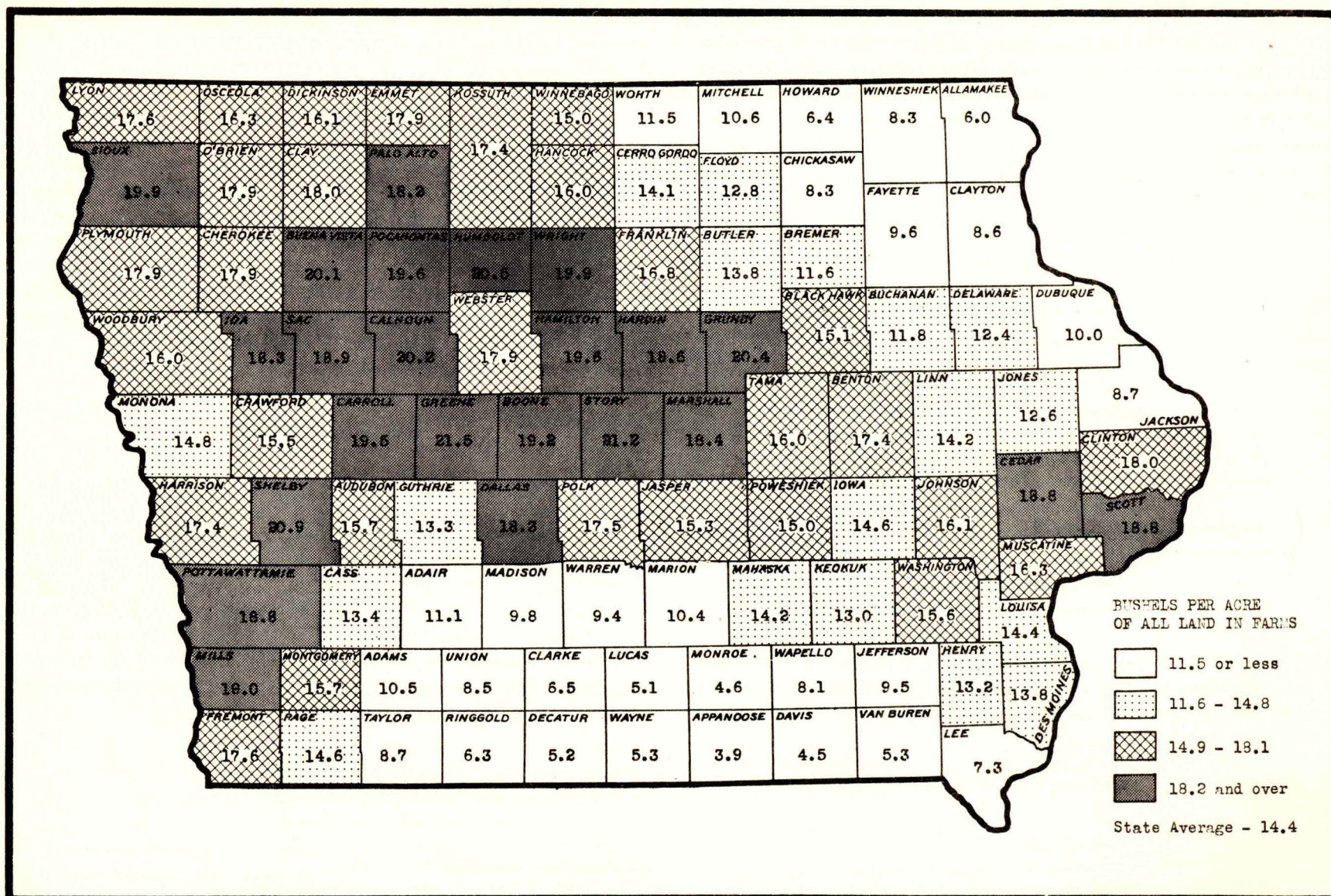
to minimize any extreme situations that may have resulted from abnormal weather or unusual economic conditions. The years covered were the most recent available at the time this bulletin was printed.

Source and Credit

Basic data used in preparing the several maps are all official State estimates released currently by the Iowa Crop and Livestock Reporting Service. The county and township breakdown is based entirely on the annual State Farm Census that is taken each year by the county assessors. The extra clerical work necessary to tabulate, compute and prepare this bulletin was made possible by a grant of matching funds from the Research Marketing Administration of the U. S. Department of Agriculture to the Iowa Department of Agriculture under terms of the Research and Marketing Act of 1946.

Other Publications

There are several other statistical bulletins relating to Iowa agriculture that may be secured by writing to the Iowa Crop and Livestock Reporting Service at 1019 High Street, Des Moines, Iowa. These are bulletin 92.6, "A Graphic Summary of Iowa Livestock and Poultry," bulletin 92.7, "Iowa Land Utilization," bulletin 92.8, "Dairying in Iowa," and bulletin 92.9, "Iowa Cash Farm Income." In addition to the special studies mentioned above, there are current estimates of crop and livestock production issued periodically throughout the year plus the annual State Farm Census that shows a county breakdown of data for all major crops, livestock and machinery items.



