

What happened to Grandma and Grandpa's farm?

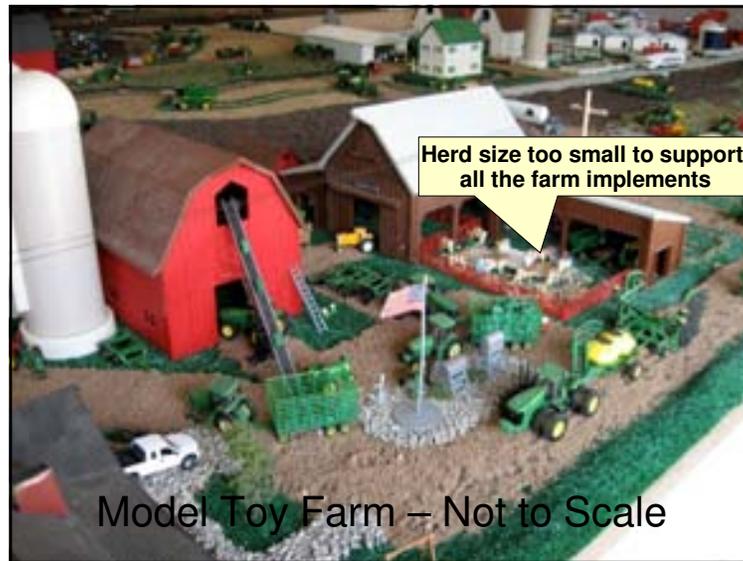
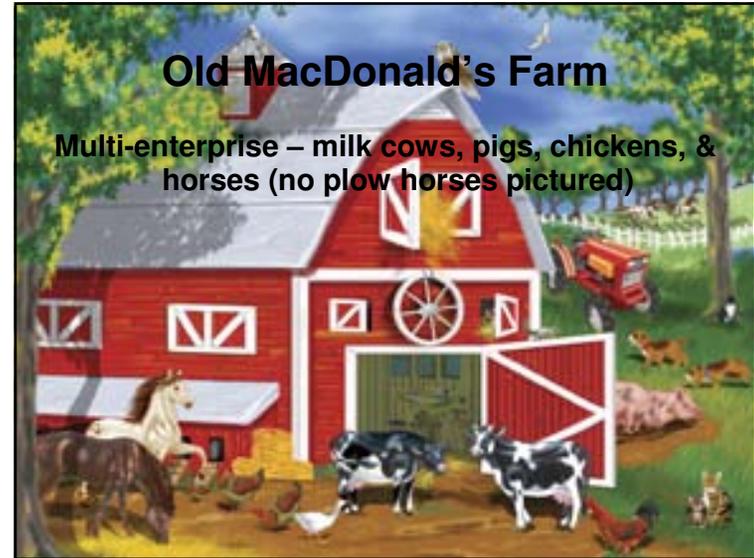
James B. Cropper
Executive Director
Northeast Pasture Consortium



NY Rotational Pasture Dairy farm

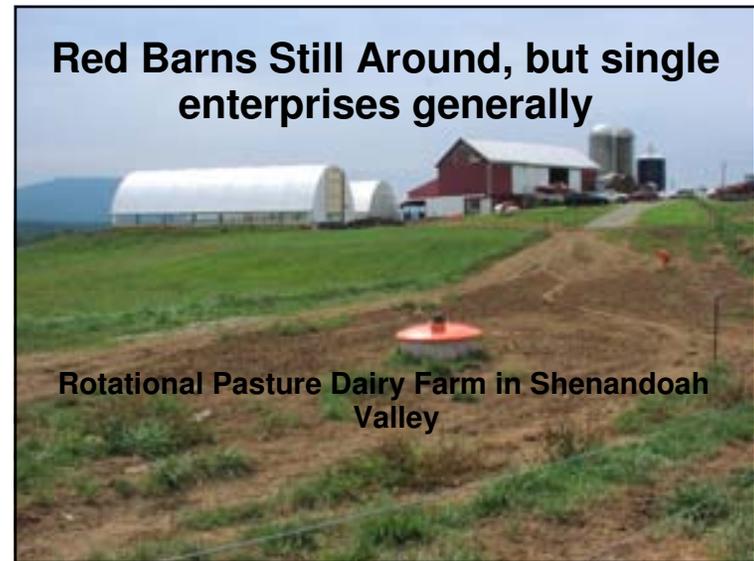
Old MacDonald's Farm

Multi-enterprise – milk cows, pigs, chickens, & horses (no plow horses pictured)

