

---

# Estimated Costs of Crop Production in Iowa - 2018

*Ag Decision Maker*

File A1-20

---

The estimated costs of corn, corn silage, soybeans, alfalfa, and pasture maintenance in this report are based on data from several sources. They include the annual Iowa Farm Business Association record summaries, production and costs data from the Departments of Economics, Agricultural and Biosystems Engineering, and Agronomy at Iowa State University, and a survey of selected agricultural cooperatives and other input suppliers around the state.

These cost estimates are representative of average costs for farms in Iowa. Very large or small farms may have lower or higher fixed costs per acre.

Due to differences in soil potentials, quantity of inputs used, and other factors, production costs will vary from farm to farm. Price shifts for inputs can change production costs in both the short and long run. The data reflect average cost of purchased inputs and a return to land and labor resources, but do not provide a margin for profit or a return to management. They reflect production costs only, and do not include costs of storage.

Labor has been treated as a fixed cost because most labor on Iowa farms is supplied by the operator, family, or permanent hired labor. However, when deciding among alternative crops, labor should be considered a variable cost. The wage rate used here is \$14.00 per hour. The hours assumed per crop are presented in the budgets. The hours per crop acre include not only the field work but also time for maintenance, travel, and other activities related to crop production. The land charge is based on rent equivalent. Owned land may require a greater or lesser cash outlay.

In the short run, cash income must be sufficient to pay cash costs, including seed, fertilizer, chemicals, insurance, cash rent, and hired labor, as well as machinery fuel and repairs, and interest

on operating capital. In the long run, income should be sufficient to pay all costs of production for resources to be used in their most profitable alternative.

Corn yields reflect rotation effects. Fertilizer rates have been adjusted to reflect current data on removal and application rates. Crop insurance costs reflect revenue crop protection at 80 percent coverage for a typical farm in Central Iowa

Machinery costs reflect both new and used equipment. The machine operations assumed are based on the 2000 Crop Production Practices Survey conducted by the Iowa Agricultural Statistics Service and Iowa State University Extension and Outreach publication PM 696, *Estimating the Field Capacity of Farm Machines*, <https://store.extension.iastate.edu/product/4032>. The Estimated Machinery Costs table can be used to budget other tillage and harvesting systems.

Estimates represent typical costs and are only intended to be guidelines. Actual costs will vary considerably and can be entered in the column for "Your Estimates." Electronic spreadsheets for developing crop production budgets are available on the Ag Decision Maker website, [www.extension.iastate.edu/agdm](http://www.extension.iastate.edu/agdm).

Budgets for alfalfa hay establishment with an oat companion crop and by direct seeding are included in this publication. Annual production costs for established alfalfa or alfalfa-grass hay as well as a budget for maintaining grass pastures are included.

Two low-till budgets, one for corn and one for soybeans, are included. The major differences between the low-till and conventional budgets are the preharvest machinery, labor, herbicide, and seeding costs. The soybean budgets are for herbicide tolerant varieties. A strip-till budget is also included.

---

FM 1712 Revised January 2018

IOWA STATE UNIVERSITY  
Extension and Outreach

## Corn Following Corn

|   | 145<br>bu. per acre |              | 165<br>bu. per acre |              | 185<br>bu. per acre |              | Your<br>Estimate |
|---|---------------------|--------------|---------------------|--------------|---------------------|--------------|------------------|
|   | Fixed               | Variable     | Fixed               | Variable     | Fixed               | Variable     |                  |
| Preharvest Machinery <sup>1/</sup>                            | \$23.50             | \$21.70      | \$23.50             | \$21.70      | \$23.50             | \$21.70      | \$ _____         |
| Seed, Chemical, etc.  | <b>Units</b>        |              | <b>Units</b>        |              | <b>Units</b>        |              |                  |
| Seed @ \$3.26 per 1000 k.                                     | 25,000              | \$81.60      | 30,000              | \$97.90      | 35,000              | \$114.20     | \$ _____         |
| Nitrogen @ \$0.30 per lb.                                     | 186                 | 55.80        | 186                 | 55.80        | 186                 | 55.80        | _____            |
| Phosphate @ \$0.39 per lb.                                    | 54                  | 21.06        | 62                  | 24.18        | 69                  | 26.91        | _____            |
| Potash @ \$0.27 per lb.                                       | 44                  | 11.88        | 50                  | 13.50        | 56                  | 15.12        | _____            |
| Lime (yearly cost)  |                     | 4.90         |                     | 4.90         |                     | 4.90         | _____            |
| Herbicide   |                     | 28.00        |                     | 28.00        |                     | 28.00        | _____            |
| Insecticide   |                     | 23.30        |                     | 23.30        |                     | 23.30        | _____            |
| Crop insurance  |                     | 9.90         |                     | 11.00        |                     | 11.90        | _____            |
| Miscellaneous   |                     | 9.00         |                     | 10.00        |                     | 11.00        | _____            |
| Interest on preharvest<br>variable costs<br>(8 months @ 5.8%) |                     | <u>10.33</u> |                     | <u>11.22</u> |                     | <u>12.10</u> | _____            |
| Total   |                     | \$255.77     |                     | \$279.81     |                     | \$303.23     | \$ _____         |
| <b>Harvest Machinery</b>                                      |                     |              |                     |              |                     |              |                  |
| Combine   | \$13.30             | \$6.90       | \$13.30             | \$6.90       | \$13.30             | \$6.90       | \$ _____         |
| Grain cart  | 6.30                | 3.10         | 6.30                | 3.10         | 6.30                | 3.10         | _____            |
| Haul  | 6.40                | 5.69         | 7.28                | 6.48         | 8.16                | 7.26         | _____            |
| Dry (LP Gas @ \$1.50/gal.)                                    | 7.25                | 26.10        | 8.25                | 29.70        | 9.25                | 33.30        | _____            |
| Handle (auger)  | 2.58                | 2.94         | 2.94                | 3.35         | 3.30                | 3.75         | _____            |
| Total   | \$35.83             | \$44.74      | \$38.07             | \$49.53      | \$40.31             | \$54.32      | \$ _____         |
| <b>Labor</b>  |                     |              |                     |              |                     |              |                  |
| 2.80 hours @ \$14.00  | \$39.20             |              | \$39.20             |              | \$39.20             |              | \$ _____         |
| <b>Land</b>   |                     |              |                     |              |                     |              |                  |
| Cash rent equivalent  | \$182.00            |              | \$219.00            |              | \$256.00            |              | \$ _____         |
| <b>Total fixed, variable</b>                                  |                     |              |                     |              |                     |              |                  |
| Per acre  | \$280.53            | \$322.21     | \$319.77            | \$351.03     | \$359.01            | \$379.25     | Yield:           |
| Per bushel  | \$1.93              | \$2.22       | \$1.94              | \$2.13       | \$1.94              | \$2.05       | bu./acre _____   |
| Total cost per acre   | \$602.74            |              | \$670.80            |              | \$738.25            |              | \$ _____         |
| Total cost per bushel   | \$4.16              |              | \$4.07              |              | \$3.99              |              | \$ _____         |

<sup>1/</sup>Chisel plow, tandem disk, apply N, field cultivate, plant, and spray. See the Estimated Machinery Costs table.

