The 2008 crop budgets provide an estimate of revenues and costs for selected crops. Each set of budgets are developed for a multi-county region. There is considerable variation in soil type and productivity, weather conditions, as well as management and production practices within each region. Therefore, THESE BUDGETS ARE ONLY INTENDED TO BE USED AS A GUIDE. EVERY INDIVIDUAL IS HIGHLY ENCOURAGED TO DEVELOP HIS/HER OWN BUDGETS!

The profitability budget accounts for full economic opportunity costs for land and machinery investment, regardless of farm operator equity position. The bottom line is the return to labor and management. This is the expected “payment” to the producer for the labor and managerial efforts required by the crop enterprise. Each individual must make the decision whether it is sufficient.

The budget can be changed to conform to the more common definition of accounting profit (return to unpaid labor and management, and owner equity) by replacing the machinery investment and land charge cost items with your per acre interest, or rental, expense of machinery and land, and real estate tax if land is owned, respectively.

The budget can be used for long run decisions if the revenues and costs are realistic for several ears. (Crop prices, direct costs, and the land charge are best estimates for only the 2008 crop year, but crop yields are historic averages and machinery ownership costs are an average for the total length of ownership). If the budget shows a high return to labor and management, and is representative for several years, increased acreage and corresponding investment should be considered. However, if long-run returns to labor and management are unsatisfactory the best decision may be to exit the crop enterprise and employ the machinery and land investment, and labor and management, in a different enterprise or investment.
For short-run planning decisions you can omit the indirect costs if the land and machinery required to produce the different enterprises are in place. Simply compare the crop enterprises by calculating return over direct costs. Labor requirements and risk should also be considered. Insurance is not available for some crops.

The budget can be used to estimate cashflow by making a few modifications. Machinery depreciation should be omitted and the machinery investment number replaced with your per acre principal and interest payment on machinery debt. For owned land, the land charge should be replaced with your per acre real estate tax and principal and interest payment on land debt.

The 2002 farm bill has expired and a new farm bill had not yet passed at the time of this publication. Projected crop prices are higher than average and no government payments, coupled to 2008 production, are expected.

**Primary Assumptions:**
Crops are planted on dryland recrop ground. Costs of moving crop to local market/storage are included.

**Market Price:** Best estimates of NDSU extension economists. The greater of projected market price and marketing loan rate is used.

**Market Yields:** Average yield for the 7 year period 2000-2006, after the low and high yield years are removed. Yields for safflower, yellow mustard, buckwheat, millet, rye, lentils and chickpeas are from NDSU extension agronomists and industry sources.

**Fertilizer:** Cost of fertilizer applied, based on soil test, to meet yield goal of 130% of market yield. N fertilizer can be reduced if previous crop was soybean, dry bean, field peas or lentil.

**Soil test**
- recrop:
  - Nitrogen: 40 lb
  - Phosphorus: 11 ppm
  - Potassium: 280 ppm

**Fertilizer prices:**
- Nitrogen: .46/lb
- Phosphorus: .40/lb
- Potassium: .29/lb

**Seed Prices:**
- Spring Wheat: 11.25/bu
- Durum: 19.50/bu
- Barley: 8.50/bu
- Corn grain RR/Bt: 1.77/thou.kern.
- Corn grain RR: 1.60/thou.kern.
- Oil Sunflower: .72/thou.kern.
- Conf. Sunflower: 1.30/thou.kern.
- Soybean RR: 30.50/50 lb
- Dry Beans: .67/lb
- Flax: 16.50/bu
- Canola: 3.65/lb
- Oats: 5.00/bu
- Field Peas: 10.50/bu
- Mustard: .88/lb
- Winter Wheat: 10.00/bu

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- Durum: 19.50/bu
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- Canola: 3.65/lb
- Oats: 5.00/bu
- Field Peas: 10.50/bu
- Mustard: .88/lb
- Winter Wheat: 10.00/bu

**Fuel prices:**
- Diesel: 2.90/gal
- Gas: 3.10/gal

**Lubrication charge:** 15% of fuel cost

**Crop Insurance:** Coverage levels are 70% on all insurable crops. MPCI estimates are used, except for RA-HPO on all wheat, soybeans, corn and canola.