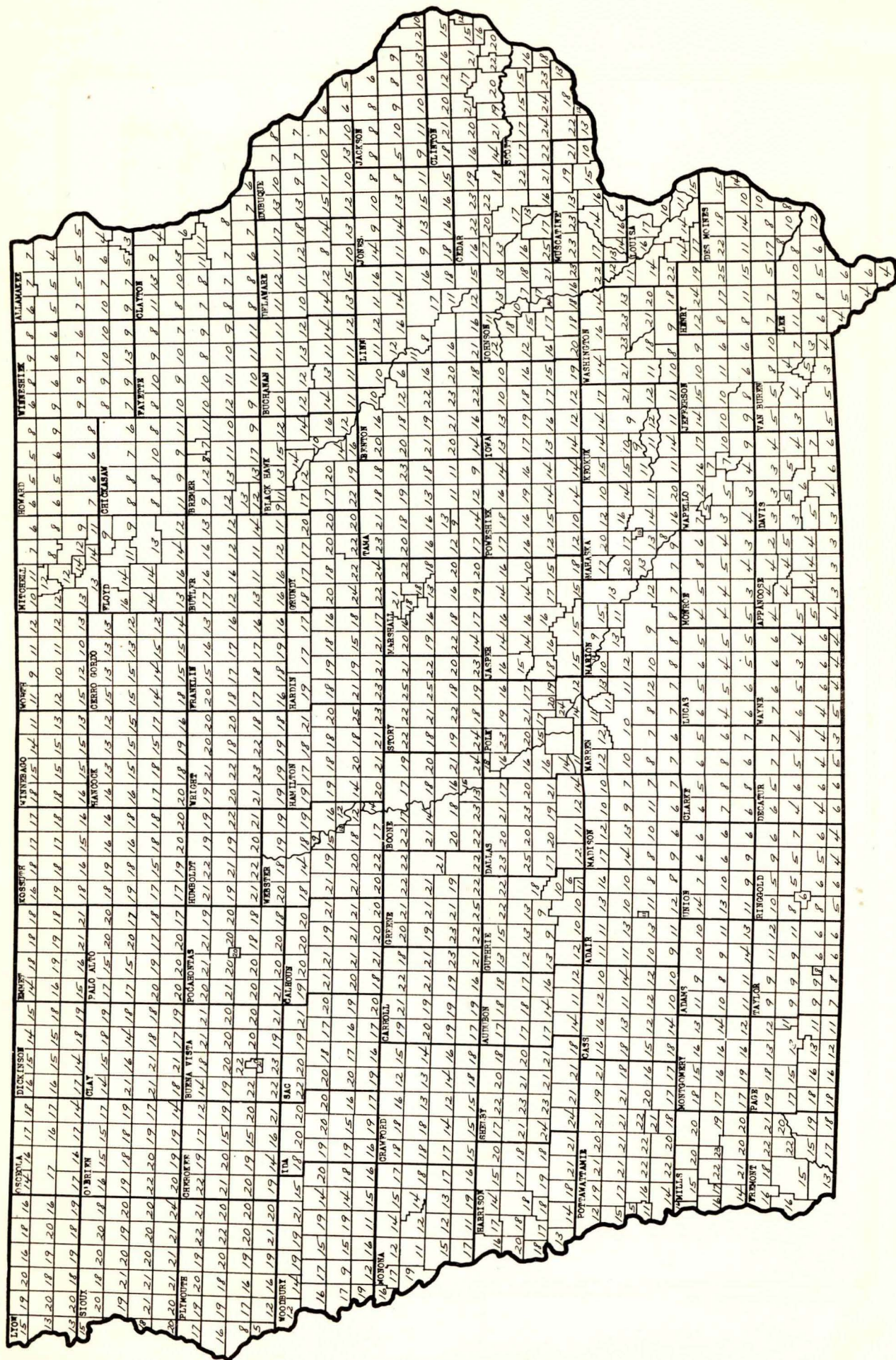


Figure 2. CORN YIELD: Bushels, per acre of all land in farms, 1944-48 average, by townships. Data from the Annual State Farm Census and the Bureau of Agricultural Economics.