## Corn Following Soybeans

|   | 160<br>bu. per acre |          | 180<br>bu. per acre |          | 200<br>bu. per acre |          | Your<br>Estimate |
|---|---------------------|----------|---------------------|----------|---------------------|----------|------------------|
|   | Fixed               | Variable | Fixed               | Variable | Fixed               | Variable |                  |
| <b>Preharvest Machinery</b> <sup>1/</sup>                     | \$19.90             | \$17.70  | \$19.90             | \$17.70  | \$19.90             | \$17.70  | \$ _____         |
| <b>Seed, Chemical, etc.</b>                                   | <b>Units</b>        |          | <b>Units</b>        |          | <b>Units</b>        |          |                  |
| Seed @ \$3.26 per 1000 k.                                     | 25,000              | \$81.60  | 30,000              | \$97.90  | 35,000              | \$114.20 | \$ _____         |
| Nitrogen @ \$0.30 per lb.                                     | 131                 | 39.30    | 131                 | 39.30    | 131                 | 39.30    | _____            |
| Phosphate @ \$0.39 per lb.                                    | 60                  | 23.40    | 68                  | 26.52    | 75                  | 29.25    | _____            |
| Potash @ \$0.27 per lb.                                       | 48                  | 12.96    | 54                  | 14.58    | 60                  | 16.20    | _____            |
| Lime (yearly cost)  |                     | 4.90     |                     | 4.90     |                     | 4.90     | _____            |
| Herbicide   |                     | 28.00    |                     | 28.00    |                     | 28.00    | _____            |
| Crop insurance  |                     | 9.90     |                     | 11.00    |                     | 11.90    | _____            |
| Miscellaneous   |                     | 9.00     |                     | 10.00    |                     | 11.00    | _____            |
| Interest on preharvest<br>variable costs<br>(8 months @ 5.8%) |                     | 8.77     |                     | 9.66     |                     | 10.53    | _____            |
| <b>Total</b>  |                     | \$217.83 |                     | \$241.86 |                     | \$265.29 | \$ _____         |
| <b>Harvest Machinery</b>                                      |                     |          |                     |          |                     |          |                  |
| Combine   | \$13.30             | \$6.90   | \$13.30             | \$6.90   | \$13.30             | \$6.90   | \$ _____         |
| Grain cart  | 6.30                | 3.10     | 6.30                | 3.10     | 6.30                | 3.10     | _____            |
| Haul  | 7.06                | 6.28     | 7.94                | 7.07     | 8.82                | 7.85     | _____            |
| Dry (LP Gas @ \$1.50/gal.)                                    | 8.00                | 28.80    | 9.00                | 32.40    | 10.00               | 36.00    | _____            |
| Handle (auger)  | 2.85                | 3.25     | 3.21                | 3.65     | 3.57                | 4.06     | _____            |
| <b>Total</b>  | \$37.51             | \$48.33  | \$39.75             | \$53.12  | \$41.99             | \$57.91  | \$ _____         |
| <b>Labor</b>  |                     |          |                     |          |                     |          |                  |
| 2.55 hours @ \$14.00  | \$35.70             |          | \$35.70             |          | \$35.70             |          | \$ _____         |
| <b>Land</b>   |                     |          |                     |          |                     |          |                  |
| Cash rent equivalent  | \$182.00            |          | \$219.00            |          | \$256.00            |          | \$ _____         |
| <b>Total fixed, variable</b>                                  |                     |          |                     |          |                     |          |                  |
| Per acre  | \$275.11            | \$283.86 | \$314.35            | \$312.68 | \$353.59            | \$340.90 | Yield:           |
| Per bushel  | \$1.72              | \$1.77   | \$1.75              | \$1.74   | \$1.77              | \$1.70   | bu./acre _____   |
| <b>Total cost per acre</b>                                    | \$558.97            |          | \$627.03            |          | \$694.49            |          | \$ _____         |
| <b>Total cost per bushel</b>                                  | \$3.49              |          | \$3.48              |          | \$3.47              |          | \$ _____         |

<sup>1/</sup>Apply N, tandem disk, field cultivate, plant, and spray. See the Estimated Machinery Costs table.

## Corn Silage Following Corn

|   | 21<br>tons per acre |          | 24<br>tons per acre |          | 26<br>tons per acre |          | Your<br>Estimate |
|---|---------------------|----------|---------------------|----------|---------------------|----------|------------------|
|   | Fixed               | Variable | Fixed               | Variable | Fixed               | Variable |                  |
| Preharvest Machinery <sup>1/</sup>                            | \$23.50             | \$21.70  | \$23.50             | \$21.70  | \$23.50             | \$21.70  | \$ _____         |
| Seed, Chemical, etc.  | Units               |          | Units               |          | Units               |          |                  |
| Seed @ \$3.26 per 1000 k.                                     | 28,750              | \$93.80  | 34,500              | \$112.60 | 40,250              | \$131.30 | \$ _____         |
| Nitrogen @ \$0.30 per lb.                                     | 150                 | 45.00    | 150                 | 45.00    | 150                 | 45.00    | _____            |
| Phosphate @ \$0.39 per lb.                                    | 74                  | 28.86    | 84                  | 32.76    | 91                  | 35.49    | _____            |
| Potash @ \$0.27 per lb.                                       | 168                 | 45.36    | 192                 | 51.84    | 208                 | 56.16    | _____            |
| Lime (yearly cost)  |                     | 4.90     |                     | 4.90     |                     | 4.90     | _____            |
| Herbicide   |                     | 28.00    |                     | 28.00    |                     | 28.00    | _____            |
| Insecticide   |                     | 23.30    |                     | 23.30    |                     | 23.30    | _____            |
| Crop insurance  |                     | 9.90     |                     | 11.00    |                     | 11.90    | _____            |
| Miscellaneous   |                     | 9.00     |                     | 10.00    |                     | 11.00    | _____            |
| Interest on preharvest<br>variable costs<br>(8 months @ 5.8%) |                     | 11.98    |                     | 13.19    |                     | 14.26    | _____            |
| Total   |                     | \$300.10 |                     | \$332.59 |                     | \$361.31 | \$ _____         |
| Harvest Machinery   |                     |          |                     |          |                     |          |                  |
| Silage harvester  | \$50.10             | \$31.80  | \$50.10             | \$31.80  | \$50.10             | \$31.80  | \$ _____         |
| Haul  | 28.51               | 27.77    | 32.59               | 31.74    | 35.30               | 34.39    | _____            |
| Store silage (unloader)                                       | 9.01                | 2.74     | 10.29               | 3.13     | 11.15               | 3.39     | _____            |
| Total   | \$87.62             | \$62.31  | \$92.98             | \$66.67  | \$96.55             | \$69.58  | \$ _____         |
| Labor   |                     |          |                     |          |                     |          |                  |
| 4.95 hours @ \$14.00  | \$69.30             |          | \$69.30             |          | \$69.30             |          | \$ _____         |
| Land  |                     |          |                     |          |                     |          |                  |
| Cash rent equivalent  | \$182.00            |          | \$219.00            |          | \$256.00            |          | \$ _____         |
| Total fixed, variable   |                     |          |                     |          |                     |          |                  |
| Per acre  | \$362.42            | \$384.12 | \$404.78            | \$420.97 | \$445.35            | \$452.59 | Yield:           |
| Per ton   | \$17.26             | \$18.29  | \$16.87             | \$17.54  | \$17.13             | \$17.41  | bu./acre _____   |
| Total cost per acre   | \$746.54            |          | \$825.75            |          | \$897.94            |          | \$ _____         |
| Total cost per ton  | \$35.55             |          | \$34.41             |          | \$34.54             |          | \$ _____         |

