

**FUEL**

continued from page 3

air quality and efficient operation. A furnace from the 1960's or earlier can waste up to 30 percent of energy, so consider replacing older models with a modern, condensing furnace or other energy-efficient designs.

Adding insulation and replacing windows are two

other options. Insulation is relatively inexpensive and usually will save enough energy to pay back the cost in a few years. Single-pane leaking windows can be replaced with new ones that are energy efficient. Consider double-glazed windows with a low-E

coating and an inert gas filling the space between the two layers of glass. Sources: Shirley Niemeyer, Ph.D., housing and environment specialist, UNL; John Merrill, housing specialist, University of Wisconsin. (BPO)

**INGREDIENTS**

continued from page 6

**Cream, Whipping**

Amount: 1 cup unwhipped

Substitute: If you wish to use a commercial pre-whipped whipped cream or whipped cream substitute rather than whip your own cream, use the guideline that 1 cup UNWHIPPED whipping cream expands to 2 cups when WHIPPED. For example, if your recipe called for 1 cup of cream to make whipped cream, you could substitute 2 cups of an already whipped product.

**Egg**

Amount: 1 whole egg

Substitute:

- 1/4 cup egg substitute (examples include: Egg Beaters, Second Nature, Scramblers); check label for specific directions

- Reconstituted powdered eggs; follow package directions
- 2 tablespoons mayonnaise (suitable for use in cake batter).

NOTE: If you type "mayonnaise cake recipe" into your favorite Internet search engine, you'll find several recipes for cakes made with mayonnaise and NO eggs. This may help you decide if this substitution will work for your cake.

- 1/2 teaspoon baking powder plus 1 tablespoon vinegar plus 1 tablespoon liquid (for baking use only)

TIP: If you don't use eggs very often, you may find it helpful to keep some powdered eggs on hand.

**Flour, All-Purpose White Flour**

Amount: 1 cup

Substitute: 1/2 cup whole wheat flour plus 1/2 cup all-purpose flour

TIP: It's generally recommended that you replace no more than half the all-purpose white flour with whole wheat flour. Too much whole wheat flour in a recipe calling for all-purpose flour might result in a reduced volume and a heavier product.

**Flour, Cake**

Amount: 1 cup

Substitute: 1 cup minus 2 tablespoons all-purpose flour

**Flour, Self-Rising**

Amount: 1 cup

Substitute: 1 cup minus 2 teaspoons all-purpose flour plus 1 1/2 teaspoons baking powder and 1/2 teaspoon salt

**Garlic**

Amount: 1 small clove

Substitute:

- 1/8 teaspoon garlic powder or
- 1/8 teaspoon instant minced garlic or
- 1/4 teaspoon garlic salt (reduce salt in recipe by 1/8 teaspoon)

**Herbs, Fresh**

Amount: 1 tablespoon,

finely cut

Substitute:

- 1 teaspoon dried leaf herbs

- 1/2 teaspoon ground dried herbs

**Lemon Zest (fresh grated lemon peel)**

Amount: 1 teaspoon

Substitute: 1/2 teaspoon

lemon extract

**Marshmallows, Miniature**

Amount: 1 cup

Substitute: 10 large

marshmallows

**Mayonnaise (for use in salads and salad dressings)**

Amount: 1 cup

Substitute:

- 1 cup sour cream
- 1 cup yogurt
- 1 cup cottage cheese pureed in a blender
- Or use any of the above for part of the mayonnaise

**Mustard, Dry**

Amount: 1 teaspoon

Substitute: 1 tablespoon

prepared mustard

**Onion**

Amount: 1 small or 1/4 cup chopped, fresh onion

Substitute: 1 tablespoon

instant minced onion, rehydrated (check package directions)

TIP: Dried onion may be added directly to moist foods such as soups, gravies, sauces and salad dressings. You may need to rehydrate it with a little water before adding it to drier foods. Check package directions—one brand advises adding an equal amount of water and letting the dried onion stand 5 to 10 minutes.

**Pasta (substituting one for another)**

Amount: 4 cups COOKED

Substitute: The National

Pasta Association suggests these substitution ratios. Check <http://www.ilovepasta.org/faqs.html#Q10> for more information.

- 8 ounces of UNCOOKED elbow macaroni, medium shells, rotini, twists, spirals, wagon wheels, bow ties, mostaccioli, penne, radiatore, rigatoni, spaghetti, angel hair, linguine, vermicelli and fettuccine all produce about 4 cups COOKED pasta

- Use about twice as much UNCOOKED egg noodles to provide 4 cups COOKED pasta. Approximately 8 ounces UNCOOKED egg noodles equal 2 1/2 cups COOKED noodles.

**Pumpkin Pie Spice**

Amount: 1 teaspoon

Substitute: 1/2 teaspoon

cinnamon plus 1/4 ground teaspoon ginger plus 1/8 teaspoon ground allspice plus 1/8 teaspoon ground nutmeg

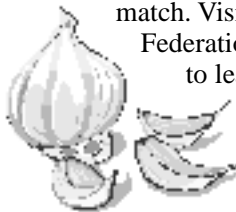
**Rice**

Amount: Any amount

Substitute: Most rice products will substitute for each other on a fairly equal basis in recipes; however, their cooking times and the amount of liquid needed may vary. If possible, choose a rice with a comparable grain length for the closest match. Visit the USA Rice

Federation's Rice Cafe

to learn more about cooking with the different forms of rice: <http://www.ricecafe.com>

**Rum**

Amount: any amount

Substitute: 1 part rum

extract plus 3 parts water. For example: for 1/4 cup rum, substitute 1 tablespoon rum extract plus 3 tablespoons water.