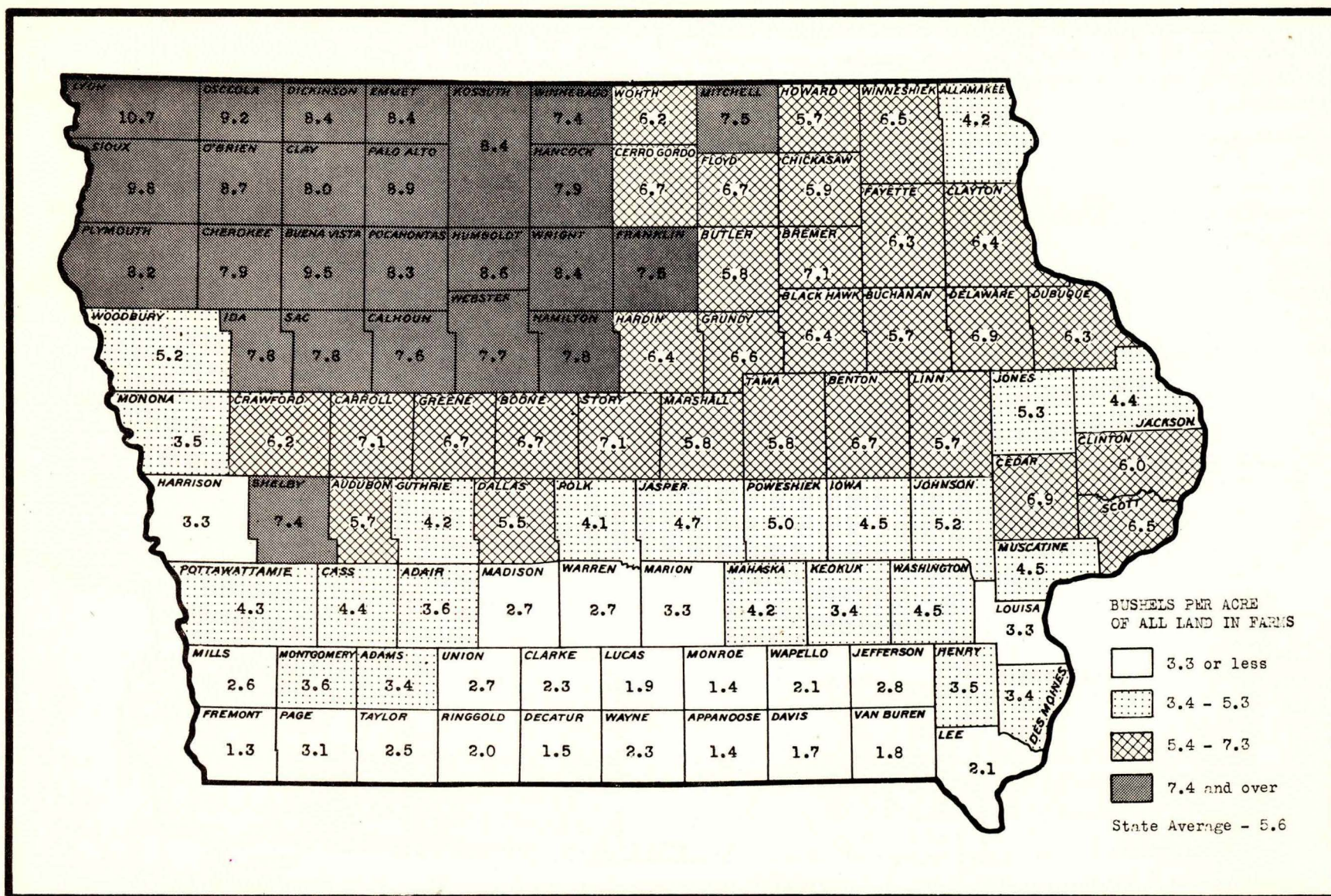


Figure 3. OAT YIELD: Bushels, per acre of all land in farms, 1944-48 average, by counties. Data from the Annual State Farm Census and the Bureau of Agricultural Economics.