<sup>1/</sup> Chisel plow, tandem disk, apply N, field cultivate, plant, and spray. See the Estimated Machinery Costs table.

## Herbicide Tolerant Soybeans Following Corn

|   | 45<br>bu. per acre |          | 50<br>bu. per acre |          | 55<br>bu. per acre |          | Your<br>Estimate |
|---|--------------------|----------|--------------------|----------|--------------------|----------|------------------|
|   | Fixed              | Variable | Fixed              | Variable | Fixed              | Variable |                  |
| <b>Preharvest Machinery</b> <sup>1/</sup>                     | \$21.30            | \$19.20  | \$21.30            | \$19.20  | \$21.30            | \$19.20  | \$ _____         |
| <b>Seed, Chemical, etc.</b>                                   | <b>Units</b>       |          | <b>Units</b>       |          | <b>Units</b>       |          |                  |
| Seed @ \$52.00 per 140 k.                                     | 140                | \$52.00  | 140                | \$52.00  | 140                | \$52.00  | \$ _____         |
| Phosphate @ \$0.39 per lb.                                    | 36                 | 14.04    | 40                 | 15.60    | 44                 | 17.16    | _____            |
| Potash @ \$0.27 per lb.                                       | 68                 | 18.36    | 75                 | 20.25    | 83                 | 22.41    | _____            |
| Lime (yearly cost)  |                    | 4.90     |                    | 4.90     |                    | 4.90     | _____            |
| Herbicide <sup>2/</sup>                                       |                    | 36.30    |                    | 36.30    |                    | 36.30    | _____            |
| Crop insurance  |                    | 7.90     |                    | 8.90     |                    | 10.00    | _____            |
| Miscellaneous   |                    | 9.00     |                    | 10.00    |                    | 11.00    | _____            |
| Interest on preharvest<br>variable costs<br>(8 months @ 5.8%) |                    | 6.25     |                    | 6.46     |                    | 6.69     | _____            |
| <b>Total</b>  |                    | \$148.75 |                    | \$154.41 |                    | \$160.46 | \$ _____         |
| <b>Harvest Machinery</b>                                      |                    |          |                    |          |                    |          |                  |
| Combine   | \$8.50             | \$4.20   | \$8.50             | \$4.20   | \$8.50             | \$4.20   | \$ _____         |
| Grain cart  | 6.30               | 3.10     | 6.30               | 3.10     | 6.30               | 3.10     | _____            |
| Haul  | 1.99               | 1.77     | 2.21               | 1.96     | 2.43               | 2.16     | _____            |
| Handle (auger)  | 0.80               | 0.91     | 0.89               | 1.01     | 0.98               | 1.12     | _____            |
| <b>Total</b>  | \$17.59            | \$9.98   | \$17.90            | \$10.28  | \$18.21            | \$10.58  | \$ _____         |
| <b>Labor</b>  |                    |          |                    |          |                    |          |                  |
| 2.20 hours @ \$14.00  | \$30.80            |          | \$30.80            |          | \$30.80            |          | \$ _____         |
| <b>Land</b>   |                    |          |                    |          |                    |          |                  |
| Cash rent equivalent  | \$182.00           |          | \$219.00           |          | \$256.00           |          | \$ _____         |
| <b>Total fixed, variable</b>                                  |                    |          |                    |          |                    |          |                  |
| Per acre  | \$251.69           | \$177.93 | \$289.00           | \$183.89 | \$326.31           | \$190.24 | Yield:           |
| Per bushel  | \$5.59             | \$3.95   | \$5.78             | \$3.68   | \$5.93             | \$3.46   | bu./acre _____   |
| <b>Total cost per acre</b>                                    | \$429.62           |          | \$472.89           |          | \$516.54           |          | \$ _____         |
| <b>Total cost per bushel</b>                                  | \$9.55             |          | \$9.46             |          | \$9.39             |          | \$ _____         |

<sup>1/</sup> Chisel plow, tandem disk, field cultivate, plant, and two sprays. See the Estimated Machinery Costs table.

<sup>2/</sup> Estimates do not include any insecticide or fungicide costs.

