

# FACT SHEET

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## REDUCING BROILER BRUISING ON THE FARM

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A problem which continues to plague the broiler industry is economic losses from bruising live broilers. Bruising results in grade reduction and trim loss when the affected part of the carcass is removed during processing. This loss to the processor and producer is most often attributed to rough handling during the live haul part of the harvesting operation. But problems in the production, live haul and processing phases all contribute to this damage. To make progress in reducing carcass bruising and other defects, each part of the company must do its part to help prevent bruising damage.

Most often bruising is attributed to the methods and equipment used in catching, loading and unloading. Problems of damaging in the catching and loading operations are well-substantiated. Bruising occurs when crews drive too many birds too rapidly into a confined catching area. Bruising also occurs when crews catch birds by the wings, carry too many in one hand or handle them roughly during cooping.

Bruising happens in unloading operations when workers throw or drop coops, remove birds from coops carelessly or allow birds to get loose during unloading. Workers sometimes hang birds roughly on the shackles, which can cause damage, especially to wings.

### Results of Texas Study

The production phase has been identified as a major contributor of bruises. Recent research shows that grower management practices and broiler-rearing facilities and equipment contribute sig-

nificantly to bruising. A field study was conducted by poultry specialists of the Texas Agricultural Extension Service, in cooperation with several East Texas broiler firms, to determine the percentage of broilers being bruised in the broiler house prior to handling by the catching crew.

To determine the bruising rate, a sample of broilers was collected just before the catching crew arrived at the farm. Lights were turned off to avoid exciting the birds, and coops were carefully placed throughout the house. Broilers were caught one at a time. Workers used both hands to minimize struggling and to gently place each bird in the coop. One hundred and fifty birds were caught at random throughout the house by members of the research group, and placed either 12 or 13 to a coop. The coops were carefully loaded onto a pickup truck and transported to the processing plant for processing the next morning.

The test coops were carefully unloaded and the birds hung on specially marked shackles by a member of the research group. By marking other shackles, a random sample of the birds handled by the commercial crew was obtained at the same time.

After defeathering, the sample carcasses were examined and scored for bruises. Only those bruises requiring a trim were scored. All scoring was done by the same two individuals to guarantee uniformity, and no attempt was made to correlate plant grade, which included other factors.

A total of 22 flocks were evaluated. The percentage of bruises found on broilers collected prior to the arrival of the catching crew ranged from a low of 1.3 to a high of 14.7 percent (Table 1).

The percentage of bruising on birds handled by the catching crews ranged from 9.3 to 21.3 per-

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cent. An average of 15.4 percent of the birds were sufficiently bruised to require trimming.

From the test sample average of only 5.5 percent, it can be seen that 35.7 percent of the bruising that shows up in the processing plant happens prior to the arrival of the catching crew.

There was considerable variation in the bruising occurring in the broiler houses among the various flocks. In one flock only 1.3 percent of the birds were bruised in the house, and this represented only 11.5 percent of total bruising for that flock. However, in another flock 14.7 percent of the birds were found to be bruised in the house. This represented 73.5 percent of the bruised birds in that flock.

#### How Bruising Occurs Before Catching

Live broilers are bruised as they are grown as well as during harvesting. Part of this early bruising heals and does not show on the broiler carcass in the processing plant. More than 90 percent of the bruising which requires trimming occurs during the 24 hours before the birds are processed. In the Texas study, of the broilers bruised in the house before the catching crew arrived, 42 percent of the birds had bruises on the breast, 33 percent

on the wings, and 25 percent of the birds had leg bruises.

The type and locations of bruises suggest obstructions with sharp points or edges at floor level in the broiler house. Many broiler houses contain obstructions where broilers can easily bruise themselves if excited (equipment stored in the house, bricks and concrete blocks, protruding nails, etc.). Bruising is increased when the caretaker moves carelessly through the flock, or by the fright reaction of flighty flocks.