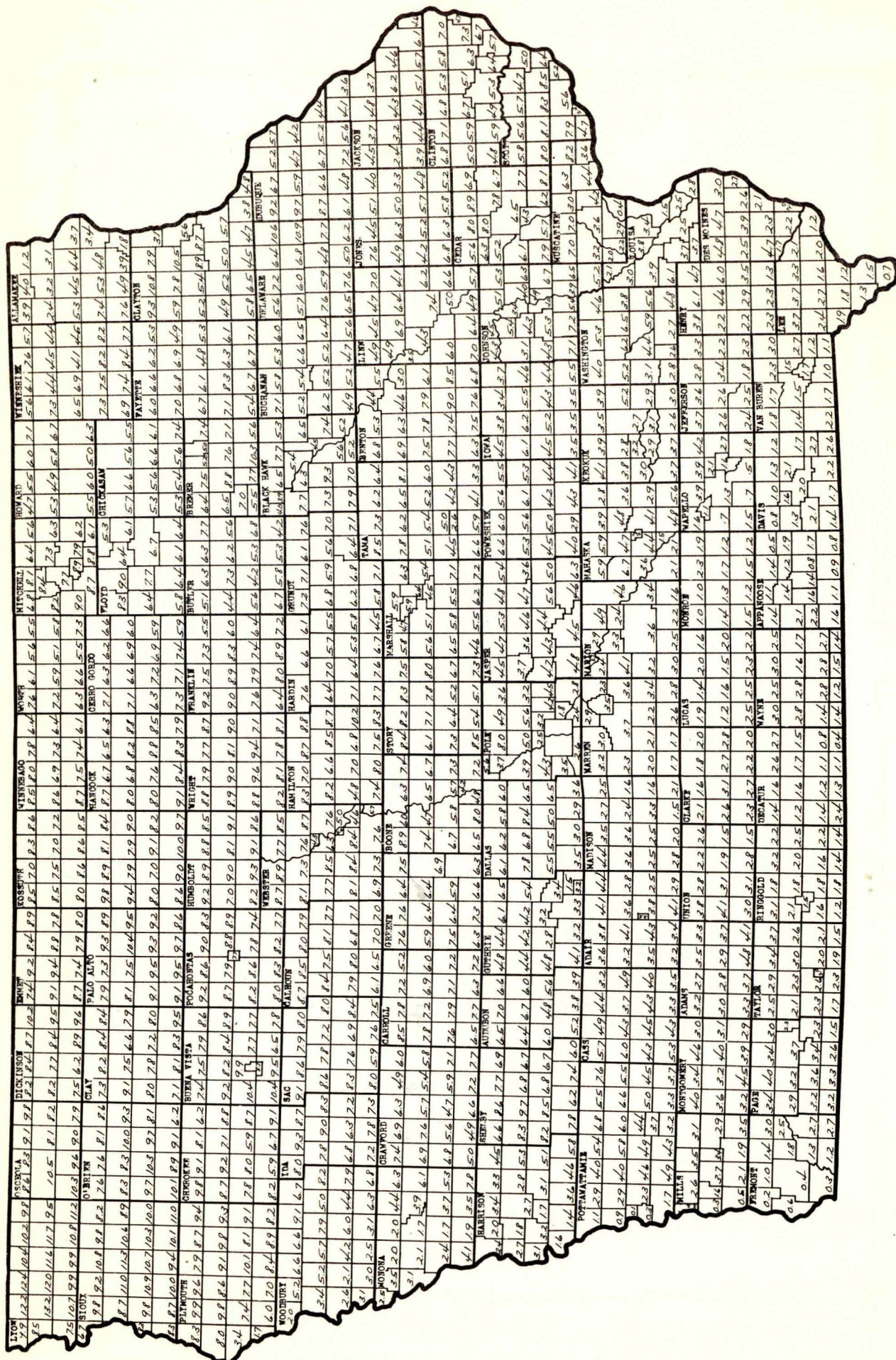


Figure 4. OAT YIELD: Bushels, per acre of all land in farms, 1944-48 average, by townships. Data from the Annual State Farm Census and the Bureau of Agricultural Economics.

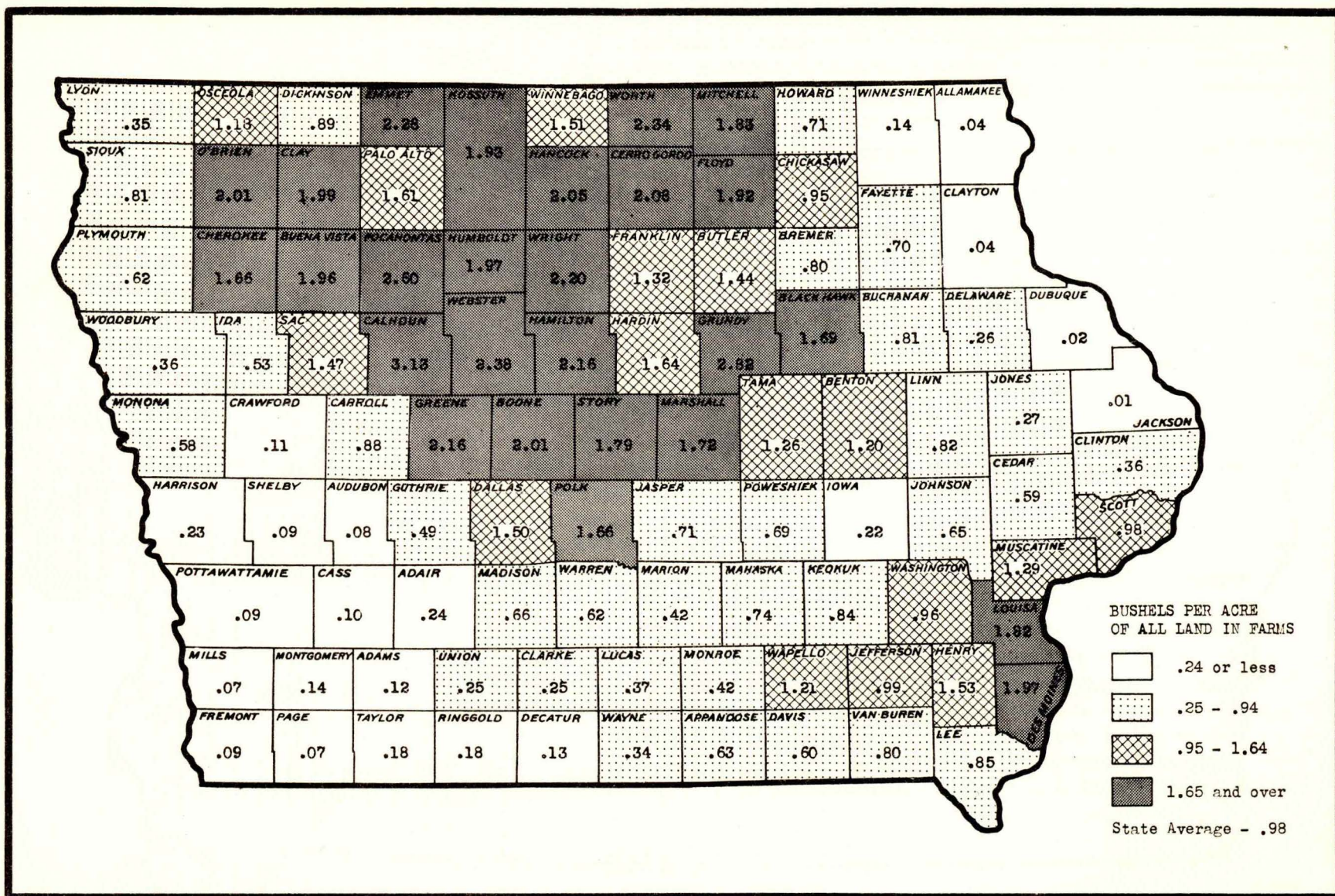


Figure 5. SOYBEAN YIELD: Bushels, per acre of all land in farms, 1944-48 average, by counties. Data from the Annual State Farm Census and the Bureau of Agricultural Economics.