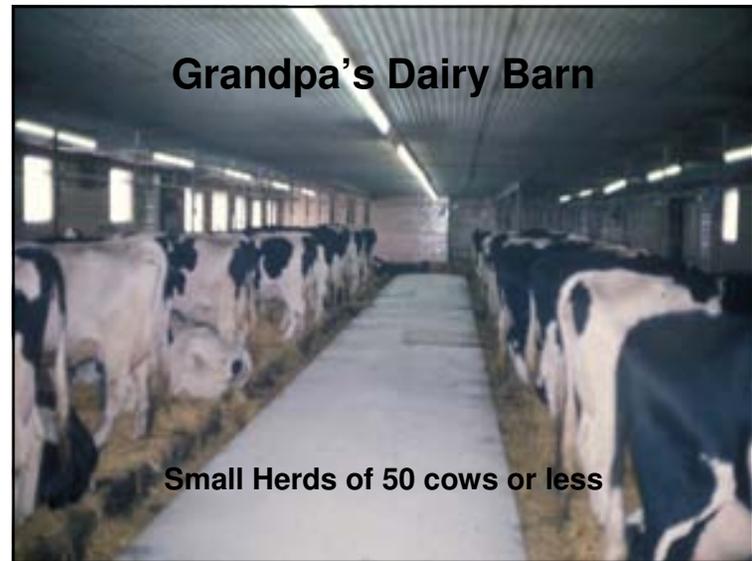
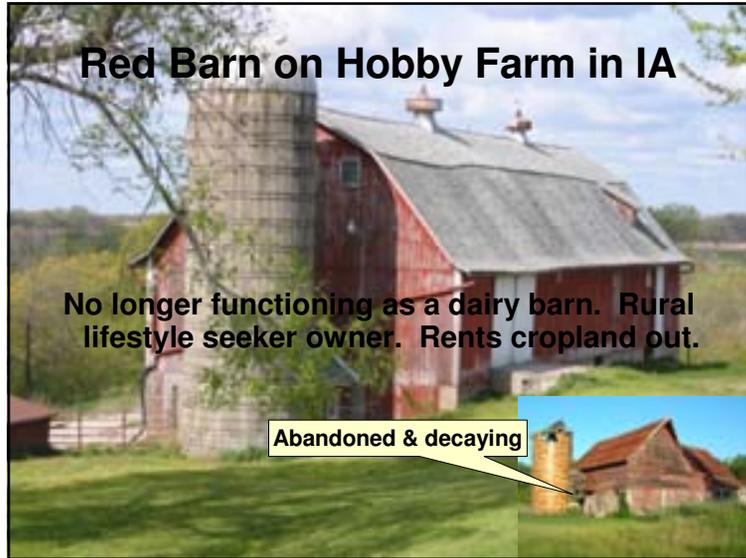


Model Toy Farm – Not to Scale

Red Barns Still Around, but single enterprises generally



Rotational Pasture Dairy Farm in Shenandoah Valley



Grandpa still milking...much longer?

Still many small dairy farms, but disappearing as dairy processors dwindle in numbers and dairy people retire.



Today's Large Scale Dairy

Growing Trend - Cow Herds over 1000 head on a single "Farm"



