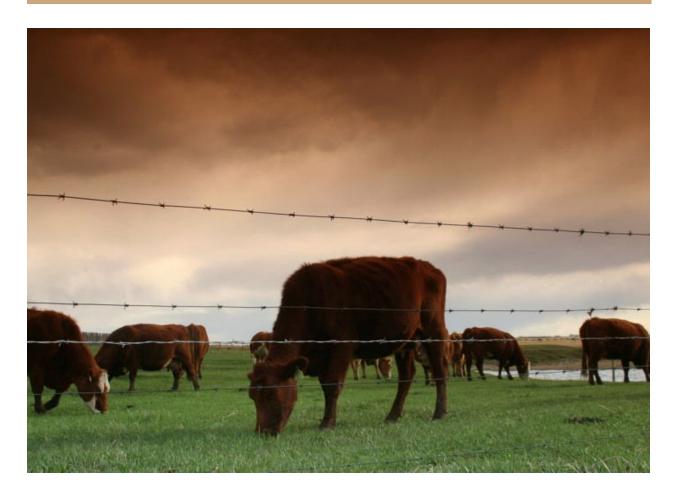
# **Livestock Production**Senior Thesis Research



#### Introduction

"Livestock production — which includes meat, milk and eggs — contributes 40% of global agricultural gross domestic product, provides income for more than 1.3 billion people and uses one-third of the world's fresh water. There may be no other single human activity that has a bigger impact on the planet than the raising of livestock. But as a new study out today in the journal *Proceedings of the National Academy of Sciences(PNAS)* shows, there is tremendous variation in how we raise livestock around the world — and major differences in what that means for the earth and for us."

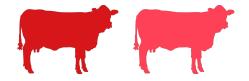
- Bryan Walsh, *science.time.com* 

### **Table of Contents**

Introduction	1
Cattle Production	4
Goat Production	7
Sheep Production	9
Hog Production	11
Chicken Production	13
Turkey Production	15
50 States	17
Alabama	18
Alaska	20
Arizona	22
Arkansas	24
California	26
Colorado	28
Connecticut	30
Delaware	32
Florida	34
Georgia	36
Hawaii	38
Idaho	40
Illinois	42
Indiana	44
Iowa	46
Kansas	48
Kentucky	50
Louisiana	52
Maine	54
Maryland	56
Massachusetts	58
Michigan	60
Minnesota	62
Mississippi	64
Missouri	66
Montana	68

Sources	122
Totals	118
Wyoming	116
Wisconsin	114
West Virginia	112
Washington	110
Virginia	108
Vermont	106
Utah	104
Texas	102
Tennessee	100
South Dakota	98
South Carolina	96
Rhode Island	94
Pennsylvania	92
Oregon	90
Oklahoma	88
Ohio	86
North Dakota	84
North Carolina	82
New York	80
New Mexico	78
New Jersey	76
New Hampshire	74
Nevada	72
Nebraska	70

## Data



### Cattle Produced for Beef

Yields 490 - 640 lbs of Meat per unit

### Cattle Produced for Milk

Milk Cows live an average of 5 years

Only apart of the milking herd for 3 years

19,825 lbs of Milk per unit per year

59,475 lbs of Milk per unit per lifespan

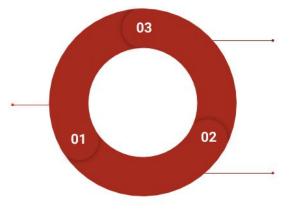
\*\*\*1 US gallon of water (gal) = 8.35 pounds of water (lb wt.)\*\*\*

Approx. 7,122 gallons of Milk per unit per lifespan

#### Air Pollution

"Across the globe, livestock spew 14.5 percent of all greenhouse gases (methane, carbon dioxide, nitrous oxide and fluorinated gases) released in the environment, and over half that comes specifically from cows, according to a United Nations report.

With every episode of gas and especially burping, cattle release methane, which is 23 times more harmful than carbon dioxide, the main greenhouse gas in car emissions"



#### **Loss of Environment**

"Unsustainable dairy farming and feed production can lead to the loss of ecologically important areas, such as prairies, wetlands, and forests."

#### Water Pollution

"The phosphorus and nitrogen in cow manure, after it's applied to farmland as fertilizer, can run off with rainfall into local waterways contributing to algal blooms that turn the water green and can produce toxins harmful to drinking water."

Blood	Bones	Brain	Fat	Hair
Adhesives Cake Mixes Dyes and Inks Imitation Eggs Laboratory Research Materials Medicines Minerals Pasta	Charcoal Fertilizer Glass Refined sugar   Output  Charcoal Fertilizer Glass Fertilizer	Anti-aging Cream     Medicines	Anti-freeze Biodiesel Candles Cament Ceremt Ceremt Coramics Chalk Chewing gum Cosmetics Crayons Creams and lotions Deodorant Detergents Explosives Fabric Softener Fertilizer Fireworks Insulation Linoleum Margaine Matches Medicines Oils and Lubricants Paint Perfume Pet food Plastics Rubber Shaving cream Textiles Waterproofing agents Wax Paper	Air filters Brushes Felt Insulation Plaster Textiles

Hooves	Organs	Manure	Milk	Skin
Adhesives     Conditioner     Emery Boards     Lamination     Pet Food     Photo Film     Plant Food     Plastics     Plywood     Shampoo     Wall Paper	Hormones, enzymes, vitamins, and other medical materials     Instrument strings     Tennis racquet strings	Fertilizer     Nitrogen     Phosphorous	Adhesives     Cosmetics     Medicines     Plastics	Adhesives     Candies and confectionery     Emery Boards     Flavorings     Gelatin     Leather     Medicines     Sheetrock     Wallpaper



### **Goats Produced for Meat**

Yields 25 - 50 lbs of Meat per unit

### Goats Produced for Milk

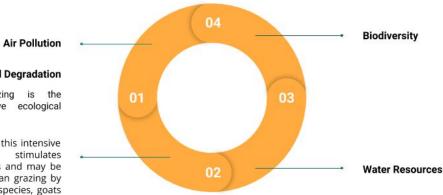
Goats live for 8-12 years

1,800 lbs of Milk per unit per year

14,400 - 21,600 lbs of Milk per unit per lifespan

\*\*\*1 US gallon of water (gal) = 8.35 pounds of water (lb wt.)\*\*\*

Approx. 1,724 - 2,586 gallons of Milk per unit per lifespan



#### **Land Degradation**

Excessive grazing is the leading negative ecological impact of goats.

However, "while this intensive stimulates biodiversity loss and may be more severe than grazing by other livestock species, goats are not a major driver of forest clearing due to their low economic value"

Bones	Hide	Manure	Milk	Fat
Dog Bones     Walking sticks	Book Binding     Cashmere     Drums     Gloves     Leather     Moccasins     Mohair	• Fertilizer	Baby Formula Beer Beestings Butter Candles Cheese Clothes Eggnog Fudge Gajeta Kefir Lip Balm Lotion Milkshakes Paint Pet wipes Pudding Soap Yogurt	• Candles



## **Sheep Including Lambs**

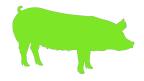
Yields 34 lbs of Meat per unit

\*\*\*Sheep also yield milk, however, my resources did not explore this aspect\*\*\*

#### **Pathogens** "All animal manure has high levels of faecal coliforms and Manure bacteria. " "On a weight basis, sheep produce two thirds as much manure as cattle. It is drier, has half the concentration of nitrogen, similar а concentration of phosphate and almost twice as much potassium." **Land Degradation**

Blood				
Agar for culturing bacteria     Antidote for overdose Digoxin     Cytofab     North American rattlesnake anti-venom     Stem cell research	Adhesive tape Bandage strips Bone charcoal pencils Buttons Cellophane wrap Collagen & Bone for plastic surgery Gelatin capsules Gelatin desserts Glycerin Fertilizers Ice cream Marshmallows Pet food Phonograph records Piano keys Steel ball bearings Syringes Wallpaper Wallpaper	Chewing gum Explosives Paints Solvents	Bricks Carpet Caskets Chair covers Chamois cloth Clothing/Socks Hanging basket liners Insulated boxes Insulation Luggage Mattress filling Mulch Pads Oil spill cleanup pads Pain Brushes Pool table baize Tennis ball covers Upholstery Yarn	Medical sutures     Musical     instrument     strings     Sausage casing     Tennis racquet     strings

Lanolin		Wool
Adhesive tape     Auto lubrication     Conditioner     Cosmetics     Lotions     Motor oils     Pharmaceuticals     Printing ink     Shampoo	Butter     Cheese     Ice cream     Yogurt	Bone graft implants     Wound dressings



### **Hogs Produced**

Yields 144 lbs of Meat per unit

### **Air Pollution** "Open lagoons also cause air pollution, with ammonia, nitrogen and methane gases freely leaking into the atmosphere and foul odours from manure pit gasses wafting over to neighbouring communities." 01

#### **Water Pollution**

"About 68 percent of the nation's lakes, reservoirs and ponds and more than half of its rivers and streams are impaired, the U.S. Environmental Protection Agency says, meaning they don't meet one or more water-quality standards and are considered too polluted for the intended use. The main culprit: agriculture, including poorly located or poorly managed animal-feeding operations and misapplication of chemicals and fertilizer, EPA reports show."

**Land Degradation** 

Blood	Bones	Cartilage	Fat	Manure
Cigarette filters Dog treats Fish food Photodynamic therapy Plywood adhesive	Batteries Bone china Bullets Candles Cork Fabric softener Glue Inkjet paper Match head Moisturizer Organic fertilizer for plants Paint Photographic Film Shampoo Shoes Soap Toothpaste Train Brakes Washing powder Water filters Yogurt	Chemical Weapons Testing     Dog treats	Antifreeze     Baked goods     Cellophane     Chalk     Cosmetics     Crayons     Floor waxes     Insecticides     Plastics     Rubber     Shaving creams     Soaps     Waterproofing agents	Alternative energ     Fertilizer

Organs	Skin
Heparin Heart valves Insulin Medical sutures Pet food Tambourines	Alcohol Bread Cheesecake Cream cheese Drumheads Face masks Fertilizer Footballs Fruit Juice Hide Glue loe cream Insulation Low-fat butter Luggage and purses Medical capsule pills Paint brushes Protein/energy bars Safety gloves Suede Sweets/Candy Upholstery Whipped cream



### **Chickens Produced**

5 - 8 lbs of Meat per unit

Chickens can be used for both Meat and Eggs, however Egg Hens lay more eggs

On average, a Chicken can lay 276 eggs per year per unit

### Pathogens

"Manure also contains pathogens which may potentially affect soil and water resources, particularly if poorly managed. Parasites such as Cryptosporidium and Giardia spp. can easily spread from manure to water supplies and can remain viable in the environment for long periods of time"



#### **Water Pollution**

"Storage of waste or over-fertilization of land with chicken manure can cause runoff into rivers, lakes and ponds."

#### **Air Pollution**

"Large chicken farming operations cause odors and emissions of ammonia, hydrogen sulfide and poultry dust, containing bacteria, bacterial toxins and chicken skin debris."