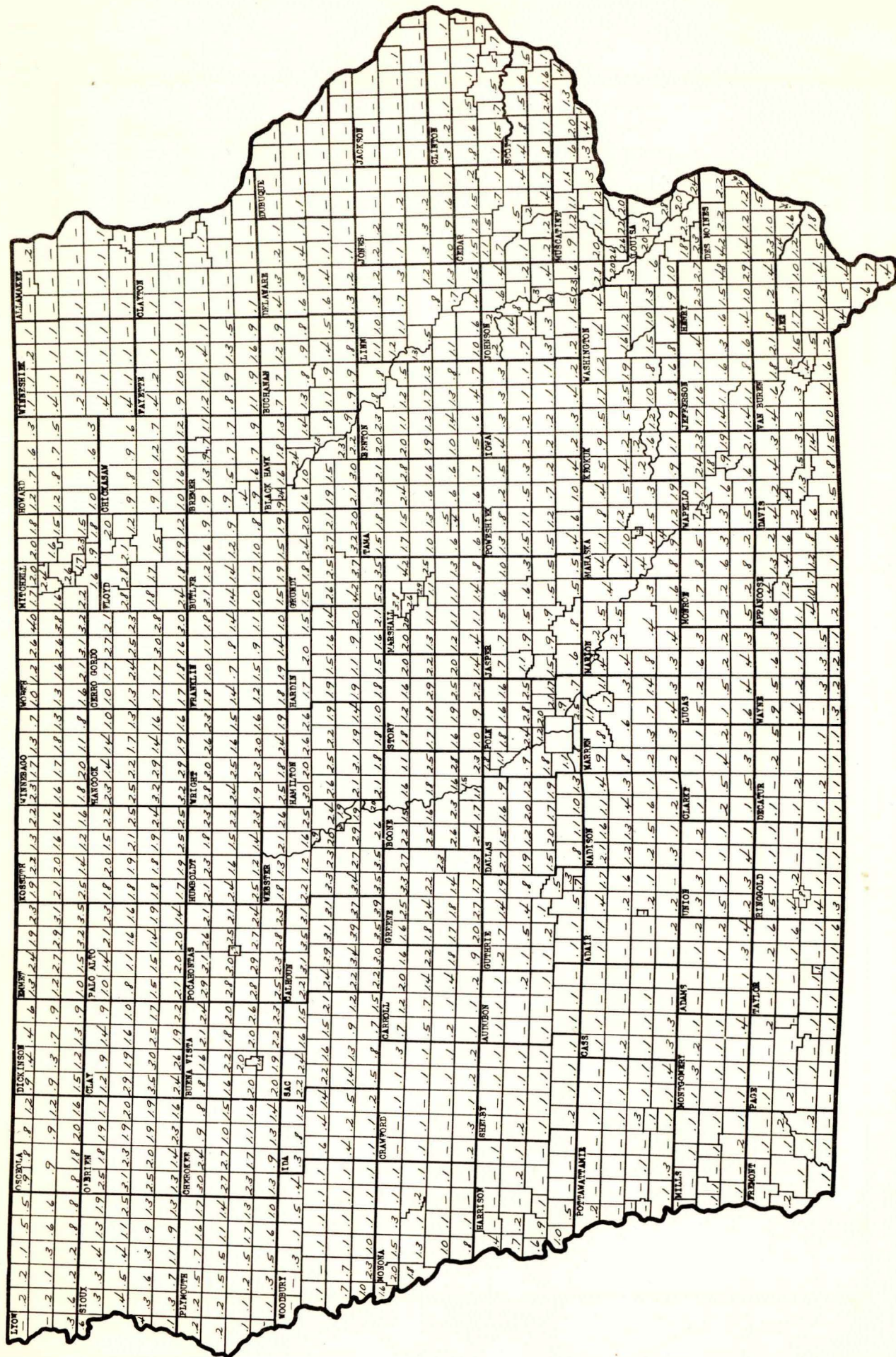


Figure 6. SOYBEAN YIELD: Bushels, per acre of all land in farms, 1944-48 average, by townships. Data from the Annual State Farm Census and the Bureau of Agricultural Economics.

