Pigs and Chickens and Cows, Oh My: Which Animals Get the Most Antibiotics?

Antibiotic resistance is a huge public and animal health problem that threatens to reverse the medical advances of the last century. Because irresponsible antibiotic use causes resistance to this medicine, monitoring antibiotic usage is essential for controlling this increasing problem. Most antibiotics are used on farm animals. Last year, the Food and Drug Administration (FDA) published data for the first time on antibiotic sales by animal species showing that cattle were given the most antibiotics, followed by pigs, turkeys, and chickens.

While raw sales numbers broken out by species is interesting, they are difficult to interpret because they do not include information on the number and weight of the animals getting the drugs. A more helpful number would be how much antibiotics were used to produce—an average—a pound of pork compared to a pound of chicken or turkey or beef. Last year, the FDA proposed a method that would allow us to determine this, but so far has not applied this method to antibiotic sales data. Since the FDA was not doing it, FACT decided to do it on our own.

Using the FDA’s proposed evaluation, FACT estimates that to produce a pound of meat, 54 milligrams (mg) of antibiotics are used for beef, 87 mg for pork, 6 mg for chicken, and a whopping 100 mg for turkey.

FACT took the method proposed by the FDA and applied it to the species-specific data on sales released by the FDA last year. For the amount and weights of animals produced, FACT primarily used data from the U.S. Department of Agriculture. After adjusting for the weight and number of animals, the first thing that stands out is that antibiotic sales for use in turkeys was exceptionally high in 2016. While this is not obvious when you look at the sales data without additional scrutiny. Chicken sales data is low but is even better when adjusted for the amount of chicken produced.

Despite having only one year of species-specific antibiotic data, the efforts of the chicken industry to reduce the amount of antibiotic use seems clear. Though it’s concerning to see the level of antibiotic use in cattle, pigs, and turkeys, it’s heartening to see that chicken farmers have managed to run their operations on a relatively low amount of antibiotics. This means we need to do more in other animal species to reduce antibiotics. FACT and our allies now have been focusing more on antibiotic reduction in beef and pork production. As additional data is released for 2017, FACT will monitor and respond to antibiotic use, and continue to do so until all animals are raised humanely and responsibly without antibiotic overuse.

Large differences exist between the antibiotic amounts used to produce meat among different animal species. In terms of pounds of antibiotics per pound of meal, turkey producers use nearly 17 times as much antibiotics as chicken producers. Pork producers use 13 times as much antibiotics, and beef producers nine times as much.

Part of this discrepancy is the length of time animals are raised. The short life of a chicken is less than fifty days, compared to five months for turkeys, six months for pigs, and 18 months for feedlot cattle. The shorter lifespan makes it easier to get to maturity before needing an antibiotic.

While cattle live the longest, when cattle are moved to a feedlot where they are crowded, stressed, and mixed with other animals, they require more antibiotic use. When raised in an open pasture with natural grasses to eat, cattle do not require any antibiotics. Antibiotic use in cattle is linked to diseases caused by not providing them their natural diet of grass when in feedlots.

With pigs, they are often weaned early, which stresses their system and makes them more prone to antibiotic use. The chicken industry has done steps to reduce antibiotic use and adopted management systems to reduce the need for antibiotics. They provide more space and make sure their hatcheries are clean.

While other animal producers may never catch up with the chicken industry, reforms are necessary for both health and welfare reasons. Increasing the sanitation of barns, feedlots, and hatcheries, making sure animals have enough space, appropriate diets, and not wearing cattle and pigs too soon will reduce antibiotic overuse.

These reforms need to happen today, and FACT will work to ensure producers hear our message.
Healthy Soil, Healthy Animals

One of FACT’s guiding principles is that all farm animals deserve to live outdoors as nature intended. To achieve this, FACT is committed to helping livestock and poultry farmers raise their animals outdoors on well-managed pasture.

Many animal welfare benefits are associated with pasture-based animal production. Animals living and cared for on well-managed pasture can move freely and engage in natural behaviors. This means that pigs can root around and wallow in the mud; chickens can spread their wings and bathe in the dust; and cows can socialize with their herd mates and spend most of their time grazing on native grasses. Pasture-raised animals have also shown lower stress, disease and lameness, as well as greater fertility and fewer reproductive problems.

But what makes this entire production system possible? The answer lies beneath our feet – soil. Healthy soil is fundamental to humane farming. The role soil plays in animal welfare may not be completely obvious, so let’s dig deeper.

Healthy, productive soil is highly active. It maintains a complex ecosystem of its own, teeming with root and plant matter—both living and decomposed—as well as bacteria, fungi, earthworms and a multitude of other organisms. The soil feeds pasture plants with a variety of nutrients essential for growth. Soil also has specific characteristics to the region it is located, which is why planting native grasses is important—the soil is designed to nourish what is growing locally. Eventually these forages and grasses provide ruminant animals with the nutrients they need to thrive. To ensure a high level of welfare for animals to graze and live on pasture, we need to care for the soil as well.