## Strip Tillage Corn and Soybeans

|   | <u>Corn Following Soybeans</u> |          |                  | <u>Herbicide Tolerant Soybeans Following Corn</u> |          |                  |
|---|--------------------------------|----------|------------------|---|----------|------------------|
|   | 180<br>bu. per acre            |          | Your<br>Estimate | 50<br>bu. per acre                                |          | Your<br>Estimate |
|   | Fixed                          | Variable |                  | Fixed   | Variable |                  |
| <b>Preharvest Machinery</b> <sup>1/</sup>                     | \$11.10                        | \$10.10  | \$ _____         | \$13.50   | \$11.80  | \$ _____         |
| <b>Seed, Chemical, etc.</b>                                   | <b>Units</b>                   |          |                  | <b>Units</b>                                      |          |                  |
| Seed @ \$3.26 per 1000 k.                                     | 30,000                         | \$97.88  | \$ _____         |   |          |                  |
| Seed @ \$52.00 per 140 k.                                     |                                |          |                  | 160   | \$59.40  | \$ _____         |
| Nitrogen @ \$0.30 per lb.                                     | 131                            | \$39.30  | _____            |   |          |                  |
| Phosphate @ \$0.39 per lb.                                    | 68                             | 26.52    | _____            | 40  | 15.60    | _____            |
| Potash @ \$0.27 per lb.                                       | 54                             | 14.58    | _____            | 75  | 20.25    | _____            |
| Lime (yearly cost)  |                                | 4.90     | _____            |   | 4.90     | _____            |
| Herbicide <sup>2/</sup>                                       |                                | 35.50    | _____            |   | 43.30    | _____            |
| Crop insurance  |                                | 11.00    | _____            |   | 8.90     | _____            |
| Miscellaneous   |                                | 10.00    | _____            |   | 10.00    | _____            |
| Interest on preharvest<br>variable costs<br>(8 months @ 5.8%) |                                | 9.66     | _____            |   | 6.73     | _____            |
| <b>Total</b>  |                                | \$249.34 | \$ _____         |   | \$169.09 | \$ _____         |
| <b>Harvest Machinery</b>                                      |                                |          |                  |   |          |                  |
| Combine   | \$13.30                        | \$6.90   | \$ _____         | \$8.50  | \$4.20   | \$ _____         |
| Grain cart  | 6.30                           | 3.10     | _____            | 6.30  | 3.10     | _____            |
| Haul  | 7.94                           | 7.07     | _____            | 2.21  | 1.96     | _____            |
| Dry (LP Gas @ \$1.50/gal.)                                    | 9.00                           | 32.40    | _____            |   |          |                  |
| Handle (auger)  | 3.21                           | 3.65     | _____            | 0.89  | 1.01     | _____            |
| <b>Total</b>  | \$39.75                        | \$53.12  | \$ _____         | \$17.90   | \$10.28  | \$ _____         |
| <b>Labor</b>  |                                |          |                  |   |          |                  |
| 2.25 hours @ \$14.00  | \$31.50                        |          | \$ _____         |   |          |                  |
| 1.70 hours @ \$14.00  |                                |          |                  | \$23.80   |          | \$ _____         |
| <b>Land</b>   |                                |          |                  |   |          |                  |
| Cash rent equivalent  | \$219.00                       |          | \$ _____         | \$219.00  |          | \$ _____         |
| <b>Total fixed, variable</b>                                  |                                |          |                  |   |          |                  |
| Per acre  | \$301.35                       | \$312.56 | Yield: _____     | \$274.20  | \$191.16 | Yield: _____     |
| Per bushel  | \$1.67                         | \$1.74   | bu./acre _____   | \$5.48  | \$3.82   | bu./acre _____   |
| <b>Total cost per acre</b>                                    | \$613.91                       |          | \$ _____         | \$465.36  |          | \$ _____         |
| <b>Total cost per bushel</b>                                  | \$3.41                         |          | \$ _____         | \$9.31  |          | \$ _____         |

<sup>1/</sup> Strip till, plant, and spray for corn. No-till drill, two sprays for soybeans. See the Estimated Machinery Costs table.

<sup>2/</sup> Estimates do not include any insecticide or fungicide costs.

## Non-Herbicide Tolerant Soybeans Following Corn

|   | <u>Soybeans Following Corn</u> |          |                  | <u>Drilled Soybeans Following Corn</u> |          |                  |
|---|--------------------------------|----------|------------------|--|----------|------------------|
|   | 50<br>bu. per acre             |          | Your<br>Estimate | 50<br>bu. per acre                     |          | Your<br>Estimate |
|   | Fixed                          | Variable |                  | Fixed                                  | Variable |                  |
| <b>Preharvest Machinery</b> <sup>1/</sup>                     | \$21.80                        | \$19.60  | \$ _____         | \$18.70                                | \$16.10  | \$ _____         |
| <b>Seed, Chemical, etc.</b>                                   | <b>Units</b>                   |          | _____            | <b>Units</b>                           |          | _____            |
| Seed @ \$37.00 per 140 k.                                     | 130                            | \$34.40  | _____            | 150                                    | \$39.60  | \$ _____         |
| Phosphate @ \$0.39 per lb.                                    | 40                             | 15.60    | _____            | 40                                     | 15.60    | _____            |
| Potash @ \$0.27 per lb.                                       | 75                             | 20.25    | _____            | 75                                     | 20.25    | _____            |
| Lime (yearly cost)  |                                | 4.90     | _____            |  | 4.90     | _____            |
| Herbicide <sup>2/</sup>                                       |                                | 48.00    | _____            |  | 43.30    | _____            |
| Crop insurance  |                                | 8.90     | _____            |  | 8.90     | _____            |
| Miscellaneous   |                                | 10.00    | _____            |  | 10.00    | _____            |
| Interest on preharvest<br>variable costs<br>(8 months @ 5.8%) |                                | 6.25     | _____            |  | 6.13     | _____            |
| <b>Total</b>  |                                | \$148.30 | \$ _____         |  | \$148.69 | \$ _____         |
| <b>Harvest Machinery</b>                                      |                                |          |                  |  |          |                  |
| Combine   | \$8.50                         | \$4.20   | \$ _____         | \$8.50                                 | \$4.20   | \$ _____         |
| Grain cart  | 6.30                           | 3.10     | _____            | 6.30                                   | 3.10     | _____            |
| Haul  | 2.21                           | 1.96     | _____            | 2.21                                   | 1.96     | _____            |
| Handle (auger)  | 0.89                           | 1.01     | _____            | 0.89                                   | 1.01     | _____            |
| <b>Total</b>  | \$17.90                        | \$10.28  | \$ _____         | \$17.90                                | \$10.28  | \$ _____         |
| <b>Labor</b>  |                                |          |                  |  |          |                  |
| 2.40 hours @ \$14.00  | \$33.60                        |          | \$ _____         |  |          |                  |
| 1.72 hours @ \$14.00  |                                |          |                  | \$24.08                                |          | \$ _____         |
| <b>Land</b>   |                                |          |                  |  |          |                  |
| Cash rent equivalent  | \$219.00                       |          | \$ _____         | \$219.00                               |          | \$ _____         |
| <b>Total fixed, variable</b>                                  |                                |          |                  |  |          |                  |
| Per acre  | \$292.30                       | \$178.18 | Yield: _____     | \$279.68                               | \$175.06 | Yield: _____     |
| Per bushel  | \$5.85                         | \$3.56   | bu./acre _____   | \$5.59                                 | \$3.50   | bu./acre _____   |
| <b>Total cost per acre</b>                                    | \$470.48                       |          | \$ _____         | \$454.74                               |          | \$ _____         |
| <b>Total cost per bushel</b>                                  | \$9.41                         |          | \$ _____         | \$9.09                                 |          | \$ _____         |

<sup>1/</sup>Chisel plow, tandem disk, field cultivate, plant, cultivate, and spray.