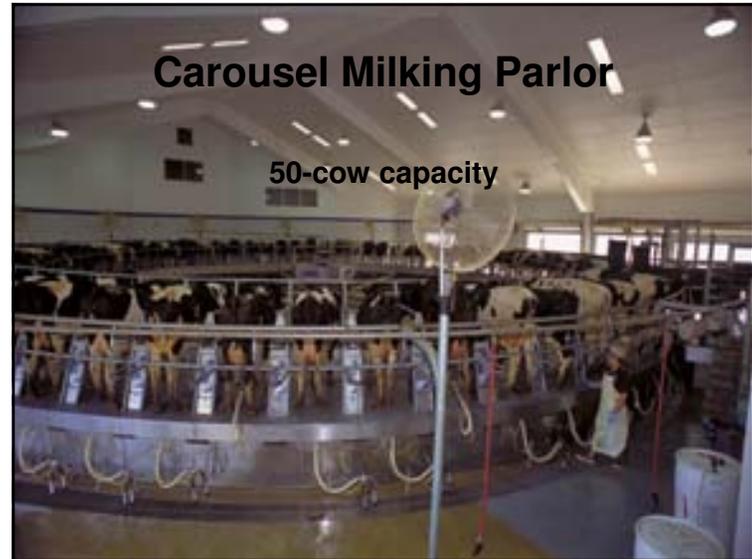
Modern Milking Parlor

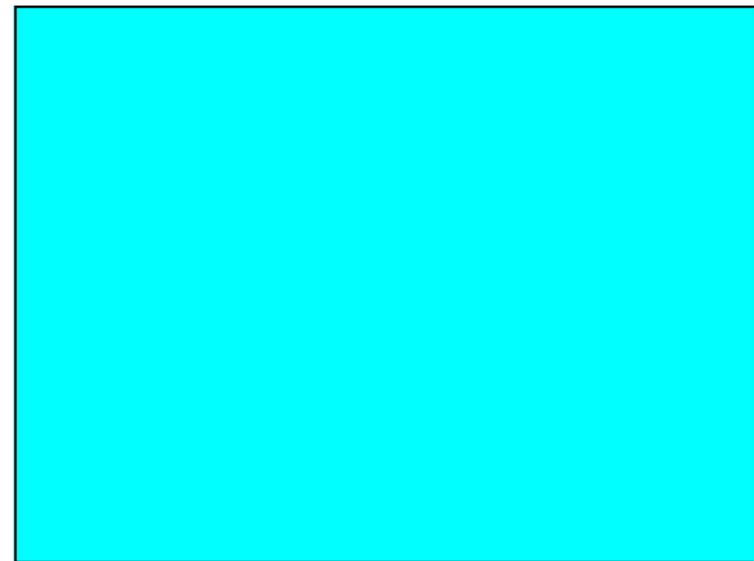
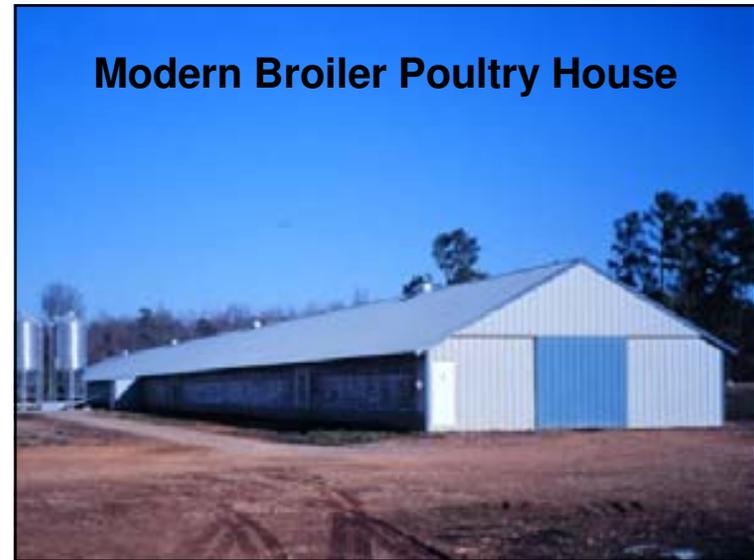
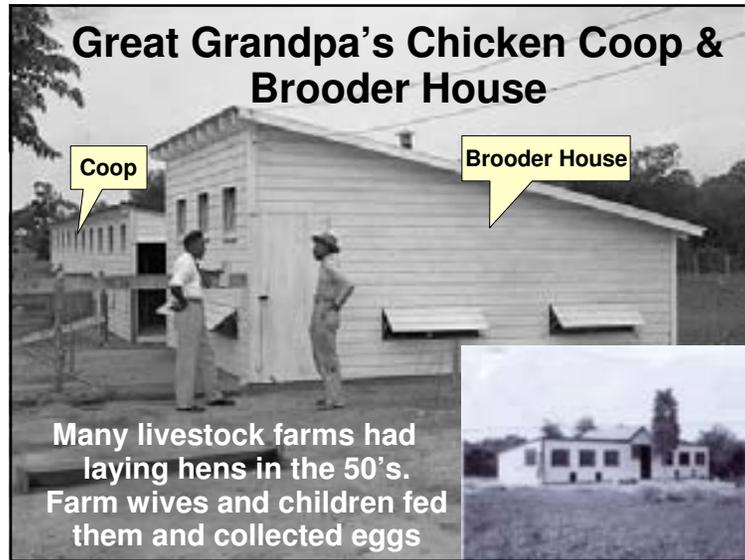
Milking parlor of a large dairy, often working on 3 - 8 hour shifts daily.