Pasture-based animal production helps improve soil health and fertility if managed properly. One effective approach farmers take is “Management Intensive Rotational Grazing.” Using this practice, farmers frequently move—or rotate—their animals to new pasture. In order to have many parcels of fresh grass available, farmers use fencing to subdivide larger areas of pasture into smaller “paddocks.” The animals are allowed to eat the plants in that particular paddock. As they graze, they distribute their manure across the land, which in turn fertilizes the soil. These nutrients are eventually cycled back to the pasture plants.

An important variable in this system is knowing when to move the animals to the next paddock. This must be done before the plants are grazed too short. In fact, most successful graziers will allow at least half of the leaves on the plants to remain uneaten! If pasture is “overgrazed” and too much of the green vegetation is consumed by the animals, root growth is severely stunted. Without healthy roots, the plants will not be able to bounce back and grow new leaves. The soil will ultimately suffer as well. Deep roots keep the soil from becoming too wet by drawing up excess water. This helps prevent run-off and soil erosion.

When the farmer determines that the plants have been sufficiently grazed, but not overgrazed as that can kill the plants, the animals are moved to the next paddock. Reaching a sufficient grazing level on a paddock may take several hours or several days, depending on the paddock’s size, the time of year, the amount and quality of available plants, and the herd size.

The used paddocks then can rest, recover, and regrow so that they are ready for grazing later in the season. This feedback loop between the animals, the plants, and the soil can reap many benefits if managed properly.

Through our grants, scholarships, webinars, and mentorship program, FACT is helping farmers improve both animal welfare and soil health by focusing our efforts to have more animals raised outdoors, and by properly managing the land they call home.
Shopping Humane at Farmers Markets

The summer months bring a wide variety of new ways to shop during the height of the annual growing season. Your local farmers market are an excellent opportunity for you to directly connect with farmers and learn more about the products you purchase while supporting independent family farms.

FACT recommends that you support farmers directly, and engage with them to learn more about your food. Consider asking farmers at area markets:

- Do your animals have access to well-managed pasture?
- What do you feed your animals?
- Do you use antibiotics, hormones, or any growth promoters?

These suggested questions are guided by FACT’s Humane Principles. FACT maintains a set of strict beliefs on how we define humane farming. Animals should receive antibiotics only for treatment of disease or illness, as prescribed by a veterinarian. Antibiotics, hormones, or other substances should not be used to promote faster animal growth. All animals should be fed a natural diet free of animal by-products and should have continuous access to clean and well-ventilated housing or shelter that protects them from weather extremes.

Asking questions about the food issues that you care about can enable you to get the products you want, while also making connections with farmers in your community.

Feeling shy or want a short cut? Look for farmers whose products have a humane certification label on them. Keep in mind that certification can be too time consuming or expensive for a small family farm to pursue, so a farm may have humane practices but not be certified.

If a market isn’t available in your area, you may still be able to find a farm near you, or get involved in starting a market. Or check to see if there is a local Community Supported Agriculture (CSA) program. Generally, a consumer pays at the beginning of the season for a set amount of food, and then receives it from the farmer once it is ready to be eaten.

A CSA may deliver food directly to you at a premium, or may ask that you pick up your food on a set schedule from a farm stand, farmers market, or community center.

Enjoy summer, and bon appetit!

Tips for Shopping Humane on a Budget

It costs more for a farmer to raise animals humanely on pasture. From buying better quality feed, to laying water lines and fences across fields - raising animals humanely takes more labor, time, and money. However, this doesn’t mean that eating humanely has to break the bank.

A thoughtful meal doesn’t have to be all or nothing. Picking one item to start is a great way to support a better food system, and has a real impact. Eggs, milk, or cheese may be only a few dollars more than their industrial counterparts, and can be a great place to start.

If you’re looking for meat, try a more unusual or less expensive cut. Less expensive cuts that are humanely raised may taste comparably, or better, as expensive “conventional” cuts. Pasture raised meat is often more lean and nutritious than its conventional counterpart, and many chefs appreciate it for its high quality. Ask your farmer what they recommend!

Buy in bulk. If you’ve got the refrigerator space and aren’t afraid to do some serious cooking, buying larger cuts of meat can be less expensive than buying each component individually. Homemade sausages, fresh broth, and a new skill set can all be incredibly rewarding.

While shopping at farmers markets and eating humane may cost more up front, industrial animal farming isn’t cheap. Damage to the environment and water sources, health problems caused by air pollution and poor food safety practices, large-scale farm subsidies, and the impact of growing antibiotic resistance all cost tax payers.

Add up the portion of agricultural fuel use that is paid for with our taxes ($22 Billion), direct Farm Bill subsidies for corn and wheat ($3 Billion), treatment of food-related illnesses ($10 Billion), agricultural chemical cleanup costs ($17 Billion), collateral costs of pesticide use ($8 Billion), and costs of nutrients lost to erosion ($20 Billion). At minimum, that’s a national subsidy of at least $80 billion, about $725 per household each year.

Dr. Stephen L. Hopp, Indiana University

By being intentional about how you shop, you can minimize the cost impact to your budget. While it may seem that that humane products are expensive, you’re getting a substantially higher quality product that reflects your values.
FACT is pleased to share that we have the Gold Seal of Transparency from Guidestar, a nationally recognized charity watchdog. You can rest assured that FACT maintains a high level of accountability and transparency. Few nonprofits attain this high level of recognition.

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