

ETHANOL: Fueling and Feeding the World

Ethanol
is both
feeding and
fueling the
world.



1 bushel of corn =
16.5 lbs animal feed +
2.8 gallons of ethanol.

16.5
POUNDS
ANIMAL FEED

2.8
GALLONS
ETHANOL



x 365

More than 39 million metric tons of animal feed was produced by ethanol plants in 2014, enough to produce 7 quarter-pound hamburgers for every person in the world or enough chicken for every American to eat one normal-sized chicken breast every day for a year.

Biorefineries only use the starch in the corn to make ethanol. The protein, fat and fiber in the corn returns to the livestock feed market as dried distillers grains (DDG) or other co-products.

39+
million
metric tons
ANIMAL
FEED



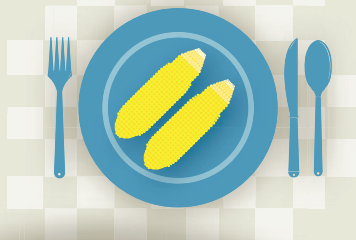
DDGs are fed to beef cattle, dairy cattle, swine, poultry, sheep and fish.

Ethanol is made from field corn, not sweet corn that humans consume.

Field corn:
Ethanol production



Sweet corn:
Human consumption



Corn is a minor ingredient in retail food items. When corn is \$4/bushel, there is just 5 cents worth of corn in a box of corn flakes.



5c

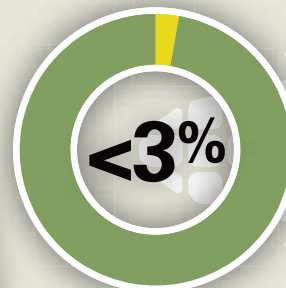
**Corn
Flakes**

Source: USDA

Corn prices in 2014/2015 are lower than they were when the RFS2 was signed into law in 2007.

Source: USDA

**More grain
is available for food and
feed use worldwide today
than at any time in history.**



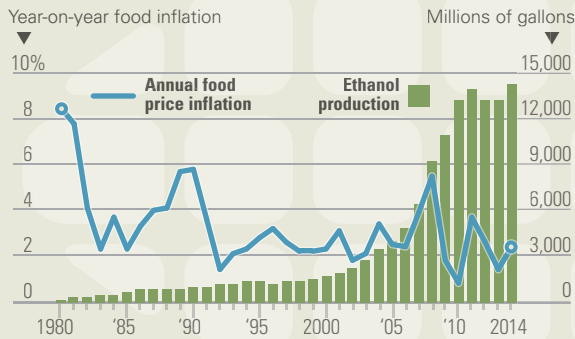
**On a net basis,
the U.S. ethanol
industry will
use less than
3% of global
grain supplies.**

Source: Based on USDA data

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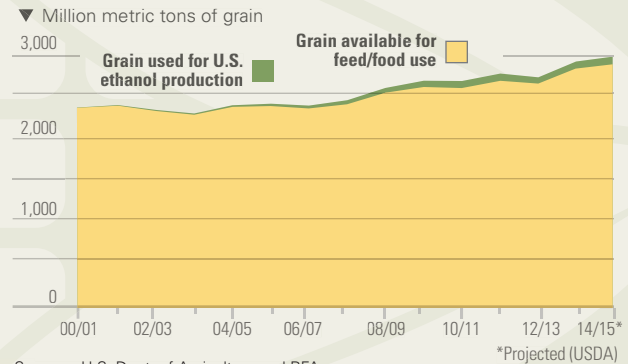
FOOD PRICES ARE DRIVEN BY OIL, NOT ETHANOL

U.S. food price inflation and ethanol production



Sources: Consumer Price Index and Energy Information Administration

Ethanol does not "divert" grain away from feed and food use

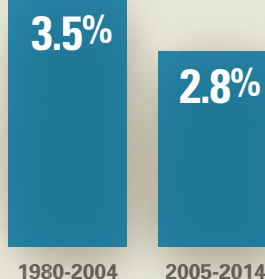


Sources: U.S. Dept. of Agriculture and RFA

Food prices have increased more slowly since passage of the RFS in 2005

Food price inflation has averaged 2.8% annually since 2005, the year the RFS was enacted, compared to the 3.5% average from 1980-2004.

Source: USDA

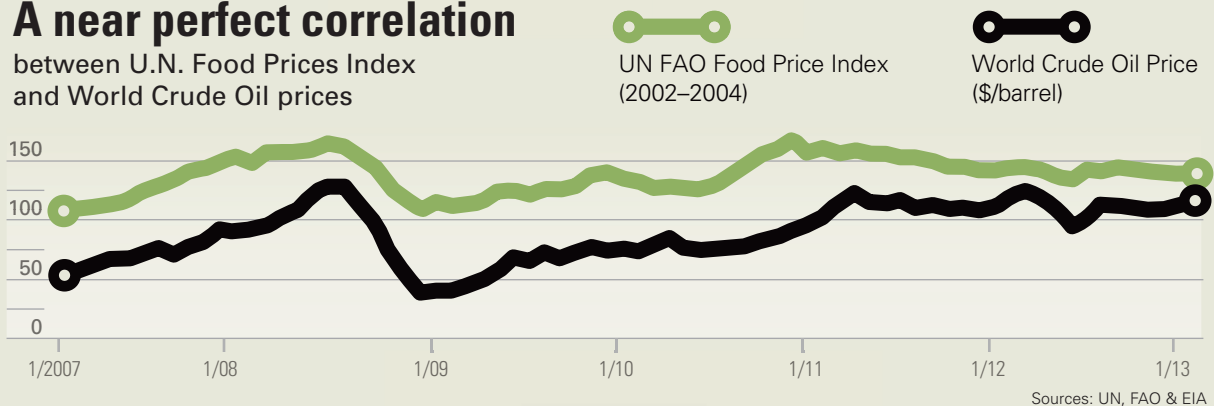


"Most of the contribution to food price changes from 1997-2004 to 2005-12 comes from the price of crude oil ..."

Source: World Bank (John Baffes and Allen Dennis)

A near perfect correlation

between U.N. Food Prices Index and World Crude Oil prices



Sources: UN, FAO & EIA

17¢ of every dollar spent on food pays for the value of the farm product in the groceries.



83¢ pays for labor, packaging, energy and other costs.