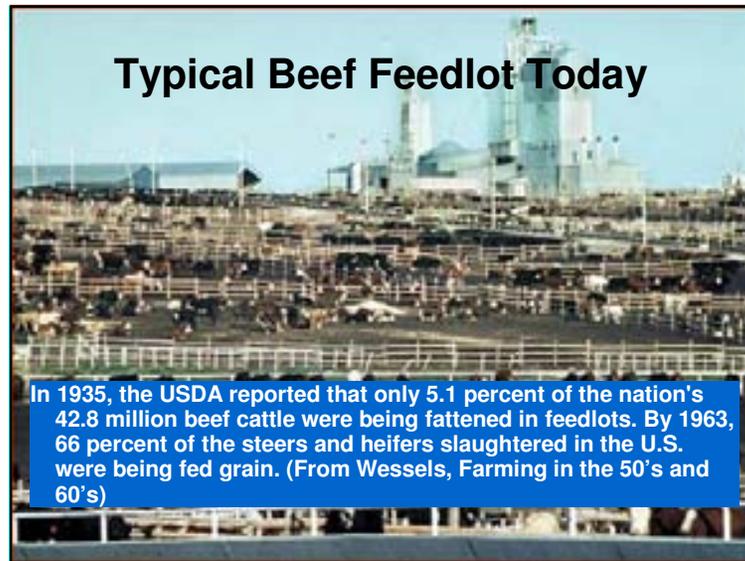


Carousel Milking Parlor

50-cow capacity







Grandpa harvesting grain corn in the 70's

Note 4-row corn head on combine, cab-less tractor



Great Grandpa combining wheat

Today's Combine & Gravity Box



Note there are two combines. Not a double exposure photo. Note cab on tractor and size of grain wagon (gravity box).