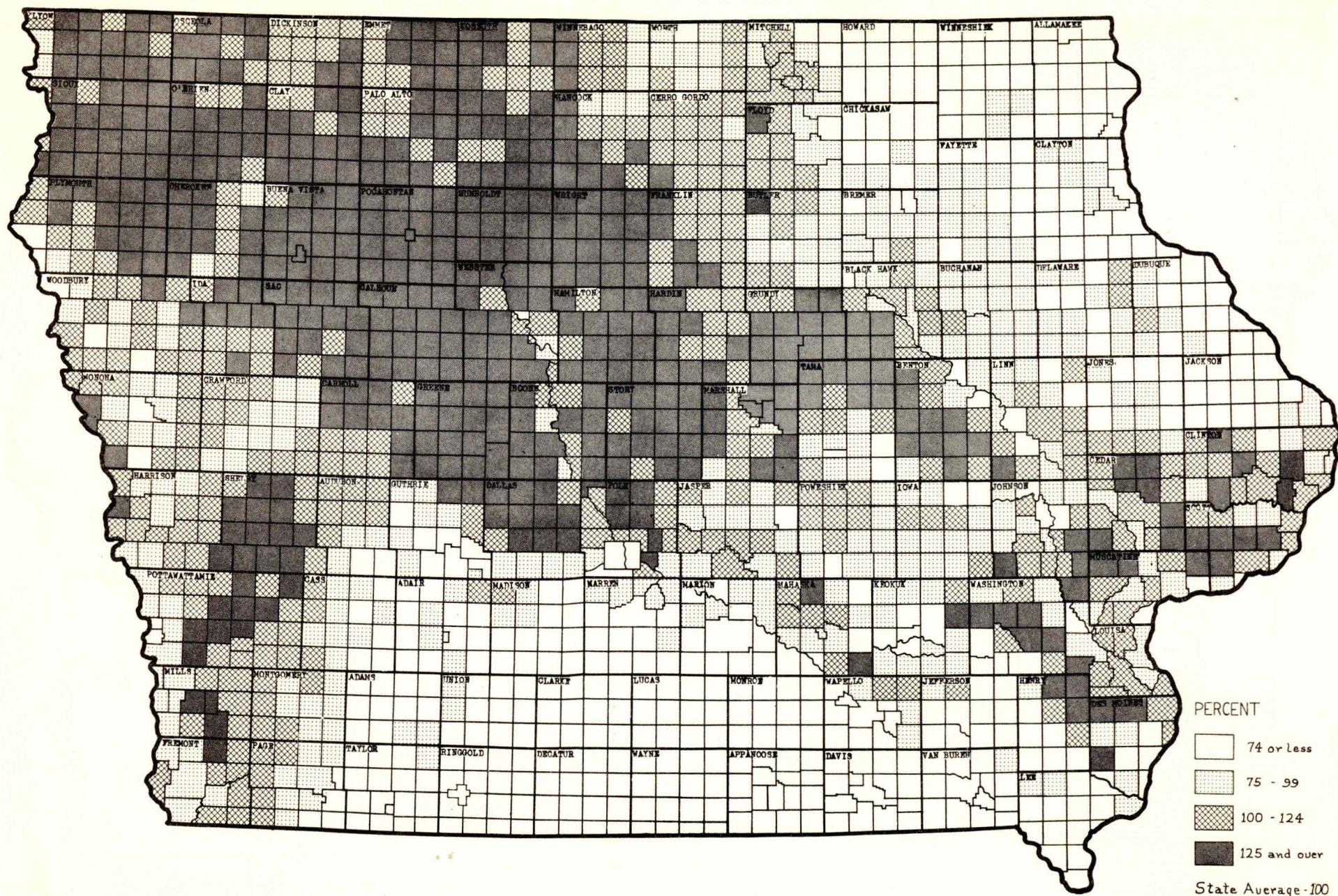


Figure 7. CROP PRODUCTION INDEX: Combined grain and seed yield, per acre of all land in farms, expressed as a percentage of the state yield per acre, 1944-48 average, by townships. Data from the Annual State Farm Census and the Bureau of Agricultural Economics.