**Sugar, Confectioners' or Powdered**

Amount: 1 cup

Substitute: 1 cup granulated

sugar plus 1 tablespoon cornstarch; process in a food processor using the metal blade attachment until it's well blended and powdery.

**Tomato Juice**

Amount: 1 cup

Substitute: 1/2 cup tomato

sauce plus 1/2 cup water

**Tomato Soup**

Amount: 10 3/4 ounce can

Substitute: 1 cup tomato

sauce plus 1/4 cup water

**Wine, Red**

Amount: Any

Substitute: The same

amount of grape juice or cranberry juice

**Wine, White**

Amount: Any

Substitute: The same

amount of apple juice or white grape juice

**Yeast, Compressed**

Amount: 1 cake (3/5 ounce)

Substitute:

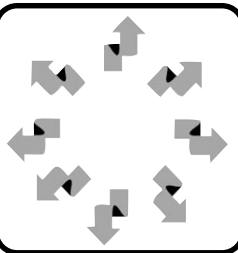
- 1 package (1/4 ounce) active dry yeast
- scant 2 1/2 teaspoons loose active dry yeast

TIP: For more information on conversions among types of yeast, check the Red Star Yeast site at: <http://www.redstaryeast.com/faqs.htm#CONVERSION>

**A FINAL TIP**

The next time you're missing an ingredient for a recipe, here's a final tip on how to S-U-B-S-T-I-T-U-T-E:

S - Seek out this article  
 U - Use a similar ingredient  
 B - Be experimental  
 S - Search the Internet  
 T - Try another recipe  
 I - Investigate your cookbooks  
 T - Try calling your neighbor  
 U - Use this as a learning experience  
 T - Take time to go to the store  
 E - Eat out!

**Miscellaneous****SOYBEAN**

continued from page 4

some of their acres from corn to soybeans. With soybean seed supplies already short, more demand for soybeans will make the situation even worse," said Len Nelson, an NU crop variety and seed production specialist. "Farmers who decide to plant more soybeans may find that they don't have as many options in terms of variety or even quality. There will be some limitations to switching."

Farmers considering planting more soybeans now should also consider the impact of over supply on market prices in the future. "If this situation also results in an oversupply of soybeans at harvest, it will certainly bring the price down," Nelson said. "Nearby states such as Iowa, Missouri, and Illinois that normally might have soybean supplies suitable for use in Nebraska are in the same situation," Cross said. He also warned against looking to warmer, southern states for soybean supplies, because those soybean varieties mature faster and may not work well in Nebraska's longer cold season in spring.

Farmers need to talk with their seed suppliers as soon as possible and find out what is available. "While the popular Roundup Ready beans may be sold out, conventional and STS varieties still may be available and are good options for Nebraska farmers," Knox said.

"You will also need to adjust your planting rate to account for smaller seeds and smaller germination percentages," he said. "There are printed materials available as resources for calculating planting rates, and you can talk to local cooperative extension educators about adjusting these rates, too."

"A planting rate of 150,000 live seeds per acre works well for soybeans in Nebraska," said Jim Specht, an NU crop scientist. This leaves a margin

of error for plants damaged by pests, bad weather, and other variables.

"At harvest, you want to have 100,000 mature plants per acre, so the margin of error is very important since not all of the plants will make it that far," he said. "It is also important to note that the germination percentage shown on the bag is from a warm germination test, not a cold stress test, so it may be a high estimate of the number of seeds that will germinate in cooler field conditions."

To find the correct planting rate, Specht said, divide the desired number of live seeds per acre by the decimal equivalent of the germination percentage. For example, for seed that has 75 percent germination, divide 150,000 by .75. For 150,000 live seeds per acre with this seed, farmers would need to plant 200,000 seeds per acre.

"The good news about poor quality soybeans is that the shortage is less likely to drive up seed prices this year," Knox said. "You shouldn't charge a high price for a lower quality product," he said. "But sometimes supply and demand does funny things to the market, so it's difficult to tell what will happen at this point."

For more information, consult cooperative extension NebGuideG99-1395-A, "Soybean Seeding Rates," which is available at local extension offices or on the web at [www.ianr.unl.edu/pubs/fieldcrops/g1395.htm](http://www.ianr.unl.edu/pubs/fieldcrops/g1395.htm). (TD)

CONTACTS: Jim Specht, Ph.D., professor, agronomy and horticulture, Gary Cross, NU foundation seed manager, Steve Knox, Nebraska Crop Improvement Association, Ken Anderson, marketing manager, NC+ Hybrids; Lenis Nelson, Ph.D., professor, agronomy and horticulture; and, Heather Corley, IANR News and Publishing.

## Guidelines for Farm Debt

Debt is a part of every farmer's life. In fact, most agricultural producers now find debt is necessary to the success of their operations. Credit should be seen as a resource by producers because, when managed carefully, it can do wonders to enhance the profitability of the operation. But in the end, debt is debt. When too much of it is accrued, trouble strikes. Here are four financial ratios that can help to assess exactly how much is too much.

The debt to asset ratio is the ratio of total farm liabilities to total farm assets. Guidelines based on farm record studies indicate that debt less than 40 percent of assets is acceptable. Debt between 40-70 percent is questionable and debt over 70 percent of assets is in the danger zone.

The rate of return on assets reflects the productivity of farm assets. So long as the ROA is greater than the interest rate, the borrowed funds are aiding in the profitability of the operation. For example, an operation with an ROA of 12 percent and borrowing money at nine percent is using credit profitably and can benefit from a high level of debt.

Interest expense ratios measure the percent of gross revenue being spent for interest. In most cases, 10 percent or less is optimal. Up to 20 percent is cause for concern, and any higher than 20 percent is dangerous.

The term debt coverage ratio indicates the ability of the

See DEBT on page 12