Great Grandpa Moldboard Plowing

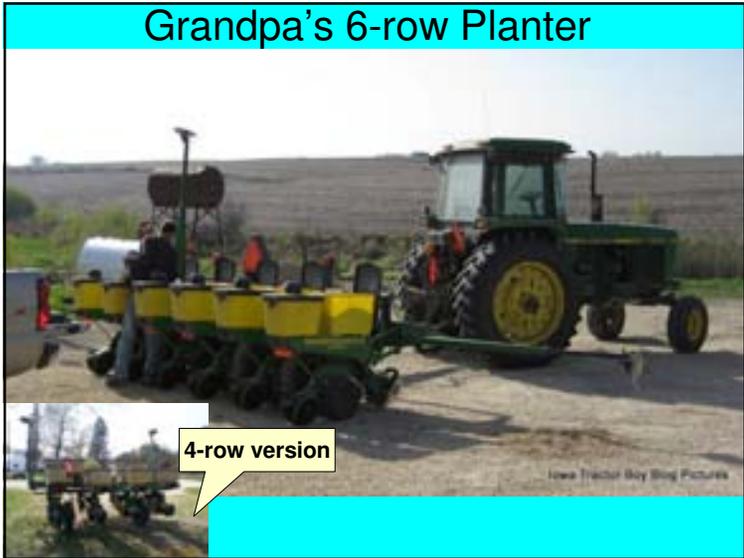


A lot of hours, not much progress

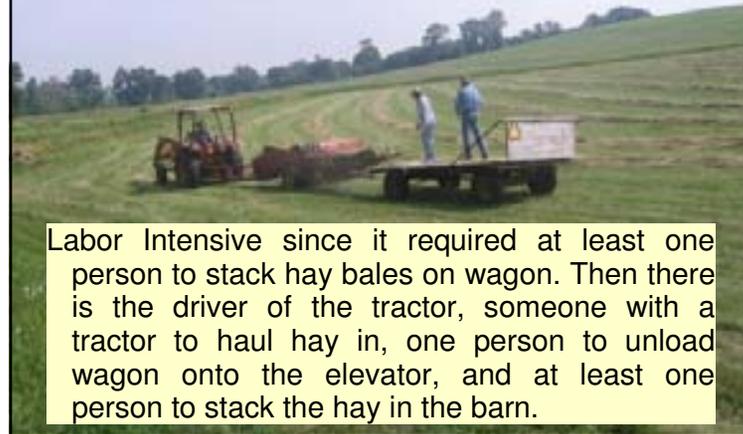
Chisel plow widths of 8 - 64 feet



Today's Chisel Plow & 4-Wheel Drive Tractor



Great Grandpa's way of baling hay

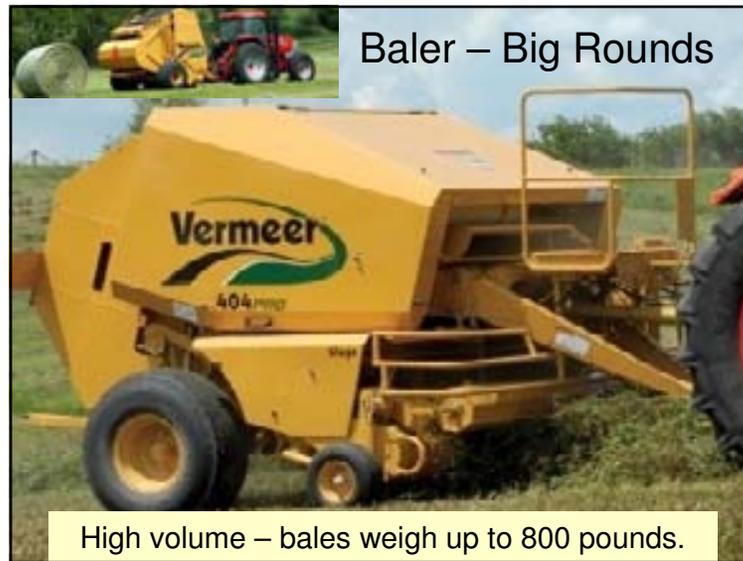


Labor Intensive since it required at least one person to stack hay bales on wagon. Then there is the driver of the tractor, someone with a tractor to haul hay in, one person to unload wagon onto the elevator, and at least one person to stack the hay in the barn.

Farm Labor Scarcity brought the kicker bale



Baler – Big Rounds



High volume – bales weigh up to 800 pounds.

Stacking Big Rounds onto bale hauler



Large Round Bales are hard to store inside, so they rarely are, leading to much waste as they mold when left out to weather.

Today's Large Square Baler



Easily stacked & stored in a shed

Reasons for a Changing Agriculture

1. Farmers buy at retail, sell at the bottom of wholesale.
2. Equity of a farmer is in the farmland, very little in retained saved cash.
3. Agriculture commodities have a price-inelastic demand.
4. TV shows *Green Acres* and *Bonanza* lifestyles became emulated by non-farmers.
5. Parity of incomes between farmers and nonfarmers has always required off-farm income.

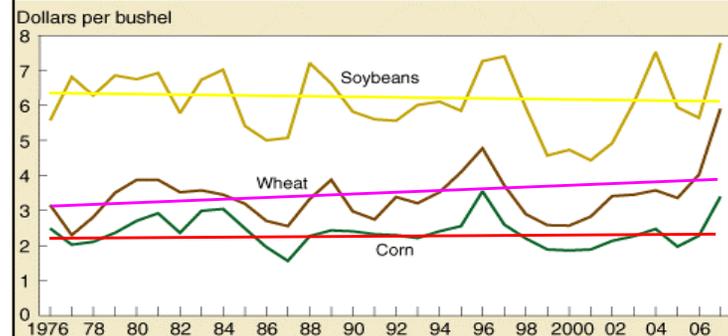
Farmers buy at retail, sell at the bottom of wholesale

1. Small farmers must buy at retail prices. Large farmers can buy at wholesale prices. Quantity discounts for seed, fertilizer, and feed. Equipment costs spread over more acres (optimized).
2. Small farmers do not use commodity futures as a hedge against commodity prices falling below cost of production. At the mercy of price cycles.
3. Large farmers must use commodity futures to keep from going bankrupt. Income tends to be more stable. Usually assured of a profit margin.

Farmers buy at retail, sell at the bottom of wholesale

Commodity Prices gyrate, but are essentially flat-lined.

