

## Fall Ideal Time for Soil Sampling

Fall is the ideal time of year to conduct routine soil sampling of your lawns, gardens, and cropland. Not only are weather conditions typically more favorable as compared to the spring season, but you will then have the winter months to think about upcoming management decisions based on the soil analysis. Here are some other reasons why fall is better than spring, or any other season, for soil sampling:

1. Fall Provides Ideal Conditions for Accurate Sampling – Most soil sample reports are inaccurate. They are not representative of the area being sampled, primarily because not enough cores were taken. University of Missouri Extension recommends a minimum of 15 to 20 cores from the area being sampled. An adequate number of cores is usually not collected in the summer because the ground is hard and it's hot outside. An adequate number of cores may not be collected in the spring because the ground may be overly wet and collecting a quality core may be difficult. Fall provides pleasant working conditions as well as soil that is not too dry or wet.
2. Lime Can Be Applied in a Timely Manner – On most ground in Missouri, occasional liming is necessary to maintain an adequate pH for crops. After lime is applied it can take up to 6 months for the lime to raise the pH of the soil to the required level. Applying lime in the fall will ensure that the pH is correct in time for a spring-planted crop.
3. Fertilizer Can Be Purchased Prior to the End of the Year – Fertilizer is often cheaper in the fall or the winter than it is in the spring when demand is greatest. If you sample in the fall, you will know exactly what you need and you can purchase it when prices are lowest. Purchasing fertilizer needed for next year prior to the end of this year could potentially provide some tax advantages. Check with your tax professional.
4. Soil Testing Laboratories Aren't as Busy in the Fall – The majority of farmers, gardeners, and homeowners test their soil in the spring. Soil testing labs are swamped this time of year and it can take several weeks to get results. This is often too late to timely apply fertilizer. Turnaround time in the fall is much faster.
5. Fall is Ideal Time for Phosphorus and Potassium or Manure Applications – Phosphorus and potassium applied in the form of commercial fertilizer and nearly all nutrients applied in manure form are not immediately available to the plant. It takes time for these nutrients to become available for a plant to use. So if you apply these products in the spring, they may not necessarily be available for that year's crop. If you apply in the fall, they will be of benefit to the next year's crop. And, to know how much to apply, you need a soil test.



Even if you begin sampling in the ideal fall time-frame, or even if you already do, the results are only as good as your sampling methods. University of Missouri Extension has a number of guides on properly sampling pastures, lawns, or crop fields available on their website, [extension.missouri.edu](http://extension.missouri.edu), or at your county extension office.

*Source: Travis Harper, Agronomy Specialist*

## What's Your Burn Rate?

We're talking about *working capital*, defined as the near-liquid funds that the farm business can access to meet short term financial obligations. Working capital is the financial reserve that can be used to either temporarily buffer the business from financial stress or be available to quickly take advantage of an opportunity.

When losses are occurring or expected, the burn rate indicates how rapidly working capital is being consumed. This is a relatively new metric used by financial analysts.



The numbers to estimate working capital are obtained from an accurate balance sheet.

Calculate working capital by subtracting total current liabilities from total current farm assets. Current assets include cash, accounts receivable, grain and market livestock inventory, prepaid inputs and investment in growing crops.

Current liabilities are items such as, accounts payable, operating lines of credit, unpaid taxes, accrued expenses, accrued interest and principal payments on long term loans due within the year.

A farm with \$400,000 in current assets and \$250,000 in current liabilities has working capital of \$150,000. Let's say the projected loss is \$100,000. The burn rate is \$150K divided by \$100K, or 1.5 years. At this pace, working capital will be completely exhausted in one and one-half years. This is not much cushion and could be an eye-opener for this farm.

Like other financial ratios, there are some signposts that indicate financial strength or vulnerability. A burn rate over 3.5 is considered to be strong. Many analysts recommend a target of maintaining 2.0 or better.

On many farms, the first step to shore up working capital is to focus on protecting cash. This means when cash is generated from product sales it stays in the business as cash rather than being used to buy capital items or withdrawn for family or other uses.

There are some common pitfalls that cause working capital and therefore the burn rate to be overstated, giving a false level of comfort with liquidity. One pitfall is valuing unhedged grain inventory. When cash markets decline working capital can change quickly. The working capital metric can also be misleading if a high proportion of current assets are tied up as purchased inputs. Inputs do not really convert to cash for an ongoing farm. Also, don't forget to include family withdrawals and income taxes in the income calculation.

Farm financial management begins with a complete set of production and financial records. When times are lean, the ability to measure and monitor an accurate burn rate and other ratios can help you decide how aggressive to be with juggling assets and reducing costs.

Contact your regional ag business specialist for assistance with farm financial questions.

**Source:** Brent Carpenter, *Ag Business Specialist*

## The Price of Hay

I usually get several calls per year asking about the price of hay. Hay pricing should take into account all production costs. These include costs for putting up the crop, fertilization of hay fields and any land ownership costs the landowner wants to recoup.

