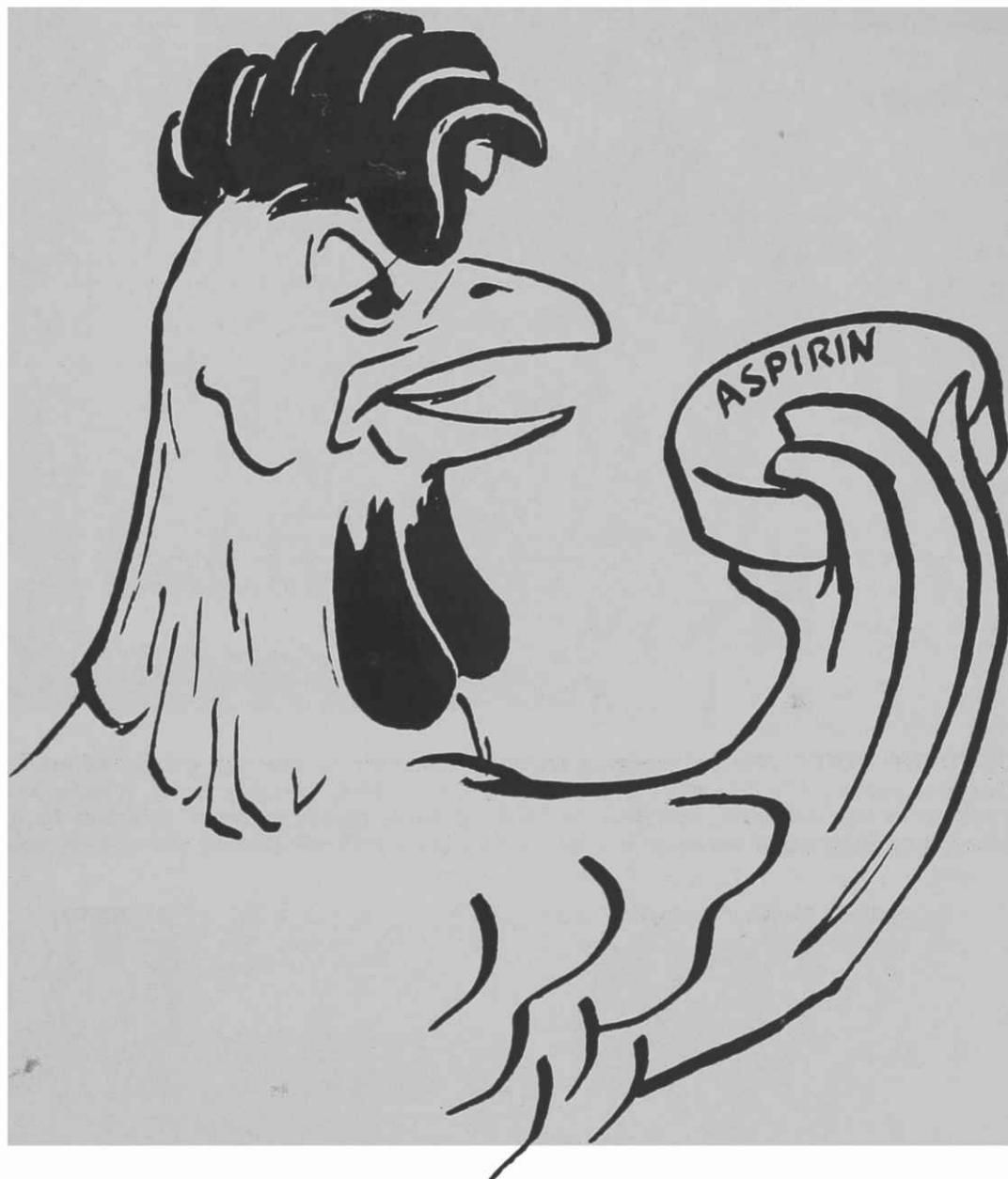


# More Eggs With Aspirin



## B. L. Reid

Poultry producers in Arizona are beset by numerous problems associated with the high environmental temperatures which occur during a large portion of the year.

High temperature lowers the rate of egg production, decreases the size of eggs produced and causes egg shells to become thinner. These effects are more severe in older birds than in the younger ones.

The Poultry Science Department of the U of A began working on the problems of heat stress a number of years ago. The most recent finding

has been associated with the feeding of acetylsalicylic acid (ordinary aspirin) to laying hens.

### Keeps Temperatures Down

The reasoning associated with the start of these studies involved the well known anti-pyretic effects of this drug. It was thought that if aspirin would maintain normal body temperatures during heat stress, a beneficial effect should result.

Two years ago, White Leghorn Pullets (University of Arizona strain) were placed on a diet which contained one pound of aspirin per ton of feed. Additional birds were fed the same diet without the aspirin and the egg production of the two groups of birds

compared at the end of the egg production year.

Results the first year showed that feeding aspirin caused egg production to increase by 12 eggs per bird. In a second experiment, improved egg production amounted to 17 more eggs per bird. One interesting observation was that in each experiment an improvement in egg production was obtained during the winter as well as in summer.

Studies now in progress seek to learn just what action of aspirin has produced this improvement. We'd like to gain some insight which can help us use other dietary changes to overcome heat stress.

Other factors which must be evaluated are those of possible residues of aspirin in the egg and body tissues. Until the question of residues has been answered, use of aspirin in poultry laying feed will not be permitted by the Food and Drug Administration.

### Need More Calcium

Nutritional factors related to heat stress involve use of higher levels of calcium during the summer in order to partially offset the thin shelled egg problem.

Levels of 3.75 to 4.00 percent calcium have resulted in increased shell quality, thus less egg breakage. Egg size can be increased by use of higher protein levels in hot weather, therefore, an increase in dietary protein from 16 percent to 17 percent for summer production is recommended.

Poultrymen are beginning to investigate the use of evaporative cooling for poultry houses. Several houses of this type are already in operation within the state and more are planned. These houses, since they will be completely enclosed and insulated, tend to eliminate extreme fluctuations in temperature both in winter and summer.

They also make it possible to take advantage of the stimulatory effects of light on laying birds. Housing birds under these conditions may remove a great many of the temperature problems encountered in commercial egg production.

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could be expected to replace 15 to 20 men in the selecting and cutting jobs.

Field tests of the experimental machine have shown it can select heads as well as they can be selected by men and, under favorable field conditions, the machine does no more damage to the heads than is done by

a hand cutting crew. The machine will operate in conventionally grown fields. However, for best machine operation care should be taken in field preparation and in thinning and cultivation to maintain broad flat beds with the heads growing squarely on top of the bed. Beds where heads lop over increases damage to the heads.

Within a few years our lettuce crop will be harvested mechanically or lettuce will lose its position in the American diet. The University of Arizona lettuce harvester is a step toward complete mechanization of this crop.