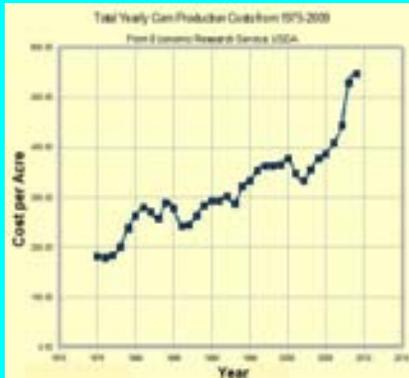
Corn, wheat, and soybean prices at or near record highs in 2007



Source: USDA, National Agricultural Statistics Service, Agricultural Price Series, 1976-2007.

Farmers buy at retail, sell at the bottom of wholesale

Meanwhile, total cost of production tripled.



Equity of a farmer is in the farmland, very little in retained saved cash.

Why is this important?

1. Retirement money mainly comes from sale of the farm. If they retire.... average farmer age is now 57.1 (2007 Ag. Census).
2. Sell farm to highest bidder who may not have any intention to farm the land, residence "farmer" or developer. 33 million acres lost 1997-2007 (2007 Ag Census).
3. Encourage their children to earn a living elsewhere for an easier life.
4. Or, **many farm families** form modest-sized **corporations** to take advantage of legal and accounting benefits of that type of business enterprise, including estate planning and sharing equity among family members. 89% of the corporate farms in the US are family owned (2007 Ag Census). 96,000 corporate farms out of 2,205,000 total farms (2007 Ag Census). Own 125 million acres out of 922 million total acres of farmland (2007 Ag Census).

Agriculture commodities have a price-inelastic demand.

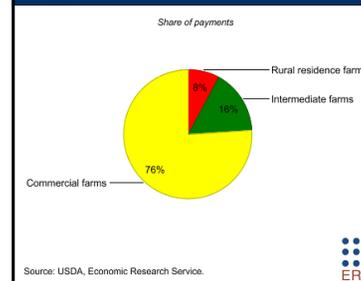
Why is this important?

1. Food purchases remain flat no matter how cheap food gets. You can only eat so much and we already eat too much as a whole. More people to feed and new uses help increase demand, but not enough.
2. This underpins the various federal crop subsidy programs and cropland retirement programs (CRP, GRP, set-aside) over the years.
3. Cannot get in and out of agriculture easily. Once out, you will pay more of an entrance fee to get back in. If you hold the land and do not produce a crop, you still have fixed costs that come due anyway.
3. Subsidies favor larger farms over smaller ones. Size makes a difference in whether the subsidy payment buys new equipment and land or a few groceries and farm supplies.
4. It favors the food industry because the commodities they purchase are cheaper than they would be if the subsidies disappeared.
5. Agriculture research, private and public, has increased production greatly, most farmers take advantage of this. Production soars, and prices remain stubbornly low....unless there is an overseas buyer.

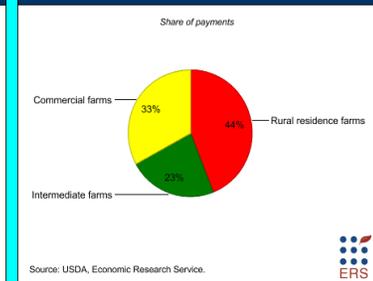
This underpins the various federal crop subsidy programs and cropland retirement programs (CRP, GRP, set-aside) over the years.

In 2008, 844,000 farms (38 percent of all farms) received \$10.3 billion in government payments (ERS, USDA, 2008).

Total commodity payments received by operator households in 2008 - \$5.2 billion

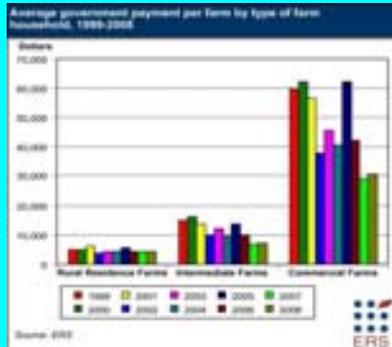


Total conservation payments received by operator households in 2008 - \$2.7 billion



Subsidies favor larger farms over smaller ones.