**Miscellaneous:** soil testing, machinery rent and custom work.

**Operating Interest:** Direct costs charged 7.50% interest for 6 month period.

**Misc. Overhead:** Machinery housing and insurance at .5% and .85%, respectively, of average machinery investment. Also, liability insurance and license fees of trucks. In addition, $1 per acre is assumed for general farm utilities, farm publications, meetings, dues, income tax preparation, legal fees, etc.

**Land charge** = average cash rent.

**Machinery investment:** 4.5% real interest rate, over the years of machine ownership, is charged on average machinery investment. The real, or inflation adjusted, rate is the commercial rate minus the inflation rate. Ave. mach. investment = (Purchase price + Disposal price)/2

**Depreciation** = (Purchase price - disposal price / years ownership)
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<tr>
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**notes:**
*Seed treatment and early season foliar fungicide. Late season fungicide would cost about about $6 or $12 per acre, depending on product availability, plus application. Trials consistantly show yield response of 15-20% with late application if weather favors disease development.
**Orange wheat blossom midge insecticide would cost about $5 per acre plus application.
### Malting Barley vs. Corn Grain

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<td>- Seed</td>
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<td>49.48*</td>
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<td>- Total Costs</td>
<td>3.47</td>
<td></td>
<td>3.09</td>
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</tbody>
</table>

**Barley notes:**
*On average, 60% or more of production is feed quality. Use $3.35 estimate for feed barley price.

**Corn notes:**
*RR/Bt corn is planted for corn borer control on 80 percent of acres and RR corn without Bt Trait is on 20 percent of acres for corn borer refuge.
**Insecticide seed treatment for wireworm, rootworm, white grub and suppression of cutworm.
### Soybeans vs. Drybeans

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<tr>
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<th>Drybeans*</th>
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<tr>
<td>-Fungicides</td>
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<td>0.00</td>
</tr>
<tr>
<td>-Insecticides</td>
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<td>0.00</td>
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<tr>
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**Soybean notes:**
*Roundup (glyphosate) resistant soybeans.
**Soybean aphid insecticide would cost about $8 per acre plus application.

**Drybean notes:**
*Acreage limititations existed under the 2002 farm bill. The general rule is drybean acres can not be planted on base acres. If farm or producer has drybean history, drybean can be planted on base acres but government payments on those acres will be forfeited.
**Fungicide for white mold would cost about $18 plus application.
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Oil Sunflower notes:
*Includes seed treatment for control of wireworm and flea beetle, $6, and one spraying for head feeding insects (red seed weevil, lygus bug and banded moths) at about $6 per acre. Custom application cost of $5.75 is under “Miscellaneous.”

Confectionery Sunflower notes:
*Includes seed treatment for control of wireworm and flea beetle, $6, and two sprayings for head feeding insects (red seed weevil, lygus bug and banded moths) at about $6 per application. Each custom application cost of $5.75 is under “Miscellaneous.”
## Canola

<table>
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<th>Per Acre</th>
<th>Your Figures</th>
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Canola notes:
* Fungicide for white mold would cost about $18 plus application.
** Insecticide seed treatment for flea beetles.
*** Fertilizer cost includes 20 lbs sulfur.
### Field Peas

<table>
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<tr>
<td><strong>MARKET INCOME</strong></td>
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</table>

#### DIRECT COSTS

- **Seed** 31.50
- **Herbicides** 18.50
- **Fungicides** 0.00
- **Insecticides** 0.00
- **Fertilizer** 5.62
- **Crop Insurance** 11.30
- **Fuel & Lubrication** 17.66
- **Repairs** 12.62
- **Drying** 0.00
- **Miscellaneous** 3.50
- **Operating Interest** 3.78

#### INDIRECT (FIXED) COSTS

- **Misc. Overhead** 3.97
- **Machinery Depreciation** 15.37
- **Machinery Investment** 8.87
- **Land Charge** 55.50

#### SUM OF ALL LISTED COSTS

188.18

#### RETURN TO LABOR & MANAGEMENT

34.30

#### LISTED COSTS PER BUDGET UNIT

- **Direct Costs** (bu): 2.90
- **Indirect Costs** 2.33
- **Total Costs** 5.23

---

### Oats

<table>
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<tr>
<th></th>
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<th>Per Acre</th>
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<tr>
<td><strong>MARKET INCOME</strong></td>
<td></td>
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</table>

