

cultivated in Utah upon the irrigation plan 263,473 acres, or a trifle over five-tenths of one per cent. of the entire area of the Territory. That acreage, which was about nine-tenths of the total amount under cultivation, was divided into 9,724 farms, which therefore had an average of twenty-seven acres each. There were, as reported by the census office, in the Territory five irrigated farms of 640 acres or more, 13 farms from 320 to 640, and 65 from 160 to 320. These 83 farms embrace 10 per cent of the irrigated land. The entire balance was divided into holdings that averaged but 25 acres each. This is an important point, the significance of which is made very clear in a comparison of the Utah report with that of Wyoming which accompanies it. Speaking of Utah the bulletin says:

"The average size of the irrigated farms, or, more strictly, of those portions of farms on which irrigation is practiced, is twenty-seven acres. The average first cost of water right is \$10.55 per acre, and the average cost of preparing the soil for cultivation, including the purchase price of the land, is \$16.10 per acre. The average present value of the irrigated land of the Territory, including buildings, etc., is reported as \$84.25 per acre, showing an apparent profit, less cost of buildings, of \$57.60 per acre. The average annual cost of water is \$0.91 per acre, which, deducted from the average annual value of products per acre, leaves an average annual return of \$17.12 per acre."

Following is the parallel report from Wyoming:

"The average size of the irrigated farms, or, more strictly, of irrigated portions of farms on which crops were raised, is 119 acres. The average first cost of water right is \$3.62 per acre, and the average cost of preparing the soil for cultivation, including the purchase price of the land, is \$9.48 per acre. The average present value of the irrigated land of the State, including buildings, etc., is reported as \$31.40 per acre, showing an apparent profit, less cost of buildings, of \$18.30 per acre. The average annual cost of water is \$0.44 per acre, which deducted from the average annual value of products per acre, leaves an average annual return of \$7.81 per acre."

In comparing the counties of Utah in relation to the acreage value of crops, it is observed that Davis and Washington take the lead with a crop valuation of \$32.93 and \$32.19 per acre respectively. San Juan and Salt Lake follow at \$27.95 and \$26.73. Then comes Weber at \$22.72, Utah at \$22.50, and Kane at \$21.81. Grand and Morgan stand \$19.05 and \$18.16. Emery, Box Elder, Sanpete, Summit, Iron, Millard, Tooele, and Cache, are reported with an average crop value of \$17.00 down to \$14.30. The remaining counties run from \$11.64 to \$9.00.

The census reporter has gone to some labor in comparing the crop values from the Utah lands and the average size of her farms with those of Arizona and New Mexico, and has reached the same

flattering result in Utah's favor as has been presented in the comparison with Wyoming.

The bulletin throughout makes a splendid showing for the people of this Territory. Of the difficulties attending the early labors here the report says:

"The average first cost of water right in Utah, \$10.55 per acre, is noticeably great, being largely due to the manner in which the ditches and canals were made. Nearly all were laid out and constructed by farmers of ordinary education without the use of surveying instruments. As a consequence, few of the more important works laid out in this manner have proved serviceable without great changes, involving in many instances the reconstruction of almost the entire system. The perseverance shown in many of these cases is remarkable. Time after time a structure has been built only to be destroyed in a year or two. Diverting dams have been placed, at an enormous outlay of time and labor, in rivers at places where it was absolutely impossible to make such works secure, using materials that must inevitably be torn away by the next great flood. Portions of canals have been built, and after the water was turned in the grades proved of such a character that it was necessary to adjust them again and again in order to make the water flow. These changes have added enormously to the first cost of irrigation, and have probably tended to bring the average above that of other parts of the country."

Some of the unsolved difficulties in the irrigation problem are pointed out, and will doubtless be elaborated and discussed to a conclusion by the congress this week. There is no use to begin upon them here; they are too numerous and involve too many conditions to admit of brief discussion. It is enough to say that so far as irrigation is concerned, Utah stands in the lead, where she properly belongs, and in questions that remain yet unsolved by her farmers there is little use in going elsewhere for the foremost experience.

IRRIGATION COMMITTEE'S REPORT.

PROBABLY the most valuable and reliable lot of information that has ever been placed before the public, in relation to Utah's irrigation system is embraced in the pamphlet just issued by the committee on statistics of the Utah delegation to the Irrigation Congress. The work has been prepared especially for the congress and is a most complete and accurate presentation of the conditions of the Territory in everything touching irrigation matters. The committee have done a great service to Utah and simplified to a large extent the work that lies before the Irrigation Congress.

SALT LAKE THE CENTRE OF THE ARID REGIONS.

PROFESSOR G. E. Bailey, who is at present sojourning in Salt Lake City, is a representative of the Chicago

Inter-Ocean. He is engaged in writing for that paper, a series of illustrated letters descriptive of Utah. He takes special interest in the irrigation question and is informing himself thoroughly on that subject. He has prepared a map of the United States, showing the old agricultural area, dependent on an uncertain rainfall, and the new agricultural area dependent on certain irrigation. This map he intends to present to the Irrigation Congress tomorrow with the compliments of the *Inter-Ocean*.

The new area map shows Salt Lake to be the exact centre of the arid regions. It includes half the Dakotas, half of Nebraska, one-third of Kansas, four-fifths of New Mexico, all of Colorado, all of Arizona, all of Utah, all of Wyoming, all of Montana, all of Idaho, all of Nevada, all of California, nine-tenths of Oregon and one-half of Washington. The diameter of this belt is 1200 miles, comprising an area of 1,180,966 square miles.

Professor Bailey is enthusiastic over the fact that Salt Lake City is the geographical center of this vast arid region. He thinks that this is the most appropriate place to hold the Irrigation Congress, and he sees no reason why Salt Lake should not become the future metropolis of the arid belt. There is every facility, he says, for its becoming the railroad center and consequently the distributing point or commercial capital of the new irrigation area.

He is a man of experience, and an authority on topographical matters. He has traveled extensively in the West and in South America. His profession as an artist and descriptive writer enables him to speak with confidence. He sees nothing to withhold this city from becoming the Chicago of the West, unless it may be the shortsightedness or inactivity of its people.

"MORMONISM" AND MORALITY.

WE copy from the Ogden *Standard* its report of a sermon delivered by Rev. A. J. Bailey of the Congregational church in that city, because it is so different in spirit and intent from most of the discourses of denominational preachers on the subject of "Mormonism." This minister appears to desire a union of effort on the part of the "Mormon" people with other professing Christians in the interests of order and morality. Strange to say he stands almost if not entirely alone, as a non-"Mormon" minister, in this worthy and Christian sentiment.

It will be found on investigation, that most of the preachers in this Territory of the various sects which have