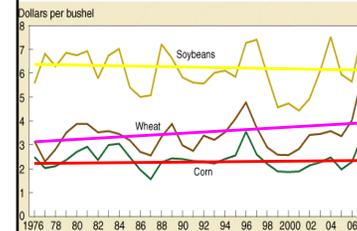
Over the last decade, increasing economies of scale and **greater commodity demand generated by legislative bioenergy mandates** have led to increased farm size and further crop specialization. This process has generated larger per-farm sales of program commodities, **pushing over 96,000 intermediate farms into the commercial farm category (ERS, USDA, 2008).**



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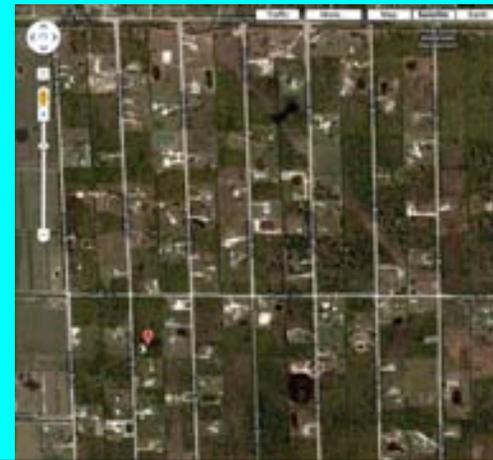
Source: USDA, National Agricultural Statistics Service, Agricultural Price Series, 1976-2007



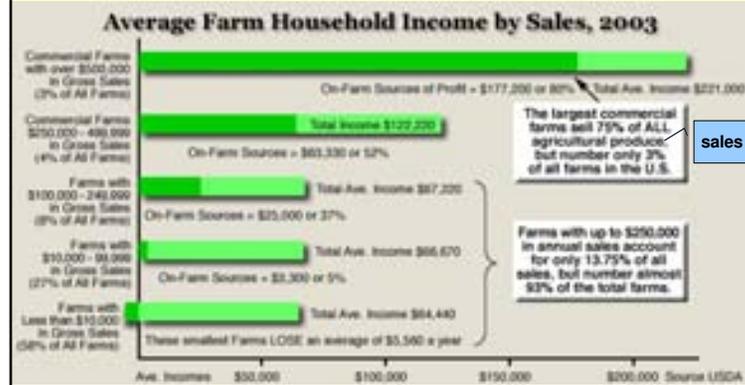
TV shows *Green Acres* and *Bonanza* lifestyles became emulated by non-farmers.

1. *Green Acres* either mimicked the desire to go back to the land or set the trend.
2. *Bonanza* also gave the city dweller a vision of what it would be like to be a cattle baron, no matter how small.
3. The advent of the hobby farm came in to vogue beginning in the 1970's. A farm could be purchased for the same price a house on a small lot could be purchased for in a nearby city.
4. Rural residence farms (small farms whose operators are either retired or reported a major occupation other than farming) make up half of the 844,000 farms that receive government payments (ERS, USDA 2008).
5. This also led to commercial farms and ranches being split up into ranchettes of 5 – 40 acres in size. Ex-urban sprawl.

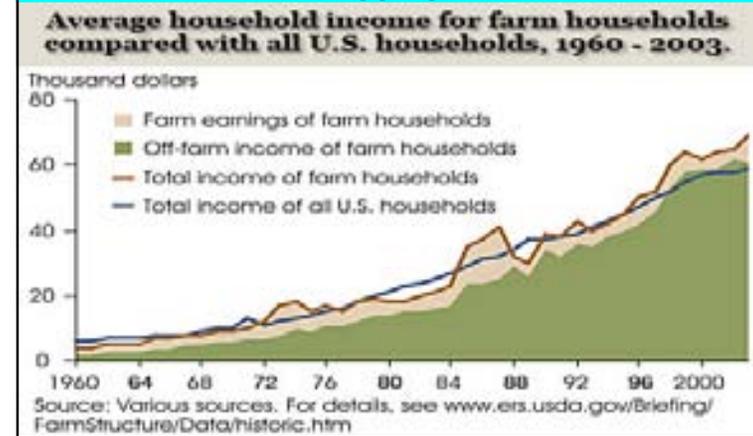
Commercial farms and ranches are being split up into ranchettes of 5 – 40 acres in size. Ex-urban sprawl.



Parity of incomes between farmers and non-farmers has always required off-farm income.



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Agriculture Will Continue to Change

Even so, there will still be a few red barns around.



Vermont Dairy Farm