Feathers	Manure
Circuit boards Clothing Cosmetics Diapers Fet Food Filters Hurricane proof roofing Insulation Paper Planting pots Plastics Pillow stuffing Shoe soles Upholstery padding	• Fertilizer



### **Turkeys Produced**

8 lbs of Meat per unit

#### Pathogens

"Manure also contains pathogens which may potentially affect soil and water resources, particularly in poorly managed. Parasites such as Cryptosporidium and Giardia spp. can easily spread from manure to water supplies and can remain viable in the environment for long periods of time"



\*\*\*Fewer turkeys are produced on farms than hunted in the wild. However, for those raised on farms their environmental impact is similar to that of chicken and other poultry.\*\*\*

#### Water Pollution

"Storage of waste or over-fertilization of land with chicken manure can cause runoff into rivers, lakes and ponds."

#### Air Pollution

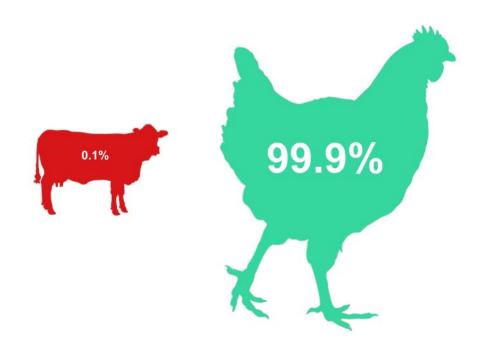
"Large chicken farming operations cause odors and emissions of ammonia, hydrogen sulfide and poultry dust, containing bacteria, bacterial toxins and chicken skin debris."

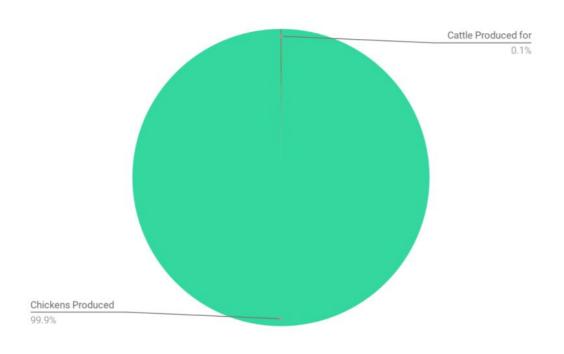
Bones	Feathers
• Whistles	Arrows     Clothing     Diapers     Feather meal     Insulation     Paper     Pillow stuffing     Plastics     Upholstery padding

## 50 States

# Alabama

Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	0.1%	714,000	349,860,000 - 456,960,000 lbs
Cattle Produced for Milk	0.0%	6,000	118,950,000 lbs / 14,245,509 gals
Goats Produced for Meat	0.0%	47,000	1,175,000 - 2,350,000 lbs
Goats Produced for Milk	0.0%	3,500	6,300,000 lbs / 754,491 gals
Sheep Including Lambs	0.0%	0	0 lbs
Hogs Produced	0.0%	57,000	8,208,000 lbs
Chickens Produced	99.9%	1,095,400,000	5,477,000,000 - 8,763,200,000 lbs (302,330,400,000 eggs)
Turkeys Produced	0.0%	0	0 lbs

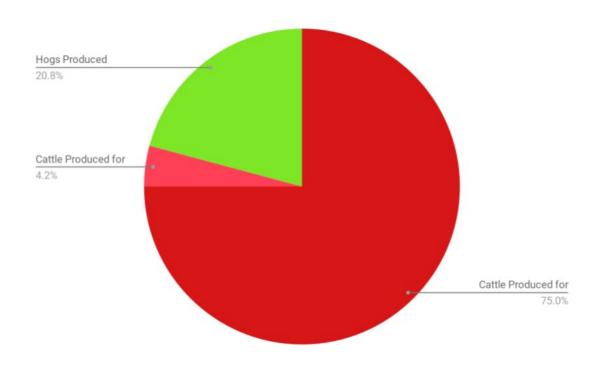




## Alaska

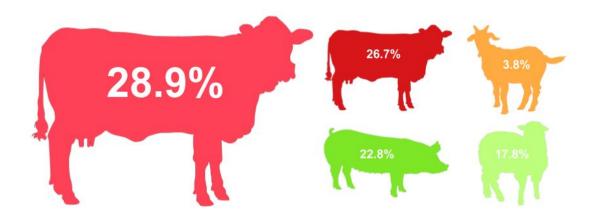
Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	75%	5,400	2,646,000 - 3,456,000
Cattle Produced for Milk	4.2%	300	5,947,500 (712,275 gals)
Goats Produced for Meat	0.0%	0	0
Goats Produced for Milk	0.0%	0	0
Sheep Including Lambs	0.0%	0	0
Hogs Produced	20.8%	1,500	216,000
Chickens Produced	0.0%	0	0
Turkeys Produced	0.0%	0	0

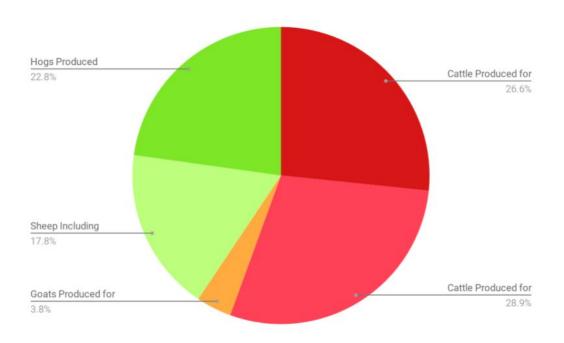




## Arizona

Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	26.7%	187,000	91,630,000 - 119,680,000
Cattle Produced for Milk	28.9%	203,000	4,024,475,000 (481,973,054 gals)
Goats Produced for Meat	3.8%	27,000	675,000 - 1,350,000
Goats Produced for Milk	0.0%	0	0
Sheep Including Lambs	17.8%	125,000	4,250,000
Hogs Produced	22.8%	160,000	23,040,000
Chickens Produced	0.0%	0	0
Turkeys Produced	0.0%	0	0

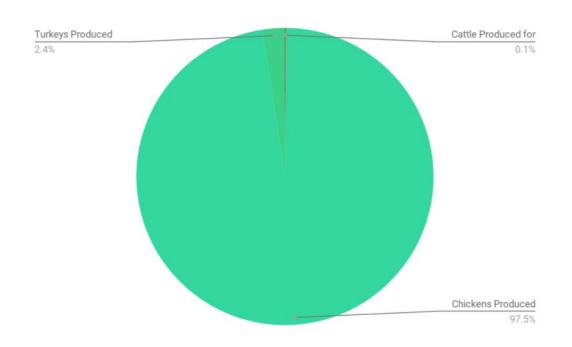




## Arkansas

Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	0.1%	924,000	452,760,000 - 591,360,000
Cattle Produced for Milk	0.0%	6,000	118,950,000 (14,245,509 gals)
Goats Produced for Meat	0.0%	33,000	825,000 - 1,650,000
Goats Produced for Milk	0.0%	4,000	7,200,000 (862,275 gals)
Sheep Including Lambs	0.0%	0	0
Hogs Produced	0.0%	131,000	18,864,000
Chickens Produced	97.5%	1,059,000,000	5,295,000,000 - 8,472,000,000 (292,284,000,000 eggs)
Turkeys Produced	2.4%	26,500,000	212,000,000

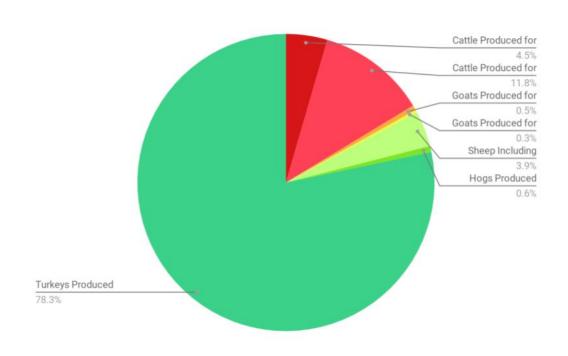




## California

Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	4.5%	660,000	323,400,000 - 422,400,000
Cattle Produced for Milk	11.8%	1,740,000	34,495,500,000 (413,119,760 gals)
Goats Produced for Meat	0.5%	80,000	2,000,000 - 4,000,000
Goats Produced for Milk	0.3%	40,000	72,000,000 (8,622,754 gals)
Sheep Including Lambs	4%	570,000	19,380,000
Hogs Produced	0.6%	95,000	13,680,000
Chickens Produced	0.0%	0	0
Turkeys Produced	78.3%	11,500,000	92,000,000

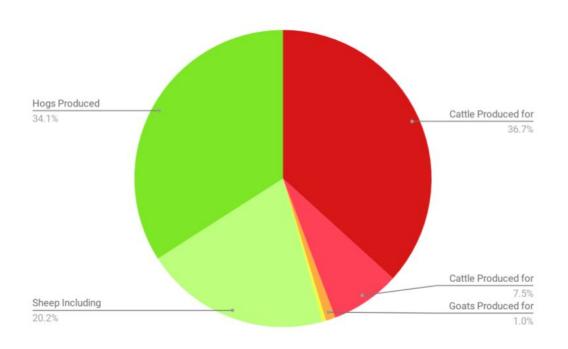




## Colorado

Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	36.8%	809,000	396,410,000 - 517,760,000
Cattle Produced for Milk	7.5%	166,000	3,290,950,000 (394,125,749 gals)
Goats Produced for Meat	1.0%	23,000	575,000 - 1,150,000
Goats Produced for Milk	0.4%	9,000	16,200,000 (1,940,119 gals)
Sheep Including Lambs	20.2%	445,000	15,130,000
Hogs Produced	34.1%	750,000	108,000,000
Chickens Produced	0.0%	0	0
Turkeys Produced	0.0%	0	0

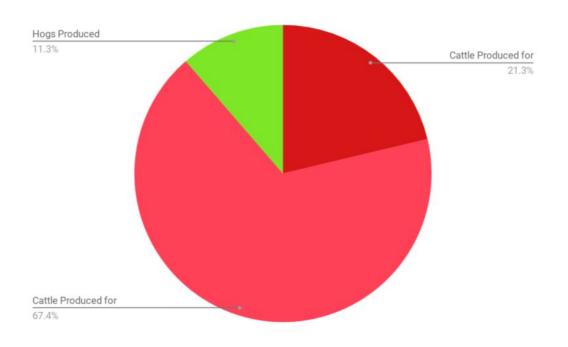




## Connecticut

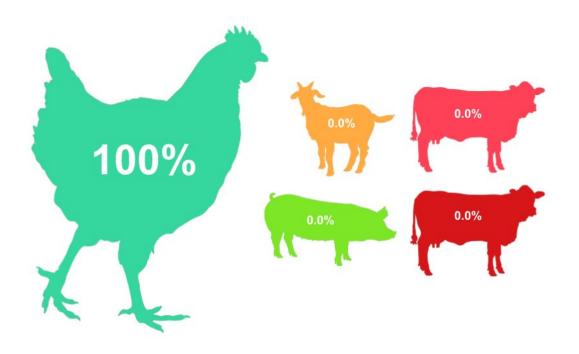
Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	21.3%	6,000	2,940,000 - 3,840,000
Cattle Produced for Milk	67.4%	19,000	376,675,000 (45,110,778 gals)
Goats Produced for Meat	0.0%	0	0
Goats Produced for Milk	0.0%	0	0
Sheep Including Lambs	0.0%	0	0
Hogs Produced	11.3%	3,200	460,800
Chickens Produced	0.0%	0	0
Turkeys Produced	0.0%	0	0