Tandem disk, field cultivate, drill, and spray for drilled soybeans. See the Estimated Machinery Costs table.

<sup>2/</sup>Estimates do not include any insecticide or fungicide costs.

## Low-till Corn and Soybeans

|   | <u>Corn Following Soybeans</u> |          |                  | <u>Herbicide Tolerant<br/>Drilled Soybeans Following Corn</u> |          |                  |
|---|--------------------------------|----------|------------------|---|----------|------------------|
|   | 180<br>bu. per acre            |          | Your<br>Estimate | 50<br>bu. per acre  |          | Your<br>Estimate |
|   | Fixed                          | Variable |                  | Fixed   | Variable |                  |
| <b>Preharvest Machinery</b> <sup>1/</sup>                     | \$15.20                        | \$14.20  | \$ _____         | \$13.70   | \$11.60  | \$ _____         |
| <b>Seed, Chemical, etc.</b>                                   | <b>Units</b>                   |          |                  | <b>Units</b>  |          |                  |
| Seed @ \$3.26 per 1000 k.                                     | 30,000                         | \$97.88  | \$ _____         |   |          |                  |
| Seed @ \$52.00 per 140 k.                                     |                                |          |                  | 160   | \$59.40  | \$ _____         |
| Nitrogen @ \$0.30 per lb.                                     | 131                            | 39.30    | _____            |   |          |                  |
| Phosphate @ \$0.39 per lb.                                    | 68                             | 26.52    | _____            | 40  | 15.60    | _____            |
| Potash @ \$0.27 per lb.                                       | 54                             | 14.58    | _____            | 75  | 20.25    | _____            |
| Lime (yearly cost)  |                                | 4.90     | _____            |   | 4.90     | _____            |
| Herbicide <sup>2/</sup>                                       |                                | 35.50    | _____            |   | 43.30    | _____            |
| Crop insurance  |                                | 11.00    | _____            |   | 8.90     | _____            |
| Miscellaneous   |                                | 10.00    | _____            |   | 10.00    | _____            |
| Interest on preharvest<br>variable costs<br>(8 months @ 5.8%) |                                | 9.82     | _____            |   | 6.73     | _____            |
| <b>Total</b>  |                                | \$249.50 | \$ _____         |   | \$169.08 | \$ _____         |
| <b>Harvest Machinery</b>                                      |                                |          |                  |   |          |                  |
| Combine   | \$13.30                        | \$6.90   | \$ _____         | \$8.50  | \$4.20   | \$ _____         |
| Grain cart  | 6.30                           | 3.10     | _____            | 6.30  | 3.10     | _____            |
| Haul  | 7.94                           | 7.07     | _____            | 2.21  | 1.96     | _____            |
| Dry (LP Gas @ \$1.50/gal.)                                    | 9.00                           | 32.40    | _____            |   |          |                  |
| Handle (auger)  | 3.21                           | 3.65     | _____            | 0.89  | 1.01     | _____            |
| <b>Total</b>  | \$39.75                        | \$53.12  | \$ _____         | \$17.90   | \$10.28  | \$ _____         |
| <b>Labor</b>  |                                |          |                  |   |          |                  |
| 2.25 hours @ \$14.00  | \$31.50                        |          | \$ _____         |   |          |                  |
| 1.70 hours @ \$14.00  |                                |          |                  | \$23.80   |          | \$ _____         |
| <b>Land</b>   |                                |          |                  |   |          |                  |
| Cash rent equivalent  | \$219.00                       |          | \$ _____         | \$219.00  |          | \$ _____         |
| <b>Total fixed, variable</b>                                  |                                |          |                  |   |          |                  |
| Per acre  | \$305.45                       | \$316.82 | Yield: _____     | \$274.40  | \$190.96 | Yield: _____     |
| Per bushel  | \$1.70                         | \$1.76   | bu./acre _____   | \$5.49  | \$3.82   | bu./acre _____   |
| <b>Total cost per acre</b>                                    | \$622.27                       |          | \$ _____         | \$465.35  |          | \$ _____         |
| <b>Total cost per bushel</b>                                  | \$3.46                         |          | \$ _____         | \$9.31  |          | \$ _____         |

<sup>1/</sup> Apply N, cultivate, plant, and spray for corn. Disk, drill, and spray for soybeans. See the Estimated Machinery Costs table.

<sup>2/</sup> Estimates do not include any insecticide or fungicide costs.



