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## Weekly Outlook: Could the Bird Flu be a 100 Million Bushel Corn Problem?

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The U.S. is currently on the tail end of the worst bird flu outbreak in history, with 222 confirmed cases and more than 47 million birds affected across 15 states (Animal and Plant Health Inspection Service [Update on Avian Influenza](#), 2015). USDA expects the outbreak to plateau near 50 million birds later this summer (Vilsack, 2015). The 2014-15 outbreak exceeds the previous 1983 record by more than 30 million birds and has led to disruptions in the supply of eggs, localized interruptions in turkey production, and legitimate concerns over potential exposure to the bird flu in the broiler population this fall (*farmdoc daily* [May 8, 2015](#); *farmdoc daily* [June 5, 2015](#)).

With respect to feed use of corn, conservative estimates of "one bushel per bird" imply that the bird flu could result in feed and residual use of corn being 50 million bushels less than projected for the current marketing year. A feed consumption level greater than one bushel per bird, combined with a slow rate of flock repopulation, could support a 100 million bushel decline in feed use from current projections. Absent increased consumption in other categories, such a decline would push the corn carryout closer to the two billion bushel threshold and would continue to pressure old-crop corn prices (*farmdoc daily* [April 13, 2015](#)). Today's article provides some perspective on how the bird flu may impact projections for feed and residual use of corn during the 2014-15 marketing year.

For the current marketing year USDA's [World Supply and Demand Estimates](#) (WASDE) projections of feed and residual use of corn have ranged from a low of 5.25 billion bushels to a high of 5.375 billion bushels. Most recently, following the March 31 [Grain Stocks](#) report which indicated higher than anticipated quarterly corn stocks, USDA reduced projections for feed and residual use of corn to 5.25 billion bushels. This number has remained unchanged through the most recent June 10, 2015 WASDE projections despite the pace of bird flu confirmations accelerating in April and May of 2015 (*farmdoc daily* [June 5, 2015](#)). Put simply, USDA has not revised feed and residual use of corn lower as a result of the bird flu.

There are several reasons why this may be the case. First, the decline in feed use attributable to the bird flu is not expected to significantly alter total poultry consumption of corn. [USDA ERS Feed Grains](#)

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[Yearbook](#) indicates that for the 2014-15 marketing year poultry is estimated to represent 34 percent of grain consuming animal units. Given the ERS projection for 5.25 billion bushels of corn used for feed, poultry use is expected to total 1.8 billion bushels of corn. These bushels are consumed across all poultry categories. Based on USDA data, a majority of the bird flu confirmations have occurred in the layer and turkey flocks ([farmdoc daily June 5, 2015](#)). Broiler production is the largest poultry production category and has been largely spared by the bird flu. While catastrophic to affected operations, the bird flu has resulted in a fairly isolated production disruption. Thus, with 47 million birds depopulated, USDA poultry inventory and slaughter data suggest only a small percentage of the U.S. poultry population is affected by the bird flu. Further, the USDA has stressed agency efforts to repopulate affected producers in a safe and timely manner ([Vilsack, 2015](#)).

Second, feed use in other animal categories accounts for 66 percent of total consumption and may offset any declines in poultry use. In the June 10 WASDE USDA recognized the supply disruption caused by the bird flu and lowered projections for 2015 production of turkeys and eggs by 6 percent and 4 percent, respectively. However, in the same report USDA increased projections for milk, pork, and broiler production. Thus, increases in USDA projections for the production of other animal products likely offset any feed declines attributable to the bird flu.

Finally, and most importantly, estimating how much corn is fed to livestock is an inexact science. USDA does not survey livestock producers to determine how much feed is actually fed to livestock. Instead, USDA determines an *implied feed and residual* use of corn by calculating the amount of corn consumption unexplained using known inventory levels, known import volumes, and known consumption values for exports and industrial uses, i.e. ethanol. For example, based on the March 31 [Grain Stocks](#) report, after accounting for all other consumption implied feed and residual use of corn for the first half of the 2014-15 marketing year was 3.668 billion bushels, 70 percent of the USDA's projection for the year of 5.25 billion bushels.

However, the pace of feed and residual use varies considerably from year to year. As a general rule of thumb, during big crop years feed and residual use of corn is greater than during years with short crops. USDA data reveals a direct correlation between crop size (measured in yield deviation from trend) and the ratio of corn use per grain consuming animal unit. Given the record corn crop of 2014 a large feed and residual use value is to be expected.

It is still too early to know how large feed and residual use will be and if the pace of feed use supports USDA's 5.25 billion bushel projection. In previous years the percent of first half feed and residual use has varied from 64 percent during 1996-97 to 2005-06 to as high as 74 percent during the most recent 2010-11 to 2013-14 marketing years. Applying these historical percentages to the implied first half feed and residual use suggests a wide range for the 2014-15 marketing year between 4.9 and 5.7 billion bushels.

At this point the 800 million bushel range of potential feed and residual use values swamps any feed component lost to the bird flu. However, third quarter corn stocks will be reported in the June 30 [Grain Stocks](#) report and represent an opportunity to update expectations on 2014-15 feed and residual use. Following this report USDA is more likely to modify feed and residual use, and may credit the bird flu for any downward revisions.

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