

Tighten belt and hang on



By **ANDY HERRINGSHAW**

BY most predictions, 2009 is going to be a tough year for agriculture. High input costs, unpredictable crop prices and the global economic picture add up to make this a year for financial caution on the farm.

For many, the economic squeeze

means tightening the belt and riding out the storm. Here are three concepts that will protect your bottom line now and in the future.

1. Soil is wealth. The value of Iowa farmland surpassed \$140 billion in 2008, and while some get out the black ink and some the red, we need to get to the heart of the matter: soil. The productive

capacity of the land is indeed the real basis of our wealth.

USDA reports tell us Iowa is experiencing an average of 139 million tons of soil erosion annually, equaling 5.4 tons per acre. The depth of the A horizon (where all of the microbial activity and organic matter reside) is one of the best predictors of yield for Iowa's principal

crops. As the eroded soil moves into our rivers, nutrients and yield potential are lost.

NRCS estimates when a ton of soil is eroded from a productive Iowa field, \$8 is lost; three-fourths of that is due to lost nutrients that must be replaced by adding fertilizer. The remainder is due to lost organic matter and the reduced water-holding capacity of the soil.

A 2008 USDA study puts the value closer to \$6. Looking at organic matter loss, Iowa State University researchers have estimated the value closer to \$10. However calculated, it's clear that value is lost to farmers and society as soil moves from a field. Considering soil value may not help you stay in the black for 2009, but accounting for the value of soil in your decision-making will pay in the long run.

2. Tillage doesn't always pay. Iowa Learning Farm cooperators who are practicing no-till report planting their crops using under a gallon of fuel and generally saving \$10 to \$15 per acre over conventional tillage. In heavier soils, strip tillage is a good option and provides much of the same erosion protection, though less cost savings.

For the ILF experiments, cooperators used fields that were in long-term no-till, and tilled a small section, performing all other field passes identically. Very few farmers found yield penalties in the no-till acres large enough to offset the increased cost of tillage.

Though yields are stable, erosion is dramatically affected by tillage, increasing fivefold in some soil and slope combinations. When increased erosion and the value of the soil are taken into account, heavy tillage is rarely the economic choice.

3. What's stover worth? A quick way to make a corn crop pay extra is to harvest and sell the stover. Ethanol plants are being designed to use stover, and more livestock producers are turning to it for feed when hay prices are high.

Stover is naturally rich in phosphorus, potassium and, depending upon harvesttime, nitrogen. Harvested at 20% moisture, it'll require replacement fertilizers costing about \$30 (16 pounds of N, 3.8 of P and 20 of K).

The cost to chop, rake, bale and move the stover is estimated at \$11 per ton (175-bushel corn, 3.5-ton-per-acre stover and 70% removal). We're up to \$41 a ton, and we haven't talked about erosion impacts. Erosion is highly affected by the tillage system used, but removing stover can increase erosion by 20% to 130%. If you value your soil, take a critical look at the true cost and return of marketing your stover.

These ideas may aid your 2009 bottom line and will keep your farm more productive for the future. Soil is wealth for all of us, and no matter the dollar figure, it can't be replaced.

Herringshaw is a graduate student in economics at Iowa State University, working with the ILF program.

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