

The Impact of Nebraska Wheat: 2008 Estimates

In 2008, 73,500,000 bu of wheat were harvested in Nebraska. The wheat was produced on 1,670,000 harvested acres with an average yield of 44 bu/a. Hence the annual production is 73,500,000 bu x 60 lbs/bu = 4,410,000,000 lbs. The economic value of the crop (assuming \$7.00/bu) was \$514,500,000

The average annual per capita consumption of wheat in the United States is between 148 and 150 lbs/person. Assuming 150 lbs/person annual consumption the crop could feed 29,400,000 Americans.

$$29,400,000 \text{ people} = 4,410,000,000,000 \text{ lbs} / (150 \text{ lbs/person})$$

The Impact of the University of Nebraska –USDA Wheat Breeding Program

In the 2008 replicated state variety trials, Scout 66 yielded 80% of Overland, Camelot, and Millennium, which were bred by the University of Nebraska –USDA Wheat Breeding Program. Hence we can assume that 20% of the total production was due to cultivars released from all sources since Scout 66. This additional production would be worth:

$$\$514,500,000 \times 20\% = \$102,900,000$$

and provide wheat to feed 5,880,000 people:

$$29,400,000 \text{ people} \times 0.20 = 5,880,000 \text{ people}$$

In 2008, 56.2% of the total wheat production is planted to cultivars released by University of Nebraska –USDA Wheat Breeding Program. Hence this program was instrumental in providing:

$\$102,900,000 \times .562 = \$57,829,800$ increased value at the farm gate to Nebraska farmers. As these varieties are grown outside Nebraska, the monetary value would be easily worth many fold more. In addition, other industries, shipping, milling and baking reap benefits from these varieties, as does the general public by improved foods and greater productivity per land area, thus providing more land for alternative uses.

It also provided enough wheat to feed an additional 3,304,560 Americans:

$$5,880,000 \times 0.562 = 3,304,560$$

The Impact of the University of Nebraska Wheat Cropping Systems Program

It is generally assumed for each unit of improvement due to genetics, there is a unit of improvement due to improved production practices. As production practices are not cultivar specific, since Scout 66, improvements in cultural practices have produced additional wheat sufficient to feed 5,880,000 Americans.

The Impact of Nebraska Wheat: 1998 Estimates

In 1998, 84,600,000 bu of wheat were harvested in Nebraska. The wheat was produced on 1,800,000 harvested acres with an average yield of 47 bu/a. Hence the annual production is $84,600,000 \text{ bu} \times 60 \text{ lbs/bu} = 5,076,000,000 \text{ lbs}$.

The average annual per capita consumption of wheat in the United States is between 148 and 150 lbs/person. Assuming 150 lbs/person annual consumption the crop could feed 33,840,000 Americans.

$$33,840,000 \text{ people} = 5,076,000,000 \text{ lbs} / (150 \text{ lbs/person})$$

The Impact of the University of Nebraska –USDA Wheat Breeding Program

In the 1998 replicated state variety trials, Scout 66 yielded 81% of Alliance, Arapahoe, and Windstar, which were bred by the University of Nebraska –USDA Wheat Breeding Program. Hence we can assume that 19% of the total production was due to cultivars released from all sources since Scout 66. This additional production would provide wheat to feed 6,429,600 people:

$$33,840,000 \text{ people} \times 0.19 = 6,429,600 \text{ people}$$

Currently, 77% of the total wheat production is planted to cultivars released by University of Nebraska –USDA Wheat Breeding Program. Hence this program was instrumental in providing wheat to feed an additional 4,950,792 Americans:

$$6,429,600 \times 0.77 = 4,950,792$$

Cultivars released by University of Nebraska –USDA Wheat Breeding Program since 1986 constitute 58% of the total production and are instrumental in providing wheat to feed an additional 3,729,168 Americans:

$$6,429,600 \times 0.58 = 3,729,792$$

The Impact of the University of Nebraska Wheat Cropping Systems Program

It is generally assumed for each unit of improvement due to genetics, there is a unit of improvement due to improved production practices. As production practices are not cultivar specific, since Scout 66, improvements in cultural practices have produced additional wheat sufficient to feed 6,429,6000 Americans.