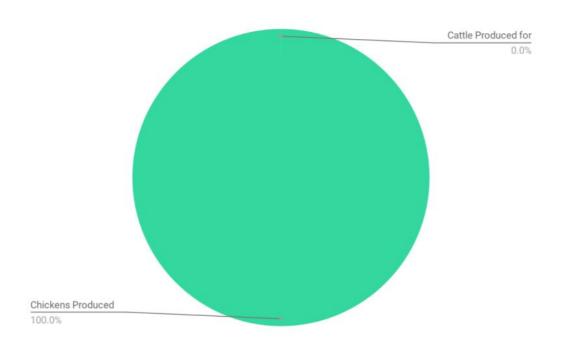




## Delaware

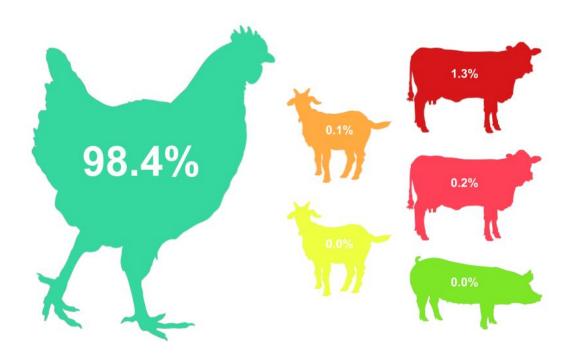
Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	0.0%	6,000	2,940,000 - 3,840,000
Cattle Produced for Milk	0.0%	2,500	49,562,500 (5,935,628 gals)
Goats Produced for Meat	0.0%	5,000	125,000 - 250,000
Goats Produced for Milk	0.0%	0	0
Sheep Including Lambs	0.0%	0	0
Hogs Produced	0.0%	6,000	864,000
Chickens Produced	100%	259,800,000	1,299,000,000 - 2,078,400,000 (71,704,800,000 eggs)
Turkeys Produced	0.0%	0	0

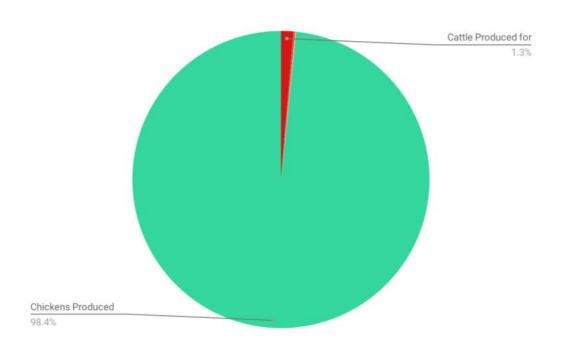




## Florida

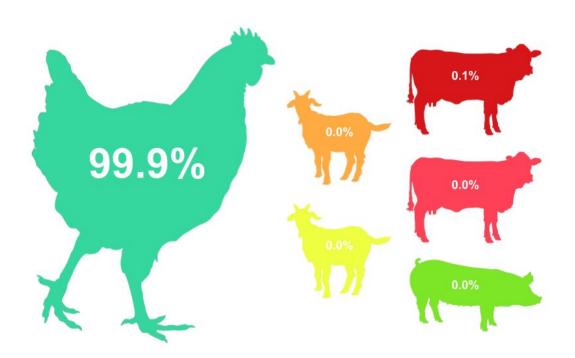
Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	1.3%	886,000	434,140,000 - 567,040,000
Cattle Produced for Milk	0.2%	124,000	2,458,300,000 (294,407,186 gals)
Goats Produced for Meat	0.1%	45,000	1,125,000 - 2,250,000
Goats Produced for Milk	0.0%	10,000	18,000,000 (2,155,688 gals)
Sheep Including Lambs	0.0%	0	0
Hogs Produced	0.0%	15,000	2,160,000
Chickens Produced	98.4%	65,200,000	326,000,000 - 521,600,000 (17,995,200,000 eggs)
Turkeys Produced	0.0%	0	0

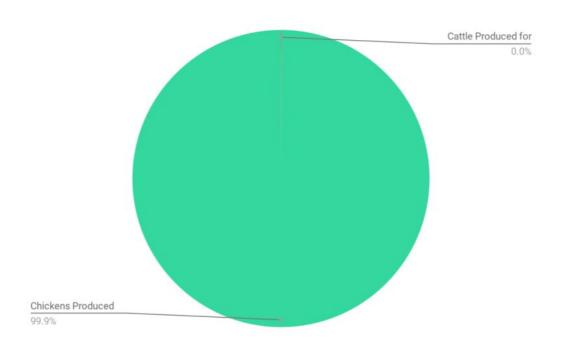




# Georgia

Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	0.1%	485,000	237,650,000 - 310,400,000
Cattle Produced for Milk	0.0%	85,000	1,685,125,000 (201,811,377 gals)
Goats Produced for Meat	0.0%	70,000	1,750,000 - 3,500,000
Goats Produced for Milk	0.0%	3,800	6,840,000 (819,161 gals)
Sheep Including Lambs	0.0%	0	0
Hogs Produced	0.0%	80,000	11,520,000
Chickens Produced	99.9%	1,363,400,000	6,817,000,000 - 10,907,200,000 (376,298,400,000 eggs)
Turkeys Produced	0.0%	0	0

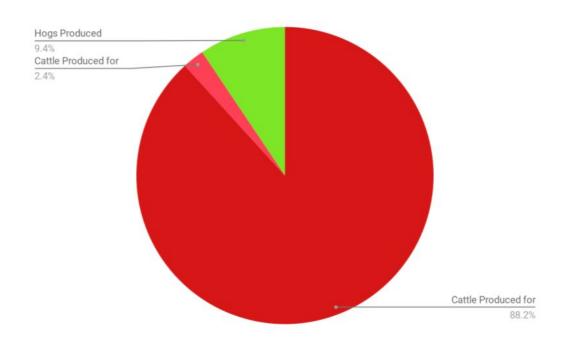




## Hawaii

Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	88.2%	75,000	36,750,000 - 48,000,000
Cattle Produced for Milk	2.4%	2,000	39,650,000 (4,748,502 gals)
Goats Produced for Meat	0.0%	0	0
Goats Produced for Milk	0.0%	0	0
Sheep Including Lambs	0.0%	0	0
Hogs Produced	9.4%	8,000	1,152,000
Chickens Produced	0.0%	0	0
Turkeys Produced	0.0%	0	0

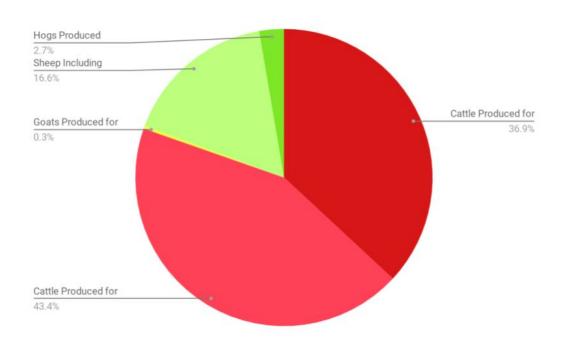




## Idaho

Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	37%	510,000	249,900,000 - 326,400,000
Cattle Produced for Milk	43.4%	600,000	11,895,000,000 (1,424,551,000 gals)
Goats Produced for Meat	0.0%	0	0
Goats Produced for Milk	0.3%	4,500	8,100,000 (970,059 gals)
Sheep Including Lambs	16.6%	230,000	7,820,000
Hogs Produced	2.7%	37,000	5,328,000
Chickens Produced	0.0%	0	0
Turkeys Produced	0.0%	0	0

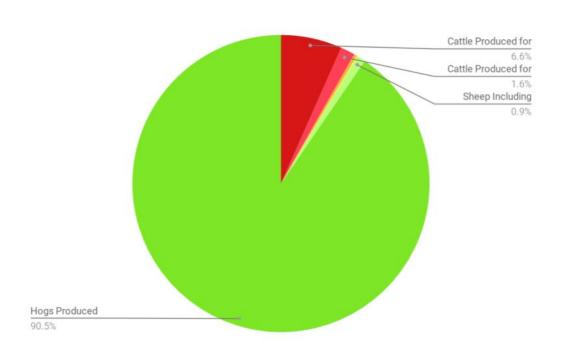




## Illinois

Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	6.6%	397,000	194,530,000 - 254,080,000
Cattle Produced for Milk	1.6%	93,000	1,843,725,000 (220,805,389 gals)
Goats Produced for Meat	0.3%	19,000	475,000 - 950,000
Goats Produced for Milk	0.1%	6,000	10,800,000 (1,293,413 gals)
Sheep Including Lambs	0.9%	55,000	1,870,000
Hogs Produced	90.5%	5,400,000	777,600,000
Chickens Produced	0.0%	0	0
Turkeys Produced	0.0%	0	0

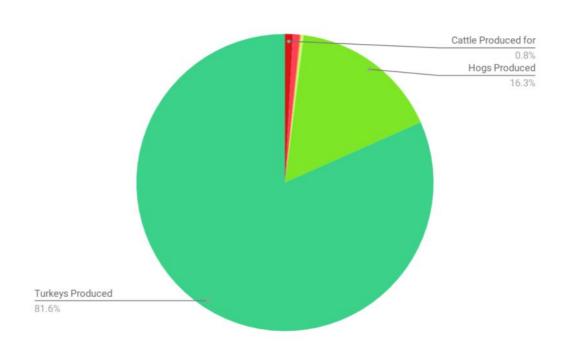




### Indiana

Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	0.8%	208,000	101,920,000 - 133,120,000
Cattle Produced for Milk	0.8%	187,000	3,707,275,000 (443,985,029 gals)
Goats Produced for Meat	0.1%	36,000	900,000 - 1,800,000
Goats Produced for Milk	0.2%	11,000	19,800,000 (2,371,257 gals)
Sheep Including Lambs	0.2%	53,000	1,802,000
Hogs Produced	16.3%	4,000,000	576,000,000
Chickens Produced	0.0%	0	0
Turkeys Produced	81.6%	20,000,000	160,000,000

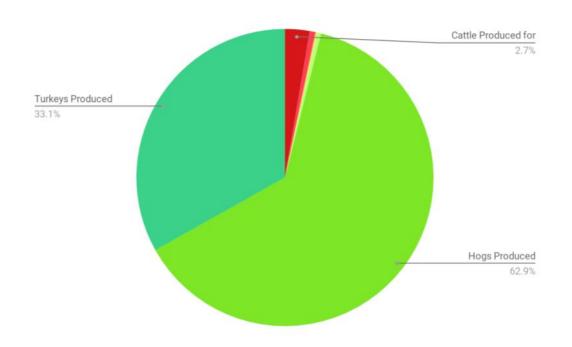




### lowa

Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	2.7%	970,000	475,300,000 - 620,800,000
Cattle Produced for Milk	0.6%	220,000	4,361,500,000 (522,335,329 gals)
Goats Produced for Meat	0.1%	35,000	875,000 - 1,750,000
Goats Produced for Milk	0.2%	31,000	55,800,000 (6,682,634 gals)
Sheep Including Lambs	0.4%	165,000	5,610,000
Hogs Produced	62.9%	22,800,000	3,283,200,000
Chickens Produced	0.0%	0	0
Turkeys Produced	33.1%	12,000,000	96,000,000