## Oats and Hay Production - Seeding Year Costs

| Establishment Costs   | Alfalfa-Grass Seeded<br>with Oat Companion Crop <sup>1/</sup> |                 | Alfalfa Seeded<br>with Herbicide <sup>2/</sup> |                 | Your<br>Estimate |
|---|---|-----------------|--|-----------------|------------------|
|   | Fixed   | Variable        | Fixed  | Variable        |                  |
| <b>Preharvest Machinery</b>                                       |   |                 |  |                 |                  |
| Spray herbicide   |   |                 | \$2.20   | \$2.00          | \$ _____         |
| Tandem disk (2 times)   | \$9.40  | \$7.00          | 9.40   | 7.00            | _____            |
| Spread fertilizer   | 2.00  | 1.60            | 2.00   | 1.60            | _____            |
| Harrow  | 2.10  | 1.50            | 2.10   | 1.50            | _____            |
| Seed (drill)  | 4.60  | 4.10            | 4.60   | 4.10            | _____            |
| <b>Total preharvest machinery</b>                                 | <b>\$18.10</b>  | <b>\$14.20</b>  | <b>\$20.30</b>                                 | <b>\$16.20</b>  | <b>\$ _____</b>  |
| <b>Seed <sup>3/</sup></b>   |   |                 |  |                 |                  |
| Oats  | 2 bu.   | \$20.07         |  |                 | \$ _____         |
| Alfalfa   | 8 lb.   | 38.65           | 15 lb.   | \$72.48         | _____            |
| Bromegrass  | 6 lb.   | 22.75           |  |                 | _____            |
| Orchardgrass  | 3 lb.   | 12.16           |  |                 | _____            |
| <b>Total seed cost</b>  |   | <b>\$93.63</b>  |  | <b>\$72.48</b>  | <b>\$ _____</b>  |
| Herbicide   |   |                 |  | \$13.30         | _____            |
| Lime (total cost for hay lifetime)                                |   | \$18.00         |  | 18.00           | _____            |
| Labor @ \$14.00   | 1 hr.   | \$14.00         | 1 hr.  | \$14.00         | \$ _____         |
| <b>Total establishment costs</b>                                  |   | <b>\$32.10</b>  |  | <b>\$119.98</b> | <b>\$ _____</b>  |
| <hr/>   |   |                 |  |                 |                  |
| <b>Annual Costs</b>   | <b>Fixed</b>  | <b>Variable</b> | <b>Fixed</b>                                   | <b>Variable</b> |                  |
| <b>One-Third of Established Costs</b><br>(for establishment year) | \$10.70   | \$41.94         | \$11.43  | \$39.99         | \$ _____         |
| <b>Fertilizer</b>   |   |                 |  |                 |                  |
| Nitrogen  | 60 lb.  | \$17.87         |  |                 | \$ _____         |
| Phosphorus  | 45 lb.  | 17.39           | 35 lb.   | \$13.53         | _____            |
| Potash  | 130 lb.   | 35.31           | 125 lb.  | 33.95           | _____            |
| <b>Total fertilizer</b>   |   | <b>\$70.58</b>  |  | <b>\$47.48</b>  | <b>\$ _____</b>  |
| <b>Insurance, oats</b>  |   | <b>\$2.90</b>   |  |                 | <b>\$ _____</b>  |
| Labor @ \$14.00   | 4 hr.   | \$56.00         | 3 hr.  | \$42.00         | \$ _____         |
| Land Cash rent equivalent   | \$109.00  |                 | \$109.00                                       |                 | \$ _____         |
| <b>Harvest Machinery</b>  |   |                 |  |                 |                  |
| Oats: combine and haul grain                                      | \$11.13   | \$6.34          |  |                 | \$ _____         |
| rake, bale, and haul straw  | 12.38   | 9.61            |  |                 | \$ _____         |
| Alfalfa: mower-conditioner, rake,<br>bale, and haul hay           | 18.83   | 14.77           | \$38.63  | \$31.07         | \$ _____         |
| <b>Total harvest cost</b>   | <b>\$42.34</b>  | <b>\$30.72</b>  | <b>\$38.63</b>                                 | <b>\$31.07</b>  | <b>\$ _____</b>  |
| <b>Total fixed and variable costs</b>                             | <b>\$218.04</b>   | <b>\$146.13</b> | <b>\$201.07</b>                                | <b>\$118.54</b> | <b>\$ _____</b>  |
| <b>Total cost per acre</b>  |   | <b>\$364.17</b> |  | <b>\$319.60</b> | <b>\$ _____</b>  |

<sup>1/</sup> Assumes 80 bushels oat yield, one ton straw yield, and one ton per acre alfalfa yield from one cutting.

<sup>2/</sup> Assumes two and a half tons per acre from two alfalfa cuttings with herbicide-assisted seeding.

<sup>3/</sup> Omit oats from August seedings. Higher priced seed varieties or different seed mixtures could vary these costs by 1.2 to 2.0 times.

## Annual Production Costs for Established Alfalfa or Alfalfa-Grass Hay

|   | Hay Production Level          |          |                 |          | Your Estimate |
|---|-------------------------------|----------|-----------------|----------|---------------|
|   | 4 tons per acre <sup>1/</sup> |          | 6 tons per acre |          |               |
|   | Fixed                         | Variable | Fixed           | Variable |               |
| <b>One-third of establishment costs</b>                   |                               |          |                 |          |               |
| Machinery, seed, lime, labor and herbicide <sup>2/</sup>  | \$10.70                       | \$41.94  | \$11.43         | \$39.99  | \$ _____      |
| <b>Annual fertilizer <sup>3/</sup></b>                    |                               |          |                 |          |               |
| 0-13-50 lbs/ton removed plus spreading and insurance      | \$2.00                        | \$78.22  | \$4.00          | \$117.48 | \$ _____      |
| <b>Harvesting Costs: Large Round Bales <sup>4/</sup></b>  |                               |          |                 |          |               |
| Mower-conditioner, rake, baling, and hauling              | \$58.43                       | \$47.37  | \$79.20         | \$65.20  | \$ _____      |
| Labor costs: 1.33 hr./cutting @ \$14.00 per hour          | \$56.00                       |          | \$74.67         |          | \$ _____      |
| <b>Land</b>   |                               |          |                 |          |               |
| Cash rent equivalent                                      | \$109.00                      |          | \$157.00        |          | \$ _____      |
| Total fixed and variable cost using large round bales     | \$236.13                      | \$167.53 | \$326.30        | \$222.67 | \$ _____      |
| Fixed and variable cost per ton                           | \$59.03                       | \$41.88  | \$54.38         | \$37.11  | \$ _____      |
| Total cost per acre                                       | \$403.66                      |          | \$548.97        |          | \$ _____      |
| Total cost per ton  | \$100.92                      |          | \$91.49         |          | \$ _____      |
| <b>Harvesting Costs: Small Square Bales <sup>4/</sup></b> |                               |          |                 |          |               |
| Mower-conditioner, rake, baling, haul, and stack          | \$55.71                       | \$45.33  | \$75.66         | \$62.65  | \$ _____      |
| Labor costs: 2 hr./cutting @ \$14.00 per hour             | \$84.00                       |          | \$112.00        |          | \$ _____      |
| <b>Land</b>   |                               |          |                 |          |               |
| Cash rent equivalent                                      | \$109.00                      |          | \$157.00        |          | \$ _____      |
| Total fixed and variable cost using small square bales    | \$261.41                      | \$165.49 | \$360.09        | \$220.11 | \$ _____      |
| Fixed and variable cost per ton                           | \$65.35                       | \$41.37  | \$60.02         | \$36.69  | \$ _____      |
| Total cost per acre                                       | \$426.90                      |          | \$580.21        |          | \$ _____      |
| Total cost per ton  | \$106.73                      |          | \$96.70         |          | \$ _____      |

<sup>1/</sup> For harvest as silage, use machine cost estimates from the Estimated Machinery Costs table.

<sup>2/</sup> Assumes alfalfa-grass seeded with oat companion crop. If alfalfa seeded with preplant herbicide, then use other costs (see previous page).

<sup>3/</sup> For 6-ton yield goal, a split application of fertilizer is assumed.

<sup>4/</sup> Harvest cost estimates assume 3 cuttings for 4 tons and 4 cuttings for 6 tons.