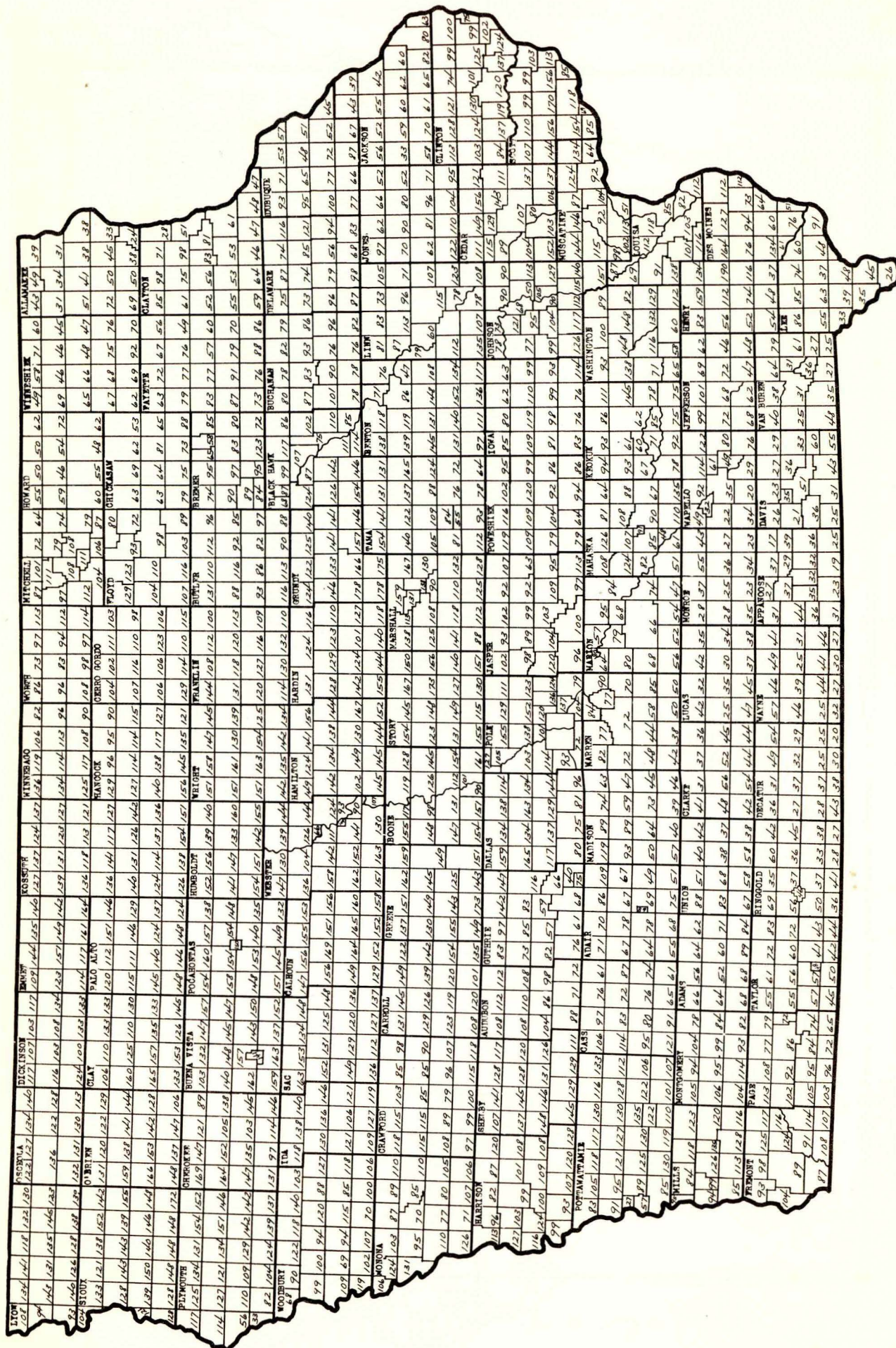


Figure 8. CROP PRODUCTION INDEX: Combined grain and seed yield, per acre of all land in farms, expressed as a percentage of the state yield per acre, 1944-48 average, by townships. Data from the Annual State Farm Census and the Bureau of Agricultural Economics.