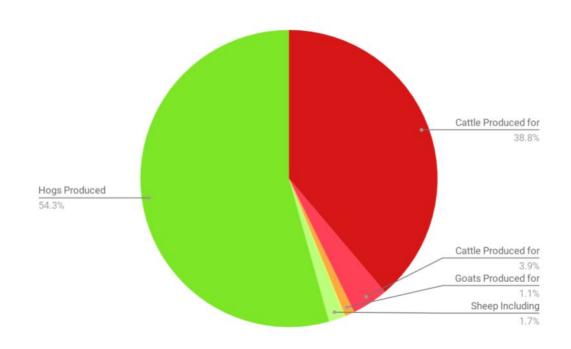




### Kansas

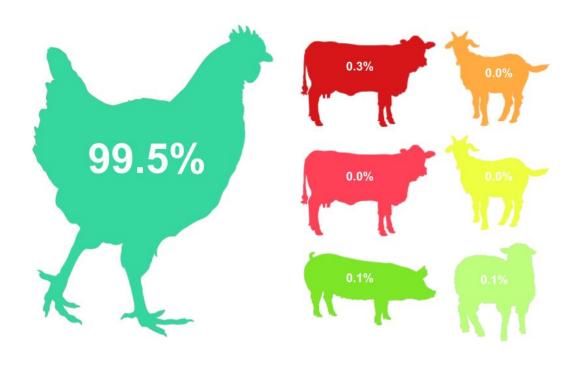
Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	38.9%	1,507,000	738,430,000 - 964,480,000
Cattle Produced for Milk	3.9%	153,000	3,033,225,000 (363,260,479 gals)
Goats Produced for Meat	1.1%	41,000	1,025,000 - 2,050,000
Goats Produced for Milk	0.1%	4,400	7,920,000 (948,502 gals)
Sheep Including Lambs	1.7%	67,000	2,278,000
Hogs Produced	54.3%	2,110,000	303,840,000
Chickens Produced	0.0%	0	0
Turkeys Produced	0.0%	0	0

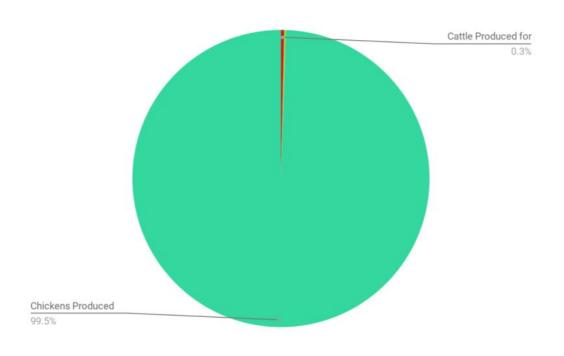




# Kentucky

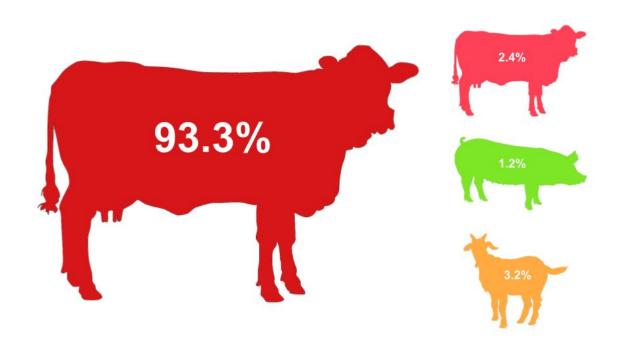
Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	0.3%	1,033,000	506,170,000 - 661,120,000
Cattle Produced for Milk	0.0%	57,000	1,130,025,000 (135,332,335 gals)
Goats Produced for Meat	0.0%	57,000	1,425,000 - 2,850,000
Goats Produced for Milk	0.0%	6,000	10,800,000 (1,293,413 gals)
Sheep Including Lambs	0.1%	50,000	1,700,000
Hogs Produced	0.1%	410,000	59,040,000
Chickens Produced	99.5%	295,800,000	1,479,000,000 - 2,366,400,000 (81,640,800,000 eggs)
Turkeys Produced	0.0%	0	0

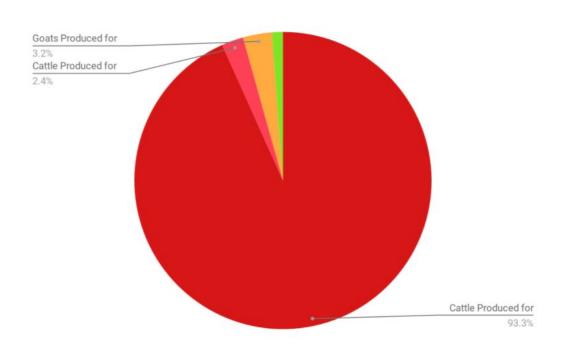




### Louisiana

Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	93.3%	473,000	231,770,000 - 302,720,000
Cattle Produced for Milk	2.4%	12,000	237,900,000 (28,491,017 gals)
Goats Produced for Meat	3.2%	16,000	400,000 - 800,000
Goats Produced for Milk	0.0%	0	0
Sheep Including Lambs	0.0%	0	0
Hogs Produced	1.2%	6,000	864,000
Chickens Produced	0.0%	0	0
Turkeys Produced	0.0%	0	0

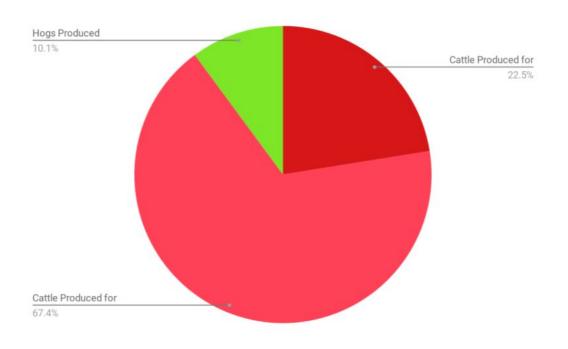




## Maine

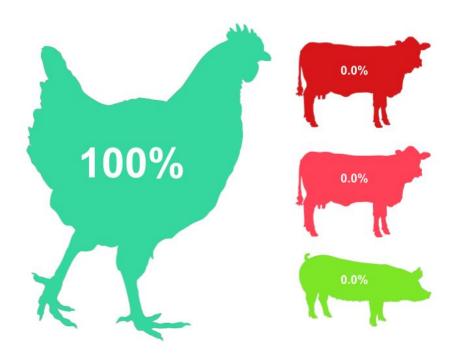
Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	22.5%	10,000	4,900,000 - 6,400,000
Cattle Produced for Milk	67.4%	30,000	594,750,000 (71,227,544 gals)
Goats Produced for Meat	0.0%	0	0
Goats Produced for Milk	0.0%	0	0
Sheep Including Lambs	0.0%	0	0
Hogs Produced	10.1%	4,500	648,000
Chickens Produced	0.0%	0	0
Turkeys Produced	0.0%	0	0

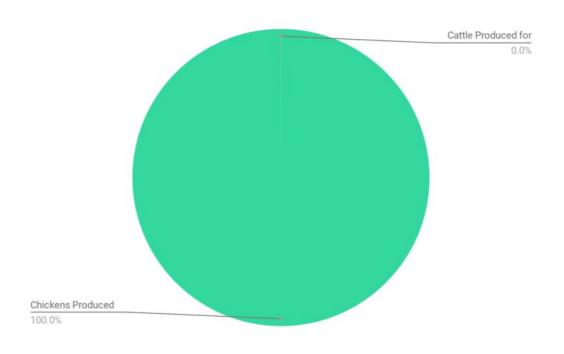




## Maryland

Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	0.0%	46,000	22,540,000 - 29,440,000
Cattle Produced for Milk	0.0%	47,000	931,775,000 (111,589,820 gals)
Goats Produced for Meat	0.0%	0	0
Goats Produced for Milk	0.0%	0	0
Sheep Including Lambs	0.0%	0	0
Hogs Produced	0.0%	21,000	3,024,000
Chickens Produced	100%	306,700,000	1,533,500,000 - 2,453,600,000 (84,649,200,000 eggs)
Turkeys Produced	0.0%	0	0

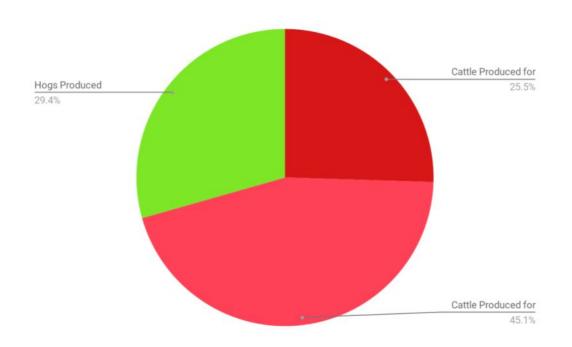




#### Massachusetts

Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	25.5%	6,500	3,185,000 - 4,160,000
Cattle Produced for Milk	45.1%	11,500	227,987,500 (27,303,892 gals)
Goats Produced for Meat	0.0%	0	0
Goats Produced for Milk	0.0%	0	0
Sheep Including Lambs	0.0%	0	0
Hogs Produced	29.4%	7,500	1,080,000
Chickens Produced	0.0%	0	0
Turkeys Produced	0.0%	0	0

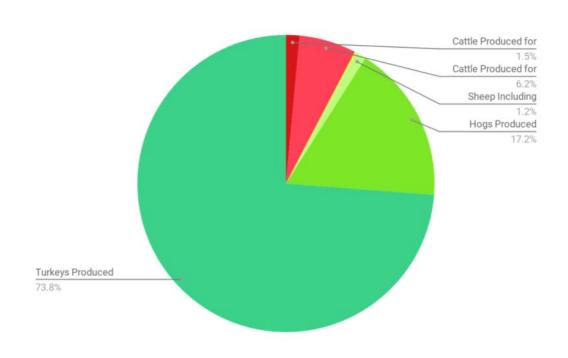




# Michigan

Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	1.5%	102,000	49,980,000 - 65,280,000
Cattle Produced for Milk	6.2%	428,000	8,485,100,000 (1,016,179,640 gals)
Goats Produced for Meat	0.0%	0	0
Goats Produced for Milk	0.3%	11,500	20,700,000 (2,479,041 gals)
Sheep Including Lambs	1.0%	80,000	2,720,000
Hogs Produced	17.2%	1,190,000	171,360,000
Chickens Produced	0.0%	0	0
Turkeys Produced	73.8%	5,100,000	40,800,000

