

Your Turkey May Be Organic, But It's Not Natural

By *Nicholas Staropoli* — November 23, 2015



Despite its present-day ubiquity, [turkey was probably not on](#)

[the menu at the first Thanksgiving](#) ^[1]. Wild turkeys were present in the region at the time, and consumed regularly by the colonists, but most historians agree they were not eaten at the seminal feast.

The 90 Wampanoag and 50 Pilgrims that attended definitely ate venison, provided by the Native Americans, and the settlers most likely brought geese or duck.

Also, contrary to what many may believe, Thanksgiving took centuries to catch on. It was not a yearly tradition until the end of the 18th century and not a national holiday until the Civil War. But by the time President Lincoln declared the last thursday in November as a national holiday, turkey was already a staple of the feast. Some of the credit for that goes to author Sarah Josepha Hale who, during her 40 year campaign to make Thanksgiving a national holiday, published many recipes popularizing the foods we today associate with thanksgiving, like turkey.

For Americans in the 18th and 19th century, turkey was also very practical choice to eat during any fall meal. A turkey born in the spring would be sufficiently large enough to feed a family by autumn. Butchering a turkey also didn't have the economic impact on the family that killing a cow or chicken had, as unlike a turkey, cows and chickens have benefits while alive. Americans are not influenced by these types of decisions anymore but almost all of us will still serve turkey on Thanksgiving day.

Yet it is a much different turkey.

Sorry Whole Foods shoppers, all of today's domestic turkeys, even the ones labeled "organic," are actually GMOs. How did this happen? Years of artificial selection (optimizing genetic traits) have made the genome of the [turkey we eat significantly different](#) ^[2] than the genome of wild ones.

The major changes to the genome of turkeys has been due to genetic optimization for traits that influence skeletal and muscle tissue. This ensures that today's turkeys grow larger and faster than their wild relatives, particularly in the breast where the popular white meat grows. That is now news, we know what breeders have always done is to make bigger livestock that get big quick. More meat, more money. However, this system has not been without its drawbacks.

These big-breasted birds can't have sex. Male turkeys are now so big that they can no longer mount the females to inseminate them. Almost all turkey breeding is instead done by artificial insemination (you can still get what is called a '[heritage turkey](#)'^[3], which is able to have sex, but it will cost you three times as much as the celibate ones.)

Artificial selection has changed the nature of these turkeys so much that they can no longer live a *natural* lifestyle. But this should be no surprise, artificial selection using breeding is the genome editing equivalent of carving your turkey with a chainsaw. Yet livestock and crops made via artificial selection can be labeled "organic", despite the fact that breeding often alters the *entire genome* of the organism and can select out beneficial traits, which means it is far less beneficial than actual modern genetic modification.

Precision techniques used to make GMOs only influence a few genes at most, they are wonderfully specific, and it makes you wonder why it isn't breeding that environmental groups are calling for to be labeled.

Top image credit: [Shutterstock](#)^[4]

COPYRIGHT © 1978-2016 BY THE AMERICAN COUNCIL ON SCIENCE AND HEALTH

Source URL: <https://www.acsh.org/news/2015/11/23/your-turkey-may-be-organic-but-its-not-natural>

Links

[1] <http://www.history.com/topics/thanksgiving/first-thanksgiving-meal>

[2] <http://ps.oxfordjournals.org/content/93/2/479.full.pdf+html>

[3] <http://heritageturkeyfoundation.org/>

[4] <http://shutterstock.com>