



Labor use on livestock ranches in Montana
by George H Biddle

A THESIS Submitted to the Graduate Committee in partial fulfillment of the requirements for the degree of Master of Science in Agricultural Economics
Montana State University
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Abstract:

In the interests of society and in the interest of the individual in most cases, it is necessary that the productive units within our economic system make the most efficient use of our natural resources, and that they maintain a degree of flexibility during crucial periods. This is expected in the ranching industry as in any other. During the the present emergency period, the impact of the labor shortage has forced a test on ranchers as to the degree of flexibility that they can maintain during crucial periods. This study was proposed to determine and analyse variations in the intensity of labor use, variations in the ability to substitute other factors for labor during labor shortages, and variations in the effective seasonal use of labor, on 64 ranches in Montana, classified according to size, and type of operations for specified areas.

Of the two areas studied, the plains and the mountains, it was found that the ranchers of the plains area used labor the least intensively, and that they spread their labor most effectively over the year. No differences were observed between the ranchers of the two areas in ability to substitute other factors for labor during shortage periods.

Of the three sizes studied, the large, medium and small, it was found that the large ranchers made the least intensive use of labor, and spread it most effectively over the year, while the medium size ranchers were able to substitute other factors for labor during shortage periods to the greatest extent.

Of the three types studied, sheep, cattle and combination sheep and cattle, it was found that the sheep ranches on the average used labor the least intensively. This was primarily due to the fewer number of small sheep ranches with high labor requirements. The combination ranches were best able to substitute other factors for labor during shortage periods, and the sheep ranches made the most effective seasonal use of their labor.

It was discovered that ranchers substituted for labor quite extensively. This was accomplished by substituting poorer quality labor, capital in the form of machinery, and different types of management such as delaying inputs for future return.

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