## Maintaining Grass Pastures - Annual Cost per Acre

|   | <u>Improved Grass</u> <sup>2/</sup> |                 | <u>Improved Grass-Legume</u> <sup>3/</sup> |                 | Your Estimate   |
|---|-------------------------------------|-----------------|--|-----------------|-----------------|
|   | Fixed                               | Variable        | Fixed                                      | Variable        |                 |
| <b>Machinery Costs</b>                        |                                     |                 |  |                 |                 |
| Spreading fertilizer                          | \$2.00                              | \$1.60          | \$2.00                                     | \$1.60          | \$ _____        |
| Spraying herbicide                            | 2.20                                | 2.00            |  |                 | _____           |
| Clipping weeds                                | 6.60                                | 4.30            | 6.60                                       | 4.30            | _____           |
| <b>Total machinery cost</b>                   | <b>\$10.80</b>                      | <b>\$7.90</b>   | <b>\$8.60</b>                              | <b>\$5.90</b>   | <b>\$ _____</b> |
| <b>Fertilizer and Herbicide</b> <sup>1/</sup> |                                     |                 |  |                 |                 |
| Nitrogen @ \$0.30 per lb.                     | 80 lb.                              | \$24.00         |  |                 | \$ _____        |
| Phosphate @ \$0.39 per lb.                    | 30 lb.                              | 11.70           | 30 lb.                                     | \$11.70         | _____           |
| Potash @ \$0.27 per lb.                       |                                     |                 | 40 lb.                                     | 10.80           | _____           |
| Herbicide                                     |                                     | 20.60           |  |                 | _____           |
| <b>Total fertilizer and herbicide</b>         |                                     | <b>\$56.30</b>  |  | <b>\$22.50</b>  | <b>\$ _____</b> |
| <b>Labor</b>                                  |                                     |                 |  |                 |                 |
| Growing practices .5 hr. @ \$14.00            | \$7.00                              |                 | \$7.00                                     |                 | \$ _____        |
| Fence maintenance 1 hr. @ \$14.00             | 14.00                               |                 | 14.00                                      |                 | _____           |
| <b>Total labor</b>                            | <b>\$21.00</b>                      |                 | <b>\$21.00</b>                             |                 | <b>\$ _____</b> |
| <b>Land</b>                                   |                                     |                 |  |                 |                 |
| Cash rent equivalent                          | \$48.00                             |                 | \$71.00                                    |                 | \$ _____        |
| <b>Total annual cost</b>                      | <b>\$79.80</b>                      | <b>\$64.20</b>  | <b>\$100.60</b>                            | <b>\$28.40</b>  | <b>\$ _____</b> |
| <b>Total annual cost per acre</b>             |                                     | <b>\$144.00</b> |  | <b>\$129.00</b> | <b>\$ _____</b> |

<sup>1/</sup> These are average rates and may vary with soil test and the level of management on a particular field. Different herbicide alternatives could vary this cost.

<sup>2/</sup> Improved grass pastures assume a dominance of cool season grasses such as smooth bromegrass, orchardgrass, tall fescue, or reed canarygrass.

<sup>3/</sup> Improved grass-legume pasture assumed one-third of the forage is made up of red clover, birdsfoot trefoil, or alfalfa.

## Estimated Machinery Costs

The following cost estimates are for on-farm use, excluding labor. Depreciation is based on current replacement cost; interest is based on average market rates. Fixed costs will be greater for newer machinery. If annual machine use is greater than that assumed, fixed costs per acre will be lower, and vice versa. Hauling costs are based on a round trip of one mile. Remember these are estimates and they should not take the place of accurate record-keeping. Diesel fuel is estimated to cost \$2.65 per gallon, delivered to the farm in bulk.

| Operation                | Hours of Use Assumed per Year | Fixed Cost per Acre (depreciation, interest, insurance, housing) | Variable Cost per Acre (fuel, oil, repairs) |
|--------------------------|-------------------------------|--|---|
| Subsoiling (V-ripper)    | 120                           | \$6.40   | \$7.90                                      |
| Moldboard plow           | 120                           | 9.20   | 9.80  |
| Chisel plow              | 120                           | 3.60   | 4.00  |
| Chop stalks              | 120                           | 5.00   | 5.00  |
| Tandem disk              | 120                           | 4.70   | 3.50  |
| Offset disk              | 120                           | 3.90   | 3.40  |
| Peg tooth harrow         | 60                            | 2.10   | 1.50  |
| Sprayer/disk             | 120                           | 3.80   | 3.00  |
| Field cultivator         | 120                           | 2.70   | 2.80  |
| Disk/Field cultivator    | 120                           | 2.70   | 2.70  |
| Strip tiller             | 120                           | 3.00   | 3.20  |
| Bulk fertilizer spreader | 60                            | 2.00   | 1.60  |
| NH3 applicator           | 120                           | 4.40   | 4.50  |
| Chisel plow, NH3 applic. | 120                           | 6.10   | 7.00  |
| Grain drill              | 100                           | 4.60   | 4.10  |
| Broadcast seeder         | 100                           | 3.00   | 1.80  |
| Planter                  | 100                           | 5.90   | 4.90  |
| No-till planter          | 100                           | 7.50   | 6.40  |
| No-till drill            | 100                           | 9.10   | 7.80  |
| Rotary hoe               | 60                            | 1.90   | 1.10  |
| Cultivator               | 120                           | 2.70   | 2.40  |
| Sprayer                  | 150                           | 2.20   | 2.00  |
| Combine corn             | 180                           | 13.30  | 6.90  |
| Combine soybeans         | 120                           | 8.50   | 4.20  |
| Combine small grain      | 120                           | 7.60   | 3.20  |
| Haul grain (on farm)     | 600                           | 0.044 /bu.   | 0.039 /bu.                                  |
| Grain cart               | 200                           | 6.30   | 3.10  |
| Store grain (auger)      |                               | 0.0178 /bu.  | 0.0203 /bu.                                 |
| Silage harvester         | 200                           | 50.10  | 31.80                                       |
| Haul silage              | 140                           | 1.36 /ton  | 1.32 /ton                                   |
| Store silage (unloader)  |                               | 0.43 /ton  | 0.13 /ton                                   |
| Rotary mower             | 120                           | 6.60   | 4.30  |
| Mower-conditioner        | 120                           | 5.50   | 4.40  |
| Rake                     | 120                           | 3.20   | 2.00  |
| Small square baler       | 120                           | 7.10 /cutting  | 4.30 /cutting                               |
| Round baler              | 120                           | 8.20   | 5.30  |
| Large square baler       | 120                           | 8.70   | 6.30  |
| Windrower                | 200                           | 3.10   | 2.20  |
| Forage chopper           | 200                           | 18.20  | 13.90                                       |
| Haul small square bales  | 120                           | 2.08 /ton  | 3.31 /ton                                   |
| Haul large round bales   | 120                           | 1.93 /ton  | 3.07 /ton                                   |

