

AT LEFT, EGG of cattle louse attached to cow's body hair. Enlarged about 62 times.

## CATTLE LICE REDUCE PROFITS

L. W. Dewhirst and R. C. Collins

Ask almost any cattle producer about lice and he will tell you that they cost him money. He knows that infested animals may be weak and generally do not gain well. Frequently, animals are treated to control lice because he feels that treatment is economically justified.

While there are at least three different kinds of cattle lice, the short-nosed cattle louse, *Haematopinus eurysternus* is usually the most abundant and damaging to Arizona cattle. These lice spend their entire life on cattle. Due to their high reproductive potential, they can rapidly and heavily infest an animal. Infestations begin to build up in the fall and increase rapidly throughout the winter.

### They Are Blood Suckers

On the other hand, lice populations decline during the summer months as the hosts shed their long winter hair coats. Since these lice utilize blood for food, large numbers on an animal should cause the animals to be anemic.

On some Arizona ranches cattle are maintained on unsupplemented pasture during the winter. Frequently these animals are in poor condition and lose considerable weight during this time because of poor grazing conditions and cold weather.

Dr. Dewhirst is a professor in the Department of Animal Pathology and Mr. Collins is a graduate assistant in the Department of Animal Pathology.

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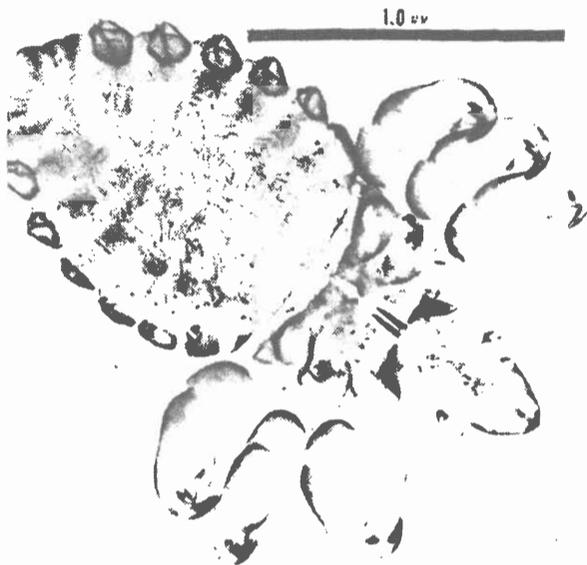


PHOTO OF ADULT cattle louse, above, is enlarged to 62 times actual size.

To assess the actual effects of varying degrees of lice infestations on these cattle, a cooperative study was initiated with the San Carlos Tribal Council, utilizing part of their registered herd of Hereford cattle located in Graham County.

### Infestations Caused Anemia

Individual weights were obtained from 137 two-year-old heifers and 66 two-year-old bulls on November 6, 1963. Each animal was again weighed on March 4 and 5, 1964. Blood samples were drawn to determine anemia, and each animal was rated as free of lice, lightly infested, moderately infested or heavily infested.

The blood studies showed the heavily infested animals in both sexes to be severely anemic. These animals were noticeably weak and in poor condition. Light and moderate infestations did not cause anemia in either sex.

### Caused Loss of Weight

The weight loss information is summarized in the adjoining table. Moderate and heavy infestations in heifers doubled and quadrupled the winter weight loss, while only the heavy infestations significantly increased loss of weight in the bulls.

### Average winter weight loss (Lbs.) in two-year-old Hereford cattle due to varying levels of lice infestation.

|         | Degree of lice infestation |       |          |       |
|---------|----------------------------|-------|----------|-------|
|         | Free                       | Light | Moderate | Heavy |
| Bulls   | 84.9                       | 96.8  | 80.9     | 139.5 |
| Heifers | 26.2                       | 28.2  | 50.7     | 108.0 |

The moderately and heavily infested heifers and the heavily infested bulls comprised 12.3 percent of the total test animals and lost a combined total of 1,078 pounds more than the groups relatively free of lice. It is apparent that lice control is economically justified, at least on the animals in these categories. The high reproductive capacity of these lice, which enables light and moderate infestations rapidly to become heavy infestations, probably justifies treatment of all cattle under these conditions.

## Land-Grant Pattern For Urban Planning?

Will the nation's land-grant college program, which for more than a century has served U. S. agriculture so well, be used as a pattern for urban improvements? That suggestion came in Pres. Lyndon B. Johnson's message to Congress early in January, when he outlined the educational program he is proposing.

The following excerpts from that message recognize the contributions made by the land-grant system:

"A wise Congress enacted the Morrill Act of 1862 and the Hatch Act of 1887 which helped the state universities help the American people. With the aid of the land-grant colleges. American agriculture produced overwhelming abundance.

"Today 70 percent of our people live in urban communities. They are confronted by problems of poverty, residential blight, polluted air and water, inadequate mass transportation and health services, strained human relations, and overburdened municipal services.

"Our great universities have the skills and knowledge to match these mountainous problems. They can offer expert guidance in community planning; research and development in pressing educational problems; economic and job market studies; continuing education of the community's professional and business leadership; and programs for the disadvantaged."