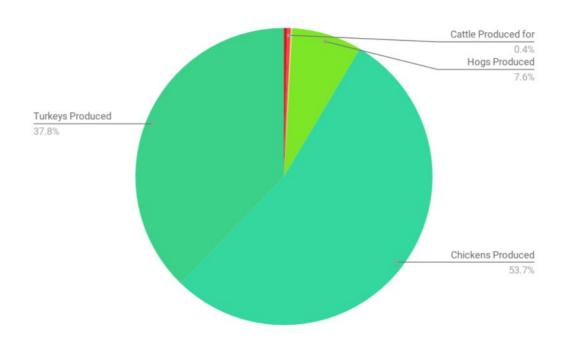




## Minnesota

Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	0.3%	365,000	178,850,000 - 233,600,000
Cattle Produced for Milk	0.4%	455,000	9,020,375,000 (1,080,284,431 gals)
Goats Produced for Meat	0.0%	24,000	600,000 - 1,200,000
Goats Produced for Milk	0.0%	14,000	25,200,000 (3,017,964 gals)
Sheep Including Lambs	0.2%	130,000	4,420,000
Hogs Produced	7.6%	8,500,000	1,224,000,000
Chickens Produced	53.7%	59,700,000	298,500,000 - 477,600,000 (16,477,200,000 eggs)
Turkeys Produced	37.8%	42,000,000	336,000,000

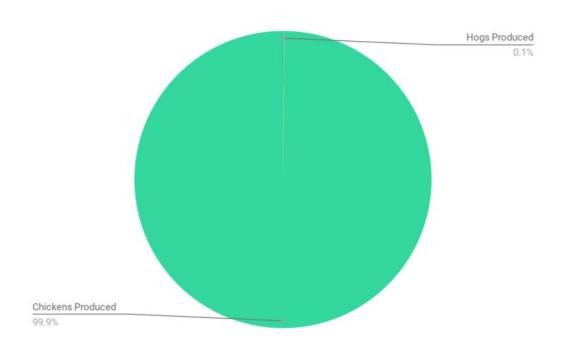




## Mississippi

Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	0.1%	501,000	245,490,000 - 320,640,000
Cattle Produced for Milk	0.0%	9,000	178,425,000 (21,368,263 gals)
Goats Produced for Meat	0.0%	19,000	475,000 - 950,000
Goats Produced for Milk	0.0%	0	0
Sheep Including Lambs	0.0%	0	0
Hogs Produced	0.1%	570,000	82,080,000
Chickens Produced	99.9%	741,100,000	3,705,500,000 - 5,928,800,000 (204,543,600,000 eggs)
Turkeys Produced	0.0%	0	0

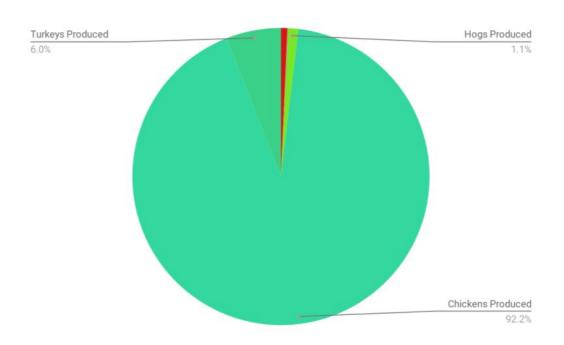




## Missouri

Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	0.7%	2,166,000	1,061,340,000 - 1,386,240,000
Cattle Produced for Milk	0.0%	84,000	1,665,300,000 (199,437,125 gals)
Goats Produced for Meat	0.0%	90,000	2,250,000 - 4,500,000
Goats Produced for Milk	0.0%	71,500	128,700,000 (15,413,173 gals)
Sheep Including Lambs	0.0%	90,000	3,060,000
Hogs Produced	1.1%	3,400,000	489,600,000
Chickens Produced	92.2%	291,100,000	1,455,500,000 - 2,328,800,000 (80,343,600,000 eggs)
Turkeys Produced	6.0%	18,800,000	150,400,000

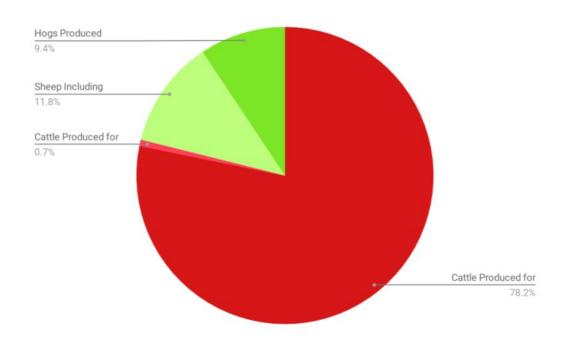




#### Montana

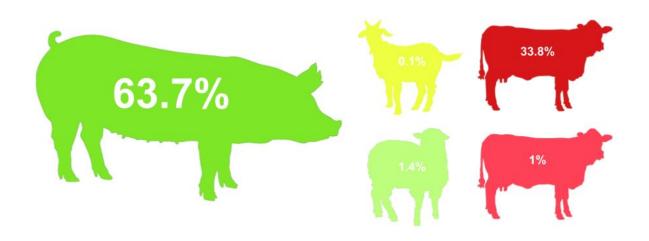
Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	78.1%	1,497,000	733,530,000 - 958,080,000
Cattle Produced for Milk	0.7%	13,000	257,725,000 (30,865,269 gals)
Goats Produced for Meat	0.0%	0	0
Goats Produced for Milk	0.0%	0	0
Sheep Including Lambs	11.8%	225,000	7,650,000
Hogs Produced	9.4%	179,000	25,776,000
Chickens Produced	0.0%	0	0
Turkeys Produced	0.0%	0	0

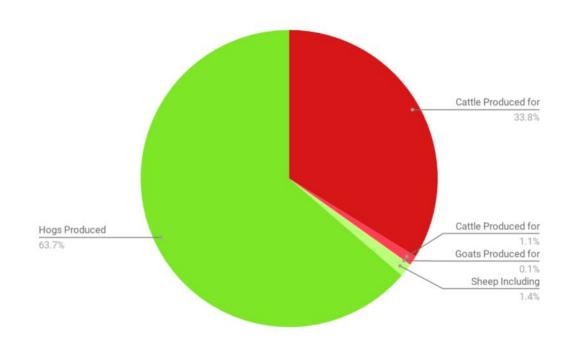




#### Nebraska

Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	33.8%	1,910,000	935,900,000 - 1,222,400,000
Cattle Produced for Milk	1.0%	60,000	1,189,500,000 (142,455,089 gals)
Goats Produced for Meat	0.0%	0	0
Goats Produced for Milk	0.1%	3,500	6,300,000 (754,491 gals)
Sheep Including Lambs	1.4%	80,000	2,720,000
Hogs Produced	63.7%	3,600,000	518,400,000
Chickens Produced	0.0%	0	0
Turkeys Produced	0.0%	0	0

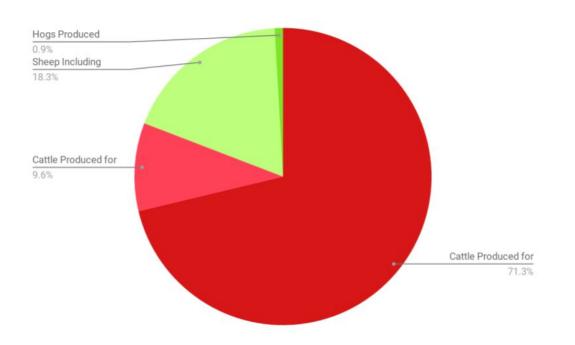




#### Nevada

Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	71.2%	238,000	116,620,000 - 152,320,000
Cattle Produced for Milk	9.6%	32,000	634,400,000 (75,976,047 gals)
Goats Produced for Meat	0.0%	0	0
Goats Produced for Milk	0.0%	0	0
Sheep Including Lambs	18.3%	61,000	2,074,000
Hogs Produced	0.9%	3,000	432,000
Chickens Produced	0.0%	0	0
Turkeys Produced	0.0%	0	0

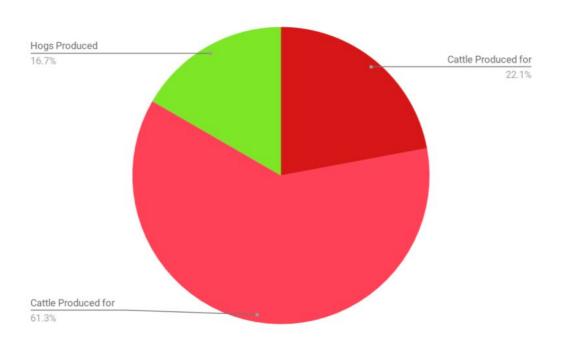




# New Hampshire

Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	22%	4,500	2,205,000 - 2,880,000
Cattle Produced for Milk	61.3%	12,500	247,812,500 (29,678,143 gals)
Goats Produced for Meat	0.0%	0	0
Goats Produced for Milk	0.0%	0	0
Sheep Including Lambs	0.0%	0	0
Hogs Produced	16.7%	3,400	489,600
Chickens Produced	0.0%	0	0
Turkeys Produced	0.0%	0	0

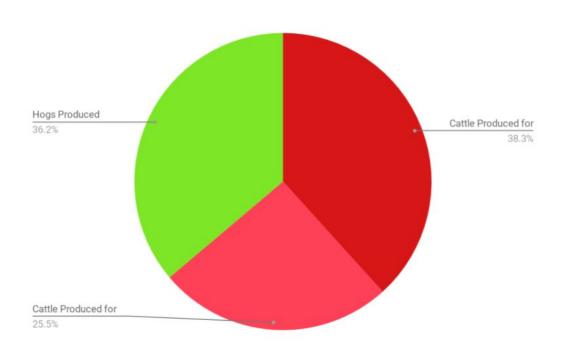




### New Jersey

Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	38.3%	9,000	4,410,000 - 5,760,000
Cattle Produced for Milk	25.5%	6,000	118,950,000 (14,245,508 gals)
Goats Produced for Meat	0.0%	0	0
Goats Produced for Milk	0.0%	0	0
Sheep Including Lambs	0.0%	0	0
Hogs Produced	36.2%	8,500	1,224,000
Chickens Produced	0.0%	0	0
Turkeys Produced	0.0%	0	0

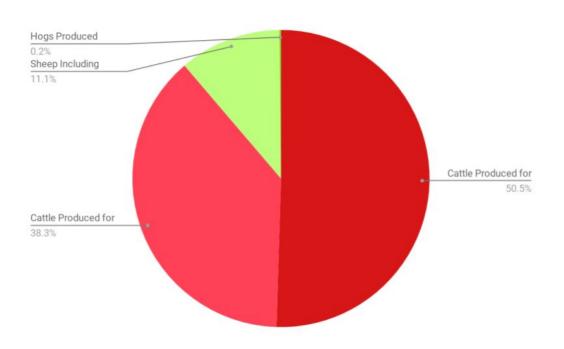




### New Mexico

Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	50.4%	438,000	214,620,000 - 280,320,000
Cattle Produced for Milk	38.3%	332,000	6,581,900,000 (788,251,497 gals)
Goats Produced for Meat	0.0%	0	0
Goats Produced for Milk	0.0%	0	0
Sheep Including Lambs	11.1%	96,000	3,264,000
Hogs Produced	0.2%	1,600	230,400
Chickens Produced	0.0%	0	0
Turkeys Produced	0.0%	0	0