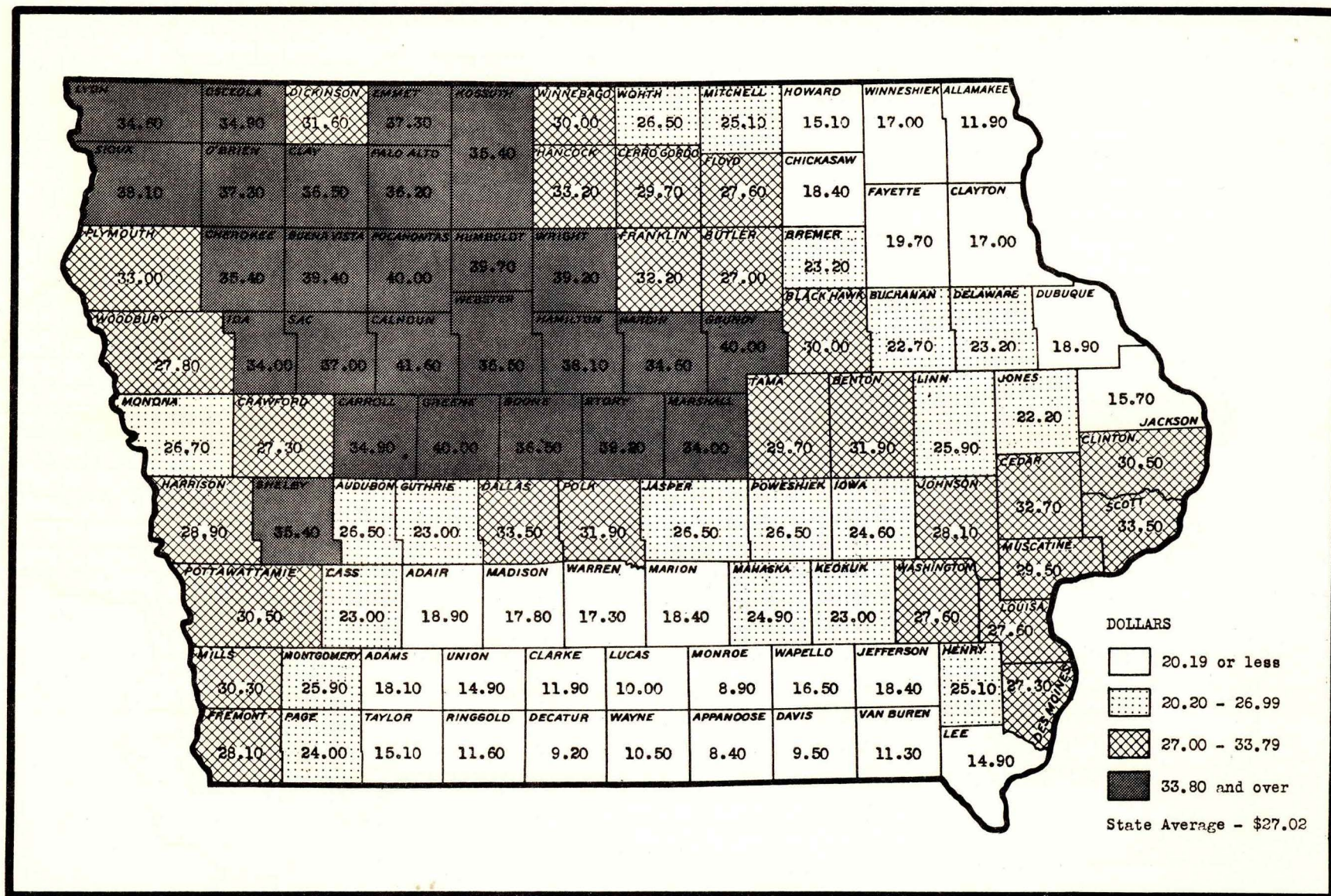


Figure 11. CROP PRODUCTION VALUE: Dollar worth of combined grain and seed yield, per acre of all land in farms, 1944-48 average, by counties. Data from the Annual State Farm Census and the Bureau of Agricultural Economics.

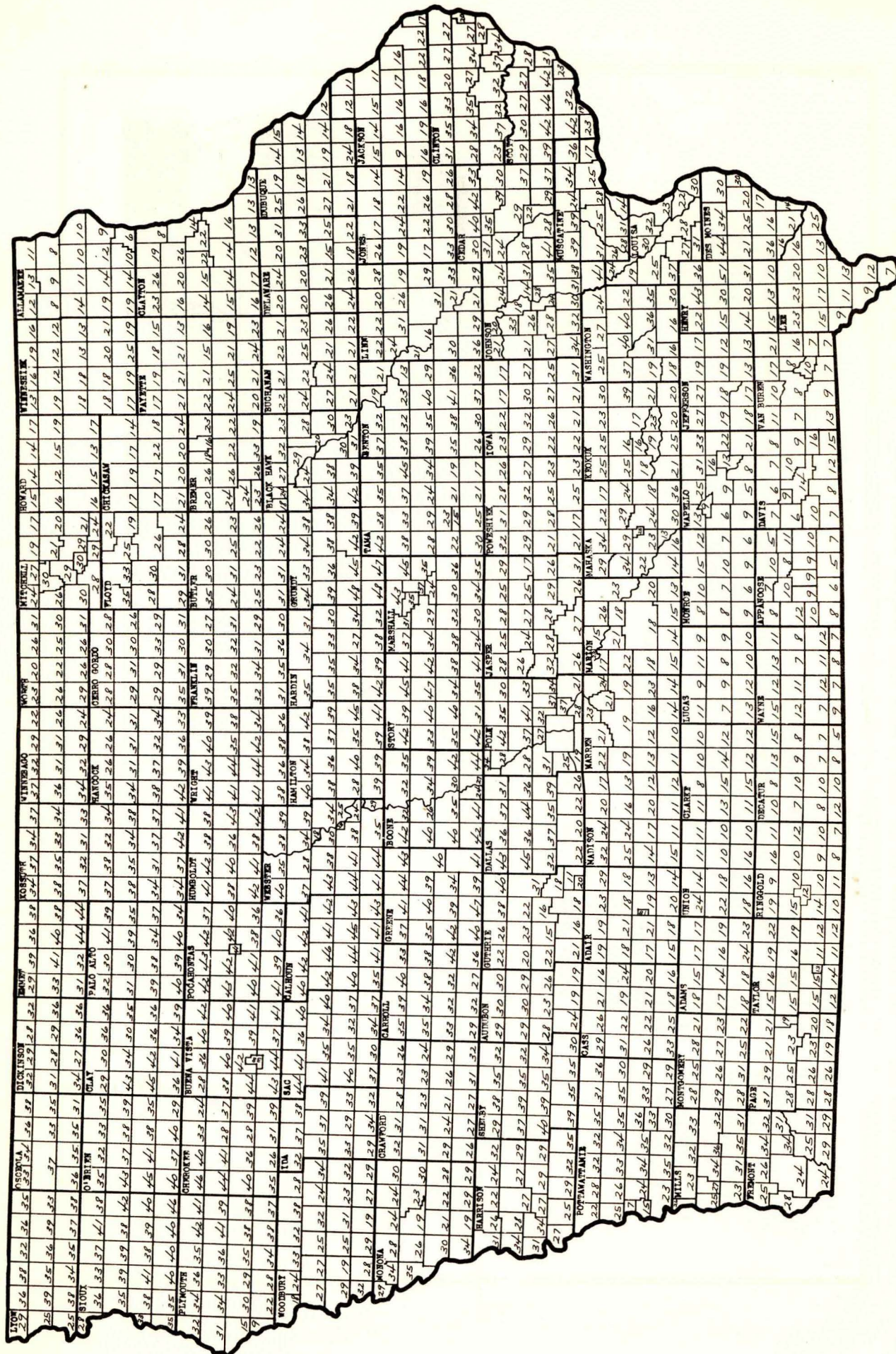


Figure 12. CROP PRODUCTION VALUE: Dollar worth of combined grain and seed yield, per acre of all land in farms, 1944-48 average, by townships. Data from the Annual State Farm Census and the Bureau of Agricultural Economics.

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