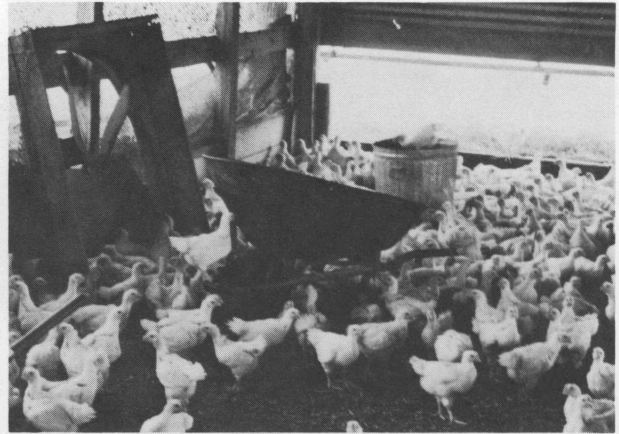
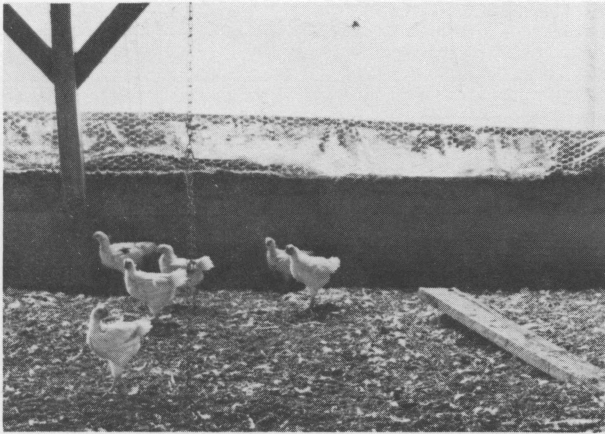
In considering the large variation among growers in the amount of on-farm bruising, it would appear that the type of facilities and equipment used is to some extent involved. However, the manner in which the grower prepares the house for the catching crew probably is the most important factor. Grower movement and speed in making the house ready for the catching crew is quite important. Much less damage was noted in flocks where growers made slow, deliberate movements as compared to those who moved rapidly in getting the house ready. A higher percentage of on-farm bruising occurred on farms having a total capacity exceeding 36,000 broilers. This may have been due to inadequate labor and the need for speed in getting the job done.

**Table 1. Percentage of bruises found on broilers in the house before handling by the catching crews, and total bruises on carcasses after usual handling.**

Flock	Broiler house bruising (%)	Total bruising (%)	Percentage of total bruising occurring in broiler house
1	3.3	9.3	35.5
2	4.7	16.7	28.1
3	3.3	13.3	24.8
4	7.3	11.3	64.6
5	6.7	12.0	55.8
6	6.7	12.7	52.8
7	3.3	17.3	19.1
8	4.0	20.0	20.0
9	6.0	16.7	35.9
10	5.3	21.3	24.9
11	1.3	11.3	11.5
12	8.7	17.3	50.3
13	2.7	13.3	20.3
14	3.3	15.3	21.6
15	2.7	12.7	21.3
16	6.7	13.3	50.4
17	7.3	20.0	36.5
18	8.7	17.3	50.3
19	5.3	18.0	29.4
20	5.3	18.7	28.3
21	4.7	11.3	41.6
22	14.7	20.0	73.5
<b>Average</b>	<b>5.5</b>	<b>15.4</b>	<b>35.7</b>



*Bruising can be caused by catching crews throwing broilers into coops or dropping coops.*



*Obstructions or clutter in the broiler house contribute to bruising on the farm.*

### Suggestions to Reduce Bruising

Bruising needs to be decreased. Catching crews will damage some birds, but crews should be trained to damage as few as possible. Work also can be done to decrease bruising before the catching crew arrives. At least half of the damage occurring before the catching crew arrives can be prevented in the average flock. In flocks with high in-house damage, greater gains could be made.

The following points will help the broiler grower reduce in-house bruising of broilers.

1. Good communication between the grower and the company is essential. The grower needs to know when to get the house ready and what is expected of him before the catching crew arrives.
2. Feeders should be equipped with winches to facilitate preparation of the house for the catching crew.
3. Slow, deliberate movements should be made by the grower in preparing the house for the catching crew.

4. Roads should be hard-surfaced or graveled, and adequate, level space should be maintained around the entrance of each house for mechanical equipment and large trucks to maneuver with minimum disruption.
5. Unnecessary obstructions in the broiler house should be removed.
6. Everyone except the regular caretaker should be kept out of and away from the broiler house during the 24-hour period before birds are caught.
7. Equip lights with dimmer switches and use dim lights during house preparation and harvesting. A separate line of blue lights may be installed for use during this time, rather than using dimmer switches.
8. The grower should always be at the farm and have the house ready when the harvesting crew arrives. A friendly working relationship should exist between the foreman of the harvesting crew and the grower.

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