#### DIRECT COSTS

- **Seed** 10.00
- **Herbicides** 1.88
- **Fungicides** 0.00
- **Insecticides** 0.00
- **Fertilizer** 34.27
- **Crop Insurance** 9.20
- **Fuel & Lubrication** 19.70
- **Repairs** 12.86
- **Drying** 0.00
- **Miscellaneous** 1.50
- **Operating Interest** 3.35

#### INDIRECT (FIXED) COSTS

- **Misc. Overhead** 4.40
- **Machinery Depreciation** 15.77
- **Machinery Investment** 9.66
- **Land Charge** 55.50

#### SUM OF ALL LISTED COSTS

178.09

#### RETURN TO LABOR & MANAGEMENT

(41.29)

#### LISTED COSTS PER BUDGET UNIT

- **Direct Costs** (bu): 1.55
- **Indirect Costs** 1.42
- **Total Costs** 2.97

---

Field Pea notes:

*Food quality price. Use $4.50 price estimate for feed quality peas.*
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Winter Wheat notes:
*Yield is per harvested acre, 2000-2006 acreage abandonment averaged 11%.
## 2008 Machinery List

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<th>Machine</th>
<th>Purch. Price</th>
<th>Annual Use</th>
<th>Years to trade</th>
<th>Trade in</th>
<th>Deprec.</th>
<th>Invest.</th>
<th>Repairs</th>
<th>Ac/hr</th>
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<td>2WD 100HP Tractor</td>
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<td>20</td>
<td>17877</td>
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<td>2WD 160HP Tractor</td>
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<td>500 hr</td>
<td>15</td>
<td>27021</td>
<td>8.57/hr</td>
<td>5.32/hr</td>
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<td>4WD 280HP Tractor</td>
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<td>15</td>
<td>37199</td>
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<td>7.33/hr</td>
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<td>SP Combine (base unit)</td>
<td>160200</td>
<td>250 hr</td>
<td>12</td>
<td>39855</td>
<td>40.12/hr</td>
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<tr>
<td>Tandem Truck (used)</td>
<td>31000</td>
<td>150 hr</td>
<td>15</td>
<td>10300</td>
<td>9.20/hr</td>
<td>6.20/hr</td>
<td>5.73/hr</td>
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<td>Semi &amp; Trailer (used)</td>
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<td>17.13/hr</td>
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<td>Pick-up Truck</td>
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<td>4300</td>
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<td>1.89/hr</td>
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<td>Swather 25 ft</td>
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<td>4150</td>
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<td>Sprayer 90 ft</td>
<td>27200</td>
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<td>15545</td>
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<td>7330</td>
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<td>0.93/ac</td>
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<td>Heavy Harrow 70 ft</td>
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<td>13512</td>
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<td>6109</td>
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<td>38264</td>
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<td>1.49/ac</td>
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<td>13586</td>
<td>1.70/ac</td>
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<td>2500</td>
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<td>2532</td>
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<td>Grain head w/PU</td>
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<td>1200 ac</td>
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<td>3960</td>
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<td>3046</td>
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<td>0.51/ac</td>
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<td>Soybeans str. cut 25 ft</td>
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<td>20</td>
<td>2033</td>
<td>1.24/ac</td>
<td>0.67/ac</td>
<td>0.41/ac</td>
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<tr>
<td>Head w/drybean pickups</td>
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<td>400 ac</td>
<td>20</td>
<td>2315</td>
<td>2.45/ac</td>
<td>1.36/ac</td>
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<tr>
<td>Grain auger</td>
<td>6900</td>
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<td>530</td>
<td>6.37/hr</td>
<td>3.34/hr</td>
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## Example Sequence of Operations

Field operations sequence for spring wheat and durum.

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<th>(MPH) SPEED</th>
<th>(AC/HR)</th>
<th>($/AC) FUEL &amp; LUBE</th>
<th>($/AC) EST. REPAIRS</th>
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<td>1</td>
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<td>2</td>
<td>Plant</td>
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<td>3</td>
<td>Spray (130%)</td>
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<td>$0.63</td>
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<td>4</td>
<td>Swath (20%)</td>
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<td>5</td>
<td>Combine</td>
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<td>6</td>
<td>Chisel Plow</td>
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Total: $18.07/$12.07

* Truck costs will vary between crops.
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