

## Notes from movie "King Corn" (by Nana)

First half follows two young men who have decided to grow an acre of corn in Iowa and follow it after harvest. It is relatively slow moving in first half. If we are showing only half the film, the first half could probably be summarized to our audience, and then begin with second half of the 1-1/2 hour film, the second half being the most impactful.

The film shows very clearly the reasons for the change in the production of corn, as well as the consequences.

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Without a government payment, a farmer would lose \$ on growing corn. As of the movie date, \$28 is paid to the farmer for each acre of corn.

The fertilizer anhydrous ammonia is widely used. With its use, 4X as much corn is produced as in the time of the great-grandparents.

Farms are growing larger, smaller ones disappearing. They produce up to 200 bushels per acre, or 10,000 pounds.

Pollan: it's an industrialized corn that's being grown, from over past 30-40 years, with one goal in mind: YIELD. Make plants tolerate living closer together.

#1 nemesis—weeds. Seeds are genetically modified to resist an herbicide (Liberty)—kills the weeds without killing the corn.

However, this is *commodity* corn—tastes awful—no one can eat it! (The two guys tried) It must be processed before eating. It's a raw material – a feed stock for all these other processes. Pollan: "The irony is an Iowan farmer can no longer feed himself."

In fall corn harvested, taken to a town elevator, where it is weighed, dumped in with other corn. 32% of the one acre produced will be exported and turned into ethanol. 490 lbs will become sweeteners, e.g. high-fructose corn syrup. Over 1/2 (5500 lbs) will be fed to animals to become meat.

60% of cattle ration is corn. "It's a good thing they're slaughtered when they are 'cause they'd be dead in six months anyway—it kills them to make the meat like that." (with all the grain fed).

Where is it like this? Every major confinement feed lot, everywhere.

To see where corn goes, our heroes must leave the corn belt. They go to Colorado, to the finishing operation. At this particular operation, they also grow corn, which is used for animal feed. Corn has replaced grass as the principal feed for cattle. {45 min. here}

“The mass production of corn drives the mass production of animal protein in confined operations” —Must have cheap feed to do the confinements. In Sue’s (a cattlemoan) operation, cattle eat grass before going to the feedlot. Cattle spend more and more of their lives in feed lots. In total confinement, they eat continuously, and therefore they get to market faster and into the food chain.

BUT, cattle weren’t meant to be on a corn fed diet this long. After more than 3 months they start getting sick. Corn feed has low doses of antibiotics to help the cattle combat the acidosis which accompanies the high corn diet. **Livestock now consume 70% of the antibiotics in the U.S!**

Reason for the feed lot system: economic. Great economic efficiency to use corn. Over past 30 years corn harvests have increased dramatically, while price of corn has dropped.

The meat produced now in a feed lot is grain fed meat...“We produce a characteristically obese animal, an animal whose muscle tissue looks more like fat tissue than it does the lean meat of wild animals.”

T-bone steak may have up to 9 gms sat fat; comparable steak from a grass-fed animal would have 1.3 gms of sat fats. America’s favorite meat, hamburger, is fat disguised as meat. 65% of its calories are from fat.

“If the American people wanted grass-fed beef, we’d produce grass-fed beef for them—it’s more expensive—but America wants and demands cheap food.”

CORN SWEETENER INDUSTRY-developed after farmers told to grow as much corn as they could. The two subjects of the film tried to get permission for filming in a corn syrup plant, which was denied to them. They do go into a description of how it is done.

Before 1970 no one ate high-fructose corn syrup (too expensive to make). Today the prominent sugar in the Western diet comes from corn. It makes a lower cost sugar substitute for processors. (1 hour here)

In past 30 years our sugar consumption has declined though our increased consumption of sweeteners has increased over 30% due to increased consumption **high-fructose corn syrup.**

Iowa corn bred for high volume production, but in doing so, nutritional value has been given up—lead to degradation of nutritional value, with decreased amount of protein (in the germ) and increased amount of starch (in the endosperm). The acre of the two guys is essentially an acre of sugar. The corn syrup has essentially no nutritional value, only empty calories with adverse metabolic effect. **70% chance the corn will end up sweetening a beverage.**

Explosion of obesity probably the most obvious sign of the nutritional crisis, with increased risk of diabetes. (Diabetes strongly linked to environmental factors of food and exercise).

“Soda is liquid candy...drinking one soda daily doubles the risk of diabetes.”

Pollan: At McDonalds everything on your plate is corn.

“Poorest quality crap the world’s ever seen is what we’re growing.” (the corn)

It costs the two guys \$349 to raise their one acre, which they sell for \$330 at the elevator, a loss of nearly \$20. However, they then get a \$28 direct payment from Govt and several other subsidy payments. Corn grower in Iowa: “But you make money off the government and that’s what it’s all about.” In Greene, IA, govt payments the biggest industry...otherwise the corn would not be grown.

Pollan: Only in the past 30 years our subsidy system rewards the over production of cheap corn. A lot of that cheap, surplus corn goes onto our bodies. “We subsidize the Happy Meals but we don’t subsidize the healthy ones.”

1970s—Earl Butz—“What we want is more production” and in his era the increased production began. The two guys visit Mr. Butz in a retirement center (he’s now quite elderly) and interview him. Butz speaks of how as a kid, farmers were paid NOT to produce and when he became Secy of Agric (?) he stopped that system. He defends cheap food...16-17% of our pay to feed ourselves. “Don’t see much room for improvement.”

Lot more spent on food in our great-grandparents days. Way we farm was transformed. Butz: “Now it’s a commercial operation, not a family operation, consequently we feed ourselves very cheaply now.”

We spend less on our food than any generation in history, but ours may be the first generation to live in a time when abundance brings too much.