The Missouri Department of Agriculture publishes a weekly hay market report for many different hay categories. Recent prices for “fair quality mixed grass hay” were quoted as \$50 to \$80 per ton or \$15 to \$35 per large round bale. How should producers compare the price of hay when it is sold by the ton vs. by the bale? The only way to compare hay priced by these two different methods is to weight the bales and then compare cost on a weight basis.

Producers don’t need to weigh every bale, but weighing random trailer loads as they are being hauled off the field gives an estimate of average bale weight. Use this information to calculate the cost per ton of hay. This allows for a direct cost comparison between two sources of hay. This also gives an estimate of average hay yield, an important consideration when applying fertilizer.

So which is cheaper, \$15 per bale or \$35 per ton? The answer depends on bale weight. A 900-pound bale priced at \$15 per bale actually costs a few cents over \$33 per ton. A 1,300-pound bale priced at \$15 per bale actually costs about \$23 per ton. The difference is more dramatic as the price per bale increases. When priced at \$35 per bale, a 900-pound bale costs \$78 per ton while the 1,300-pound bale costs about \$54 per ton. If we figure 10% waste due to storage and feeding losses, this difference increases to over \$25 per ton for hay that is priced at \$35 per bale simply due to differences in bale weight.

Hay isn’t bought and sold just for the fun of it, so how do these different bale weights impact cow feed costs? Assuming we are feeding a 1,200-pound cow and paid \$35 per bale with 10% storage and feeding waste, a 900 pound bale costs \$1.30 per day to feed the cow while the 1,300 pound bale costs \$0.90 per day to feed the same cow. Can you afford to pay an extra \$0.40 per cow per day in feed costs simply due to bale weight differences of purchased hay?

**Source:** *Gene Schmitz, Livestock Specialist*

## Saving Seeds Not a Good Investment

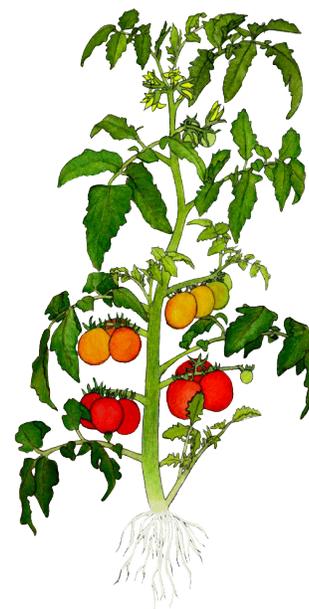
A penny saved is a penny earned, but saving seeds from the garden can be a questionable use of time and energy. You might save money by keeping seeds from this year’s favorite plants, but you will likely be disappointed next year. Most seeds produce problematic plants the next growing season.

This is because most ornamental and vegetable seeds in today’s gardens are  $F_1$  hybrids. An  $F_1$  hybrid is the result of a controlled mating between two parental lines carefully selected for certain traits.  $F_1$  hybrids tend to be more vigorous, uniform and productive than either of their parents, or other non-hybrid types.

The phenomenon is called “heterosis,” or hybrid vigor. Heterosis, however, does not carry over from one generation to the next. Instead, it must be re-established each generation by remaking the original cross. Therefore, seeds saved from a hybrid variety will not produce a plant with the same characteristics as the plant that bore it. Progeny of  $F_1$  hybrids tend to revert in form to one of their parents.

In very, very rare cases, seed saved from a hybrid produces a better-performing plant than the previous generation. However, the chance for this to happen is infinitesimally small.

The wisdom behind saving non-hybrid ornamental and vegetable seeds depends on many factors. For example, seed from cross-pollinated crops will be true to type only if the plants were isolated from other varieties of the same species. To preserve genetic purity, wind-pollinated species, such as sweet corn, must be isolated from other varieties by a greater distance than insect-pollinated species, such as watermelon.



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Self-pollinated species probably represent the best candidates for seed saving. Heirloom tomatoes are a good example because tomatoes are usually self-pollinated. Isolating saved heirloom varieties from other tomato varieties can help assure genetic purity. However, insects such as bumblebees can cross-pollinate them and mingle genes from other varieties.

If you decide to save garden seeds, collect only from healthy plants as seeds transmit several virus diseases. Clean the seeds and sort out any that appear to be nonviable. These seeds are usually smaller and lighter.

Store seeds in a cool place, such as a refrigerator, and keep them dry. A wide mouth glass jar works as a good storage container for leftover seeds from this year's garden. Place a layer of a desiccant, such as silica gel, in the bottom of the jar. Then, place packets of seeds on top of it, and seal tightly.

For more information, go to <http://ipm.missouri.edu/MPG/2014/8/Why-Not-Save-Hybrid-Seeds/>.

**Source:** *Dr. David Trinklein, MU Horticulture*