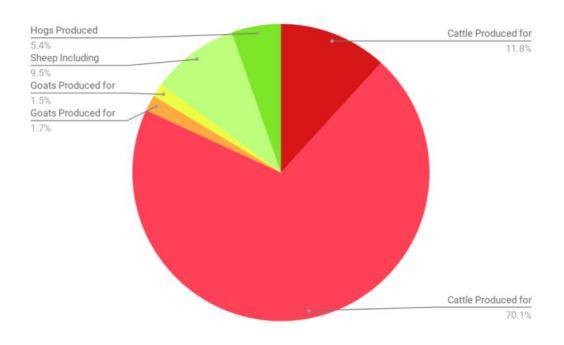




#### New York

Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	11.8%	105,000	51,450,000 - 67,200,000
Cattle Produced for Milk	70.1%	625,000	12,390,600,000 (1,483,904,191 gals)
Goats Produced for Meat	1.7%	15,500	387,500 - 775,000
Goats Produced for Milk	1.5%	13,000	23,400,000 (2,802,395 gals)
Sheep Including Lambs	9.5%	85,000	2,890,000
Hogs Produced	5.4%	48,000	6,912,000
Chickens Produced	0.0%	0	0
Turkeys Produced	0.0%	0	0

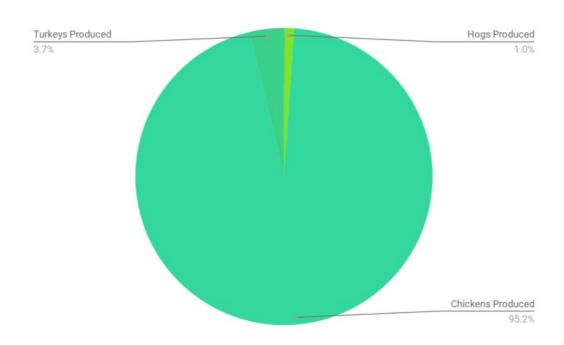




### North Carolina

Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	0.0%	370,000	181,300,000 - 236,800,000
Cattle Produced for Milk	0.0%	45,000	892,125,000 (106,841,317 gals)
Goats Produced for Meat	0.0%	47,000	1,175,000 - 2,350,000
Goats Produced for Milk	0.0%	7,000	12,600,000 (1,508,982 gals)
Sheep Including Lambs	0.0%	25,000	850,000
Hogs Produced	1.0%	9,000,000	1,296,000,0000
Chickens Produced	95.2%	830,800,000	4,154,000,000 - 6,646,400,000 (229,300,800,000 eggs)
Turkeys Produced	3.7%	32,500,000	260,000,000

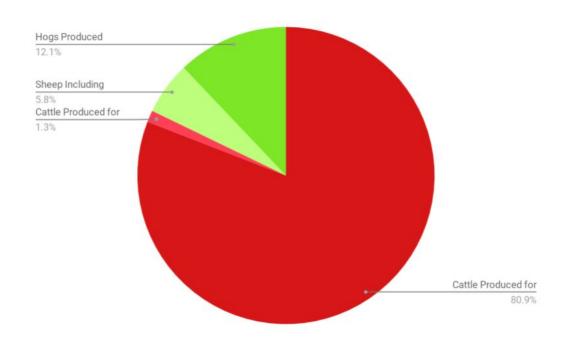




### North Dakota

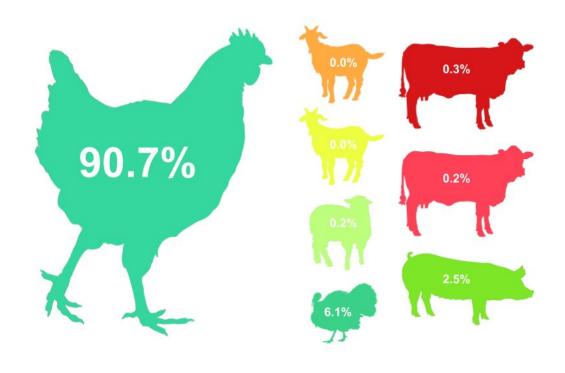
Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	80.8%	984,500	482,405,000 - 630,080,000
Cattle Produced for Milk	1.3%	15,500	307,287,500 (36,800,898 gals)
Goats Produced for Meat	0.0%	0	0
Goats Produced for Milk	0.0%	0	0
Sheep Including Lambs	5.8%	70,000	2,380,000
Hogs Produced	12.1%	147,000	21,168,000
Chickens Produced	0.0%	0	0
Turkeys Produced	0.0%	0	0

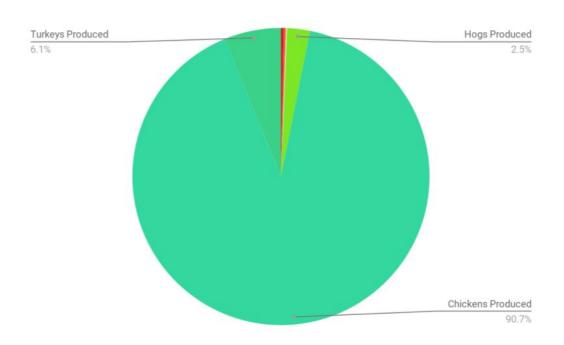




### Ohio

Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	0.3%	296,000	145,040,000 - 189,440,000
Cattle Produced for Milk	0.2%	264,000	5,233,800,000 (626,802,395 gals)
Goats Produced for Meat	0.0%	44,000	1,100,000 - 2,200,000
Goats Produced for Milk	0.0%	10,500	18,900,000 (2,263,473 gals)
Sheep Including Lambs	0.2%	119,000	4,046,000
Hogs Produced	2.5%	2,700,000	388,800,000
Chickens Produced	90.7%	99,300,000	496,500,000 - 794,400,000 (27,406,800,000 eggs)
Turkeys Produced	6.1%	6,700,000	53,600,000

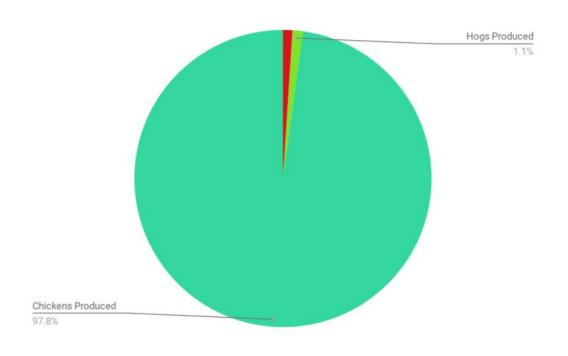




#### Oklahoma

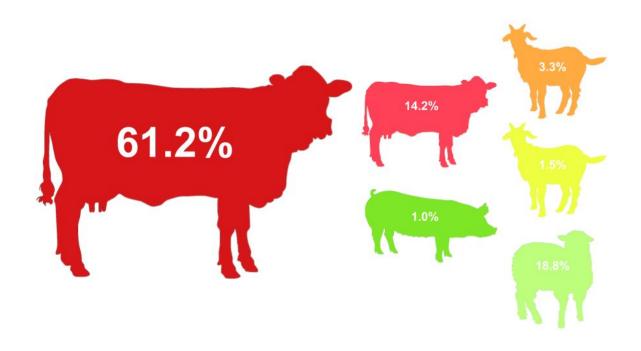
Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	1.0%	2,131,000	1,044,190,000 - 1,363,840,000
Cattle Produced for Milk	0.0%	39,000	773,175,000 (92,595,808 gals)
Goats Produced for Meat	0.0%	82,000	2,050,000 - 4,100,000
Goats Produced for Milk	0.0%	7,000	12,600,000 (1,508,982 gals)
Sheep Including Lambs	0.0%	54,000	1,836,000
Hogs Produced	1.1%	2,200,000	316,800,000
Chickens Produced	97.8%	204,500,000	1,022,500,000 - 1,636,000,000 (56,442,000,000 eggs)
Turkeys Produced	0.0%	0	0

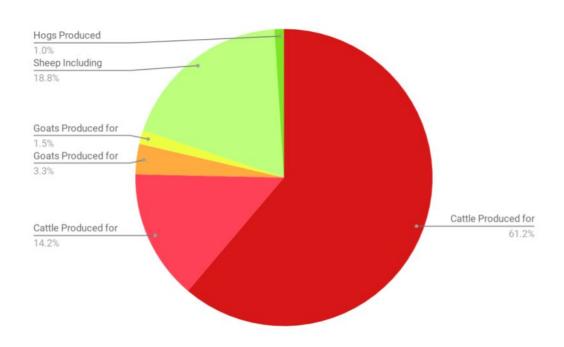




# Oregon

Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	61.2%	536,000	262,640,000 - 343,040,000
Cattle Produced for Milk	14.2%	124,000	2,458,300,000 (294,407,185 gals)
Goats Produced for Meat	3.3%	29,000	725,000 - 1,450,000
Goats Produced for Milk	1.5%	13,000	23,400,000 (2,802,395 gals)
Sheep Including Lambs	18.8%	165,000	5,610,000
Hogs Produced	1.0%	9,000	1,296,000
Chickens Produced	0.0%	0	0
Turkeys Produced	0.0%	0	0

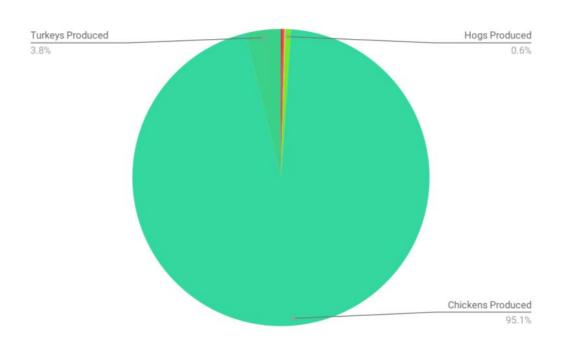




# Pennsylvania

Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	0.1%	215,000	105,350,000 - 137,600,000
Cattle Produced for Milk	0.3%	525,000	10,408,100,000 (1,246,479,041 gals)
Goats Produced for Meat	0.0%	38,000	950,000 - 1,900,000
Goats Produced for Milk	0.0%	15,000	27,000,000 (3,233,532 gals)
Sheep Including Lambs	0.1%	96,000	3,264,000
Hogs Produced	0.6%	1,240,000	178,560,000
Chickens Produced	95.1%	185,200,000	926,000,000 - 1,481,600,000 (251,115,200,000 eggs)
Turkeys Produced	3.8%	7,500,000	60,000,000

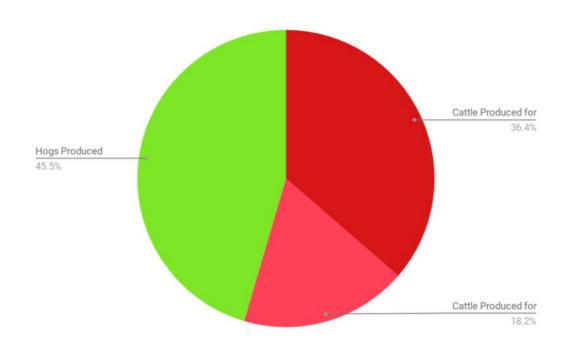




#### Rhode Island

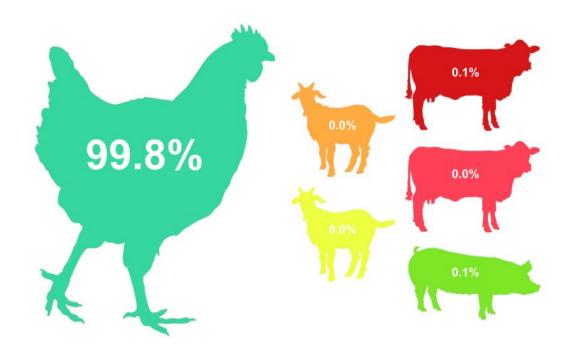
Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	36.3%	1,600	784,000 - 1,024,000
Cattle Produced for Milk	18.2%	800	15,860,000 (1,899,401 gals)
Goats Produced for Meat	0.0%	0	0
Goats Produced for Milk	0.0%	0	0
Sheep Including Lambs	0.0%	0	0
Hogs Produced	45.5%	2,000	288,000
Chickens Produced	0.0%	Ō	0
Turkeys Produced	0.0%	0	0