## Estimated Crop Production Costs in Iowa, 2009-2018

|  | 2009     | 2010 <sup>1/</sup> | 2011     | 2012     | 2013     | 2014     | 2015     | 2016     | 2017     | 2018     |
|--|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|
| <b>Corn Following Corn</b>   |          |                    |          |          |          |          |          |          |          |          |
| Machinery  | \$115.99 | \$124.25           | \$152.73 | \$147.37 | \$147.37 | \$155.29 | \$144.99 | \$129.92 | \$119.83 | \$132.80 |
| Seed, chemicals, etc.  | 387.44   | 290.78             | 341.92   | 376.81   | 372.43   | 340.27   | 357.80   | 330.55   | 287.19   | 279.81   |
| Labor  | 31.35    | 31.35              | 33.06    | 33.35    | 34.91    | 37.05    | 37.05    | 37.05    | 36.40    | 39.20    |
| Land   | 205.00   | 195.00             | 215.00   | 258.00   | 276.00   | 287.00   | 273.00   | 266.00   | 230.00   | 219.00   |
| Total cost per acre  | 739.77   | 641.37             | 742.70   | 815.53   | 830.70   | 819.61   | 812.83   | 763.52   | 673.41   | 670.80   |
| Assumed yield  | 145 bu.  | 165 bu.            | 165 bu.  | 165 bu.  | 165 bu.  | 165 bu.  | 165 bu.  | 165 bu.  | 165 bu.  | 165 bu.  |
| Total cost per bushel  | \$5.10   | \$3.89             | \$4.50   | \$4.94   | \$5.03   | \$4.97   | \$4.93   | \$4.63   | \$4.08   | \$4.07   |
| <b>Corn Following Soybeans</b>   |          |                    |          |          |          |          |          |          |          |          |
| Machinery  | \$113.98 | \$122.42           | \$151.54 | \$144.22 | \$144.22 | \$152.28 | \$142.18 | \$126.74 | \$116.56 | \$130.47 |
| Seed, chemicals, etc.  | 344.03   | 266.48             | 300.13   | 329.14   | 324.61   | 298.80   | 311.84   | 292.47   | 251.48   | 241.86   |
| Labor  | 28.60    | 28.60              | 30.16    | 30.42    | 31.85    | 33.80    | 33.80    | 33.80    | 33.15    | 35.70    |
| Land   | 205.00   | 195.00             | 215.00   | 258.00   | 276.00   | 287.00   | 273.00   | 266.00   | 230.00   | 219.00   |
| Total cost per acre  | 691.61   | 612.50             | 696.83   | 761.78   | 776.68   | 771.88   | 760.81   | 719.01   | 631.18   | 627.03   |
| Assumed yield  | 160 bu.  | 180 bu.            | 180 bu.  | 180 bu.  | 180 bu.  | 180 bu.  | 180 bu.  | 180 bu.  | 180 bu.  | 180 bu.  |
| Total cost per bushel  | \$4.32   | \$3.40             | \$3.87   | \$4.23   | \$4.31   | \$4.29   | \$4.23   | \$3.99   | \$3.51   | \$3.48   |
| <b>Soybeans Following Corn<sup>2/</sup></b>                              |          |                    |          |          |          |          |          |          |          |          |
| Machinery  | \$55.80  | \$57.70            | \$72.70  | \$80.70  | \$80.70  | \$84.70  | \$79.17  | \$75.43  | \$67.40  | \$68.67  |
| Seed, chemicals, etc.  | 202.85   | 154.00             | 156.52   | 180.89   | 163.44   | 155.65   | 166.38   | 162.63   | 157.11   | 154.41   |
| Labor  | 26.95    | 26.95              | 28.42    | 26.33    | 27.56    | 29.25    | 29.25    | 29.25    | 28.60    | 30.80    |
| Land   | 205.00   | 195.00             | 215.00   | 258.00   | 276.00   | 287.00   | 273.00   | 266.00   | 230.00   | 219.00   |
| Total cost per acre  | 490.60   | 433.65             | 472.64   | 545.91   | 547.71   | 556.60   | 547.80   | 533.30   | 483.11   | 472.89   |
| Assumed yield  | 50 bu.   | 50 bu.             | 50 bu.   | 50 bu.   | 50 bu.   | 50 bu.   | 50 bu.   | 50 bu.   | 50 bu.   | 50 bu.   |
| Total cost per bushel  | \$9.81   | \$8.67             | \$9.45   | \$10.92  | \$10.95  | \$11.13  | \$10.96  | \$10.67  | \$9.66   | \$9.46   |
| <b>Alfalfa Hay, annual production, 6 ton per acre, large round bales</b> |          |                    |          |          |          |          |          |          |          |          |
| One-third of est. costs  | \$38.97  | \$54.28            | \$52.75  | \$52.48  | \$54.25  | \$58.17  | \$60.62  | \$57.93  | \$60.03  | \$51.43  |
| Annual fertilizer  | 294.60   | 170.24             | 199.82   | 227.92   | 200.94   | 164.14   | 166.88   | 148.21   | 109.05   | 121.48   |
| Harvest machinery  | 102.90   | 107.00             | 159.60   | 174.50   | 174.50   | 179.60   | 167.60   | 159.20   | 140.80   | 144.40   |
| Labor  | 58.67    | 58.67              | 61.87    | 62.40    | 65.33    | 69.33    | 69.33    | 69.33    | 69.33    | 74.67    |
| Land   | 125.00   | 113.00             | 124.00   | 150.00   | 161.00   | 167.00   | 167.00   | 170.00   | 165.00   | 157.00   |
| Total cost per acre  | 632.27   | 503.19             | 598.04   | 667.30   | 656.02   | 638.24   | 631.43   | 604.67   | 544.22   | 548.97   |
| Assumed yield  | 6 ton    | 6 ton              | 6 ton    | 6 ton    | 6 ton    | 6 ton    | 6 ton    | 6 ton    | 6 ton    | 6 ton    |
| Total cost per ton   | \$105.38 | \$83.86            | \$99.67  | \$111.22 | \$109.34 | \$106.37 | \$105.24 | \$100.78 | \$90.70  | \$91.49  |

<sup>1/</sup> Starting 2010 corn yields adjusted.

<sup>2/</sup> Soybean estimates are for herbicide tolerant varieties.

Iowa State University Extension and Outreach does not discriminate on the basis of age, disability, ethnicity, gender identity, genetic information, marital status, national origin, pregnancy, race, religion, sex, sexual orientation, socioeconomic status, or status as a U.S. veteran. (Not all prohibited bases apply to all programs.) Inquiries regarding non-discrimination policies may be directed to Ross Wilburn, Diversity Officer, 2150 Beardshear Hall, 515 Morrill Road, Ames, Iowa 50011, 515-294-1482, wilburn@iastate.edu.

Prepared by Alejandro Plastina  
extension economist  
515-294-6160  
plastina@iastate.edu

[www.extension.iastate.edu/agdm](http://www.extension.iastate.edu/agdm)  
[store.extension.iastate.edu](http://store.extension.iastate.edu)