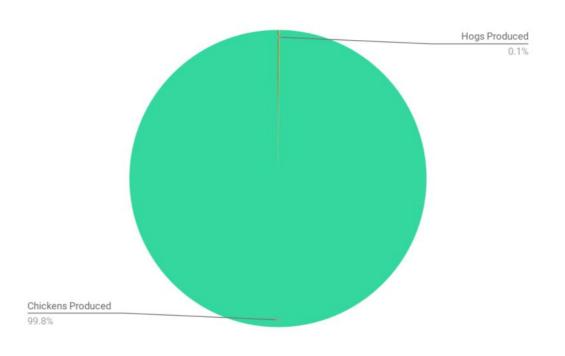




### South Carolina

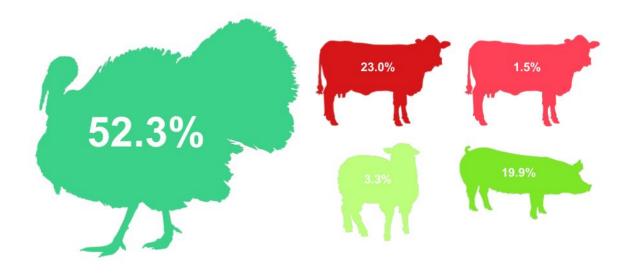
Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	0.1%	174,000	85,260,000 - 111,360,000
Cattle Produced for Milk	0.0%	15,000	297,375,000 (35,613,772 gals)
Goats Produced for Meat	0.0%	33,500	837,500 - 1,675,000
Goats Produced for Milk	0.0%	3,500	6,300,000 (754,491 gals)
Sheep Including Lambs	0.0%	0	0
Hogs Produced	0.1%	185,000	26,640,000
Chickens Produced	99.8%	243,100,000	1,215,500,000 - 1,944,800,000 (67,095,600,000 eggs)
Turkeys Produced	0.0%	0	0

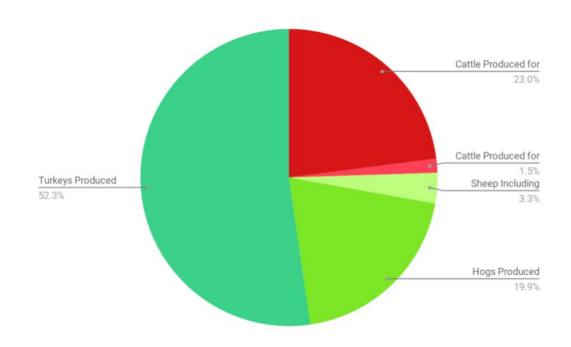




### South Dakota

Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	23%	1,801,000	882,490,000 - 1,152,640,000
Cattle Produced for Milk	1.5%	119,000	2,359,175,000 (282,535,928 gals)
Goats Produced for Meat	0.0%	0	0
Goats Produced for Milk	0.0%	0	0
Sheep Including Lambs	3.3%	260,000	8,840,000
Hogs Produced	19.9%	1,560,000	224,640,000
Chickens Produced	0.0%	0	0
Turkeys Produced	52.3%	4,100,000	32,800,000

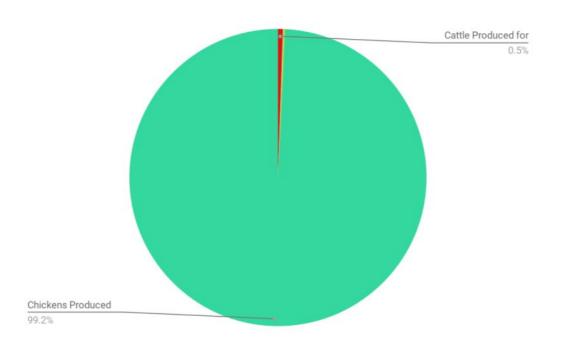




### Tennessee

Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	0.5%	910,000	445,900,000 - 582,400,000
Cattle Produced for Milk	0.0%	40,000	793,000,000 (94,970,059 gals)
Goats Produced for Meat	0.1%	104,000	2,600,000 - 5,200,000
Goats Produced for Milk	0.0%	7,500	13,500,000 (1,616,766 gals)
Sheep Including Lambs	0.1%	46,000	1,564,000
Hogs Produced	0.1%	235,000	33,840,000
Chickens Produced	99.2%	171,500,000	857,500,000 - 1,372,000,000 (47,334,000,000 eggs)
Turkeys Produced	0.0%	0	0

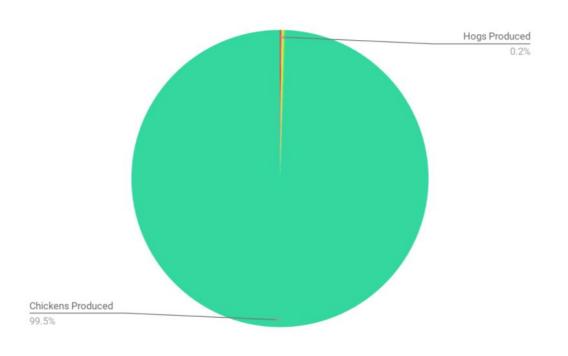




### Texas

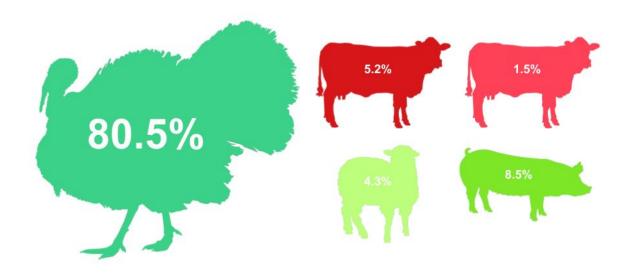
Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	0.1%	458,500	224,665,000 - 293,440,000
Cattle Produced for Milk	0.1%	515,000	10,209,900,000 (1,222,742,514 gals)
Goats Produced for Meat	0.1%	795,000	19,875,000 - 39,750,000
Goats Produced for Milk	0.0%	26,000	46,800,000 (5,604,790 gals)
Sheep Including Lambs	0.0%	750,000	25,500,000
Hogs Produced	0.2%	1,050,000	151,200,000
Chickens Produced	99.5%	651,200,000	3,256,000,000 - 5,209,600,000 (179,731,200,000 eggs)
Turkeys Produced	0.0%	0	0

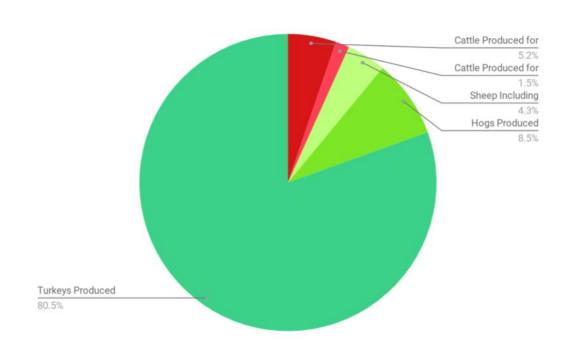




### Utah

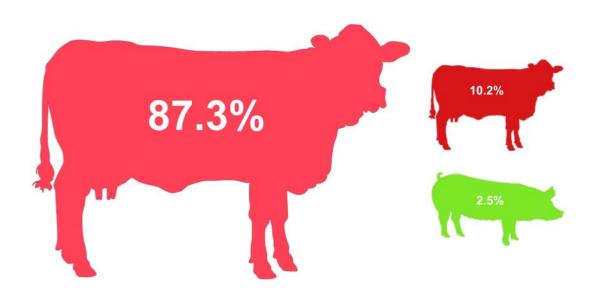
Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	5.2%	338,000	165,620,000 - 216,320,000
Cattle Produced for Milk	1.5%	97,000	1,923,025,000 (230,302,395 gals)
Goats Produced for Meat	0.0%	0	0
Goats Produced for Milk	0.0%	0	0
Sheep Including Lambs	4.3%	275,000	9,350,000
Hogs Produced	8.5%	550,000	79,200,000
Chickens Produced	0.0%	0	0
Turkeys Produced	80.5%	5,200,000	41,600,000

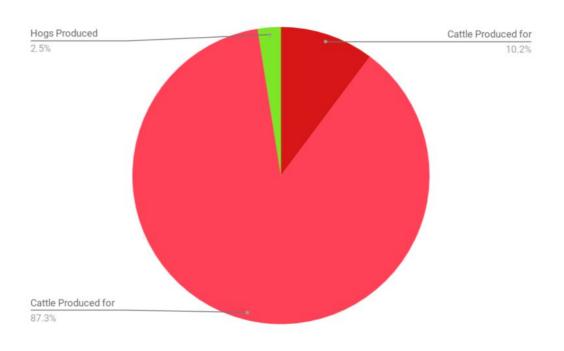




#### Vermont

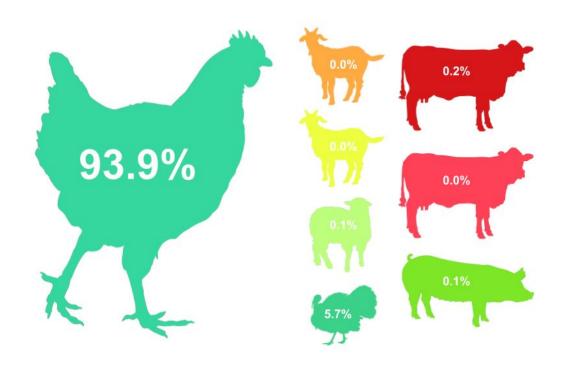
Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	10.2%	15,000	7,350,000 - 9,600,000
Cattle Produced for Milk	87.3%	128,000	2,537,600,000 (303,904,191 gals)
Goats Produced for Meat	0.0%	0	0
Goats Produced for Milk	0.0%	0	0
Sheep Including Lambs	0.0%	0	0
Hogs Produced	2.5%	3,700	532,800
Chickens Produced	0.0%	0	0
Turkeys Produced	0.0%	0	0

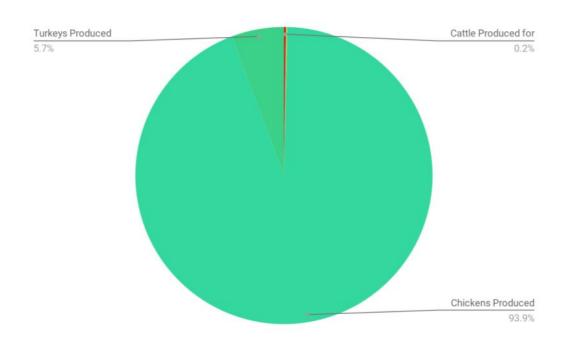




# Virginia

Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	0.2%	633,000	310,170,000 - 405,120,000
Cattle Produced for Milk	0.0%	87,000	1,724,775,000 (206,559,880 gals)
Goats Produced for Meat	0.0%	41,000	1,025,000 - 2,050,000
Goats Produced for Milk	0.0%	5,500	9,900,000 (1,185,628 gals)
Sheep Including Lambs	0.1%	75,000	2,550,000
Hogs Produced	0.1%	240,000	34,560,000
Chickens Produced	93.9%	277,400,000	1,387,000,000 - 2,219,200,000 (76,562,400,000 eggs)
Turkeys Produced	5.7%	16,800,000	134,400,000

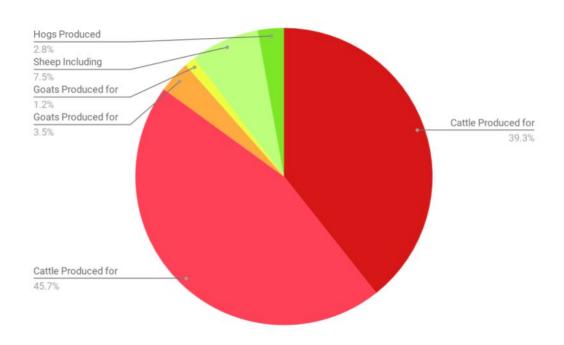




# Washington

Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	39.3%	236,000	115,640,000 - 151,040,000
Cattle Produced for Milk	45.7%	274,000	5,432,050,000 (650,544,910 gals)
Goats Produced for Meat	3.5%	21,000	525,000 - 1,050,000
Goats Produced for Milk	1.2%	7,000	12,600,000 (1,508,982 gals)
Sheep Including Lambs	7.5%	45,000	1,530,000
Hogs Produced	2.8%	17,000	2,448,000
Chickens Produced	0.0%	0	0
Turkeys Produced	0.0%	0	0

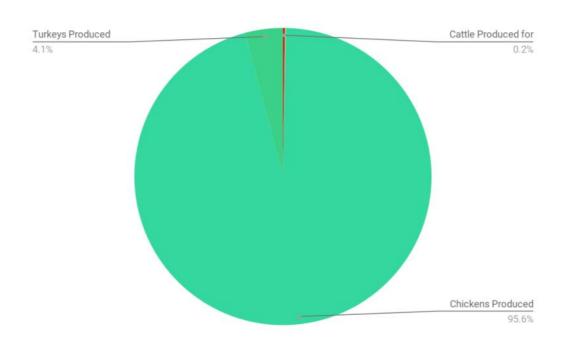




# West Virginia

Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	0.2%	203,000	9,947,000 - 129,920,000
Cattle Produced for Milk	0.0%	7,000	138,775,000 (16,619,760 gals)
Goats Produced for Meat	0.0%	21,500	537,500 - 1,075,000
Goats Produced for Milk	0.0%	0	0
Sheep Including Lambs	0.1%	35,000	1,190,000
Hogs Produced	0.0%	5,000	720,000
Chickens Produced	95.6%	86,100,000	430,500,000 - 688,800,000 (23,763,600,000 eggs)
Turkeys Produced	4.1%	3,700,000	29,600,000

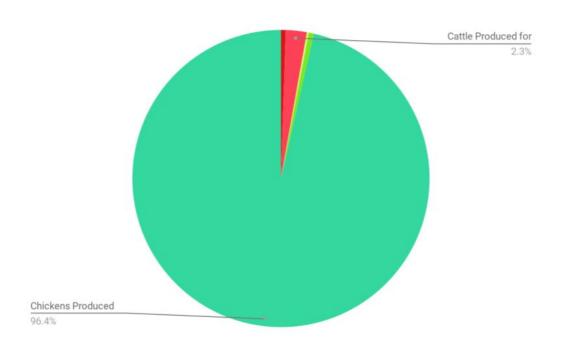




## Wisconsin

Section	Percent	Unit	Approximate Pounds	
Cattle Produced for Beef	0.5%	285,000	139,650,000 - 182,400,000	
Cattle Produced for Milk	2.3%	1,275,000	25,276,900,000 (3,027,173,652 gals)	
Goats Produced for Meat	0.0%	0	0	
Goats Produced for Milk	0.1%	47,000	84,600,000 (10,131,736)	
Sheep Including Lambs	0.2%	75,000	2,550,000	
Hogs Produced	0.5%	305,000	43,488,000	
Chickens Produced	96.4%	53,800,000	269,000,000 - 430,400,000 (14,848,800,000 eggs)	
Turkeys Produced	0.0%	0	0	

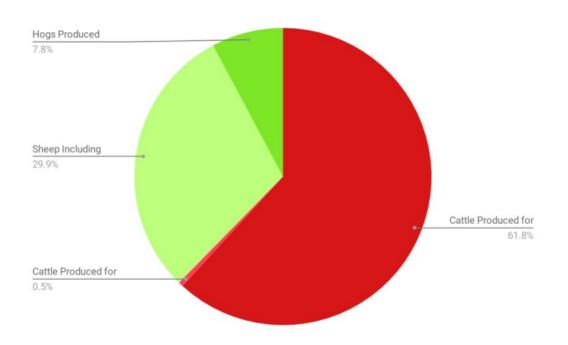




# Wyoming

Section	Percent	Unit	Approximate Pounds
Cattle Produced for Beef	61.8%	714,000	349,860,000 - 456,960,000
Cattle Produced for Milk	0.5%	6,000	118,950,000 (14,245,508 gals)
Goats Produced for Meat	0.0%	0	0
Goats Produced for Milk	0.0%	0	0
Sheep Including Lambs	29.9%	345,000	11,730,000
Hogs Produced	7.8%	90,000	12,960,000
Chickens Produced	0.0%	0	0
Turkeys Produced	0.0%	0	0





## Totals

	Cattle Produced for Beef
Percent	0.4%
Unit	27,555,000
Pounds	13,412,427,000 - 17,635,200,000

	Cattle Produced for Milk
Percent	0.1%
Unit	9,397,100
Pounds	186,281,647,500

	Goats Produced for Meat
Percent	0.0%
Unit	1,938,500
Pounds	48,462,500 - 96,925,000

	Goats Produced for Milk
Percent	0.0%
Unit	395,700
Pounds	712,260,000

	Sheep Including Lambs
Percent	0.1%
Unit	5,042,000
Pounds	171,428,000

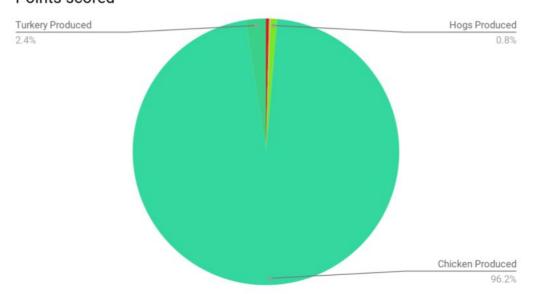
	Hogs Produced
Percent	0.8%
Unit	73,144,900
Pounds	22,196,433,600

	Chickens Produced
Percent	96.2%
Unit	8,340,100,000
Pounds	41,700,500,000 - 66,690,800,000

	Turkeys Produced
Percent	2.4%
Unit	212,400,000
Pounds	1,699,200,000



#### Points scored



## Sources

#### General

- https://www.nass.usda.gov/Quick\_Stats/Ag\_Overview/stateOverview.php?state=ALABAMA
  - The above link was used for all 50 states, the only difference is that the end of the link differentiated between the states.
- http://convert-to.com/conversion/water-weight-volume/convert-us-gal-of-water-volume-to-pound-lb-of-water-weight.html

#### Cattle

- https://extension.tennessee.edu/publications/documents/pb1822.pdf
- https://albertamilk.com/ask-dairy-farmer/how-long-does-the-average-dairy-cow-live/
- https://www.myanimalmyhealth.org/2017/06/9-food-animals-with-amazing-by-products-you-didnt-know/
- http://beef2live.com/story-fun-facts-products-beef-cattle-89-104636
- https://www.myfearlesskitchen.com/what-else-are-by-products-used-for/
- https://www.worldwildlife.org/industries/dairy
- http://science.time.com/2013/12/16/the-triple-whopper-environmental-impact-of-global-meat-production/
- https://cfaes.osu.edu/news/articles/reducing-the-environmental-impact-cows-waste

#### Goats

- https://sites.google.com/site/manitobagoatassociation1a/Resources/information-from-members/alternative-goat-products
- https://www.myanimalmyhealth.org/2017/06/9-food-animals-with-amazing-by-products-you-didnt-know/
- http://www.dairygoatssa.com/Products.htm
- https://www.fsis.usda.gov/wps/wcm/connect/fsis-content/internet/main/topics/food-safety-education/get-answers/food-safety-fac t-sheets/meat-preparation/goat-from-farm-to-table/ct\_index
- https://www.h2ouse.org/how-long-do-goats-live/
- https://prezi.com/qgp4erfgjwae/goats-products-and-by-products/
- https://evans.uw.edu/policy-impact/epar/research/environmental-implications-livestock-goats

#### Sheep

- http://www.thefatewe.com/how-much-meat-do-you-get.html
- http://www.sheep101.info/products.html
- https://protecttheharvest.com/education-resources/educational-resources/
- http://www.publish.csiro.au/sa/pdf/SA0401011
- https://www.iwto.org/news/understanding-environmental-impact-wool

### Hog

- https://protecttheharvest.com/site/assets/files/3176/pth-national-ffa-convention\_pig.pdf
- https://www.dailymail.co.uk/sciencetech/article-1217794/From-bullets-bread-beer-tambourines-toothpaste--plus-180-things-pig.
   html
- http://animalsmart.org/feeding-the-world/products-from-animals
- https://www.oda.state.ok.us/food/fs-hogweight.pdf
- https://articles.extension.org/pages/65635/evaluating-the-environmental-footprint-of-pork-production
- https://www.cnbc.com/2015/02/16/water-air-quality-fears-conflict-with-pig-farms.html
- http://www.earthtimes.org/business/environmental-impact-disposal-waste-large-scale-pig-production/433/

### Chicken

- https://protecttheharvest.com/site/assets/files/3176/pth-national-ffa-convention\_chicken.pdf
- https://farmweeknow.com/blogs-chickens-rule-year-rooster-17584
- https://www.nytimes.com/2016/04/19/science/how-many-eggs-does-a-chicken-lay-in-its-lifetime.html
- http://www.fao.org/Ag/Againfo/home/events/bangkok2007/docs/part2/2\_2.pdf
- https://sciencing.com/ecological-impact-chicken-farming-5005.html
- http://www.upc-online.org/environment/
- https://gizmodo.com/youll-never-believe-all-the-things-made-out-of-chicken-1533665221

### **Turkey**

- https://dollydomestic.com/cooking/how-much-meat-does-a-turkey-yield/
- http://extension.illinois.edu/turkey/turkey\_facts.cfm
- https://wanderingbull.com/turkey-feathers-history/
- https://afs.ca.uky.edu/poultry/poultry-feathers-what-can-they-be-used
- http://www.fao.org/Ag/Againfo/home/events/bangkok2007/docs/part2/2\_2.pdf