



From Turnover

# WHOLE WHEAT VS WHITE

White bread made before about 1850 wasn't like white bread is now. The old stone mills couldn't separate all of the germ and bran from the starchy wheat endosperm. "White" flour was just sifted whole wheat flour, which was sometimes bleached. Because particles of the bran and germ were left in, this white flour was more nutritious than white flour made by modern methods.

The modern roller mill was invented in the mid-1800's. It consists of several sets of two rollers each. Each set of rollers is placed slightly closer together than the one before. The roller pairs turn in opposite directions, with each set removing a another layer of the grain. To make the whitest flour, the germ is removed first, then the bran layers, then the endosperm is crushed.

Many of the first roller mills were built in Hungary, where much wheat is grown. Hungarian flour became world-famous. Bread made from it was served at the World's Fair in Vienna in 1873. Americans tasted it there and reported how white it was.

When the governor of Minnesota, Governor Washburn, heard about the white bread and roller mills he sent for Hungarian engineers. Soon roller mills were in operation all over Minnesota, and white flour became inexpensive enough that many more Americans could afford it.

Millers and bakers loved this new flour. When it was bleached (often with substances no longer permitted because they are poisons) it was pure white and it stored much better. With the germ removed, the oil content was very low, so the flour was less likely to go rancid. With the bran gone, the flour absorbed less

moisture, so it caked and spoiled less. And best of all, weevils stayed out of it. Consumers were equally pleased with the color and texture of the new flour.

In the second half of the 1800's scientists attempted to settle the question of which flour was best in the laboratory. They showed that white bread gave the body as much or more protein and calories as an equal quantity of brown bread and considered the debate closed.

However, the discovery of vitamins at the turn of the century raised the issue once again. Most people thought white bread was better, until scientists showed that it was lacking in vitamins that were needed for health, and which were present in the whole wheat.

Among the first vitamins understood were niacin (B-3) and thiamine (B-1). A survey taken in the U.S. in the 1930's showed 200,000 cases of the disease pellagra (caused by lack of niacin) and many cases of beri-beri (caused by lack of thiamine). These are both vitamins removed when white flour is made. The surgeon General of the United States called a conference to decide how to get rid of these diseases. Several years later, after much argument and debate, a decision was made to enrich white flour by putting some vitamins and minerals back into it.

In the 1930's, a group of experts was asked by the government to decide what substances should be added to white flour. They had to choose among those items that were known and which could be purchased in bulk at a reasonable price. The four nutrients they chose were thiamine (B-1), riboflavin (B-2), niacin (B-3), and iron. They suggested a fifth, calcium, as optional. In October, 1941, 30% of U.S. flour was enriched with the first four nutrients; by January 1943, the amount was 75%. At this point enrichment was temporarily

made compulsory to ensure people's health during World War II.

30 states now have laws requiring enrichment, and in some other states most flour is enriched voluntarily. About 90% of flour is now enriched. If flour is enriched, it must say so on the label.

This could have closed the issue for good, except that nutritional science continues to discover more about human needs. It is now known that when white flour is milled, the following nutrient that we need are removed:

- about 1/6 of the protein, especially the amino acid lysine
- most of the (unsaturated) oil and with it the vitamin E
- much of the B vitamins: B-1, B-2, B-3, B-6, pantothenic acid, and folacin
- much of the minerals: calcium, magnesium, iron, and the trace elements.
- most of the dietary fiber

In 1941, some of these couldn't have been added because they weren't available or were too expensive. Some of them were not even known to be important for good nutrition.

Whether you buy white or whole wheat bread, reading the label can help you get more for your money: Unbleached white flour contains more B vitamins and vitamin E than bleached. Commercial white bread with eggs, milk powder, and food yeast added will have extra nutritional value.

Calcium propionate, which inhibits mold, is probably one of the least risky of food additives. It is, however, quite unnecessary in bread if you buy it fresh and eat it within 2-3 days. Refrigerate it if you won't be using it all that quickly.

By checking the label you can

choose breads with less sweetener, or even none. Raisin syrup is a sweetener, probably with some traces of the vitamins and minerals found in raisins.

Bread containing some whole wheat has more nutrients from the flour than bread with all white flour. But be sure that if your paying extra for bread that has some whole wheat flour in it that there is really a significant amount of whole wheat. The order of ingredients listed on the label tells the amount of the ingredients in decreasing quantity. So make sure that the whole wheat flour isn't the 10th ingredient listed.



Also be sure that you don't mistake "wheat flour" for whole wheat flour. The law allows bakers to call white flour "wheat" flour and color it brown with caramel coloring.



IF YOU PURCHASE 24 OR MORE

T-SHIRTS OUR EXCELLENT PRINT-

ING WORK IS

## Free!

17 W. 9th 841-7878

T-SHIRTS TRANSFERS

LETTERING OF YOUR CHOICE

Continued from P. 5.

## Credit Union...

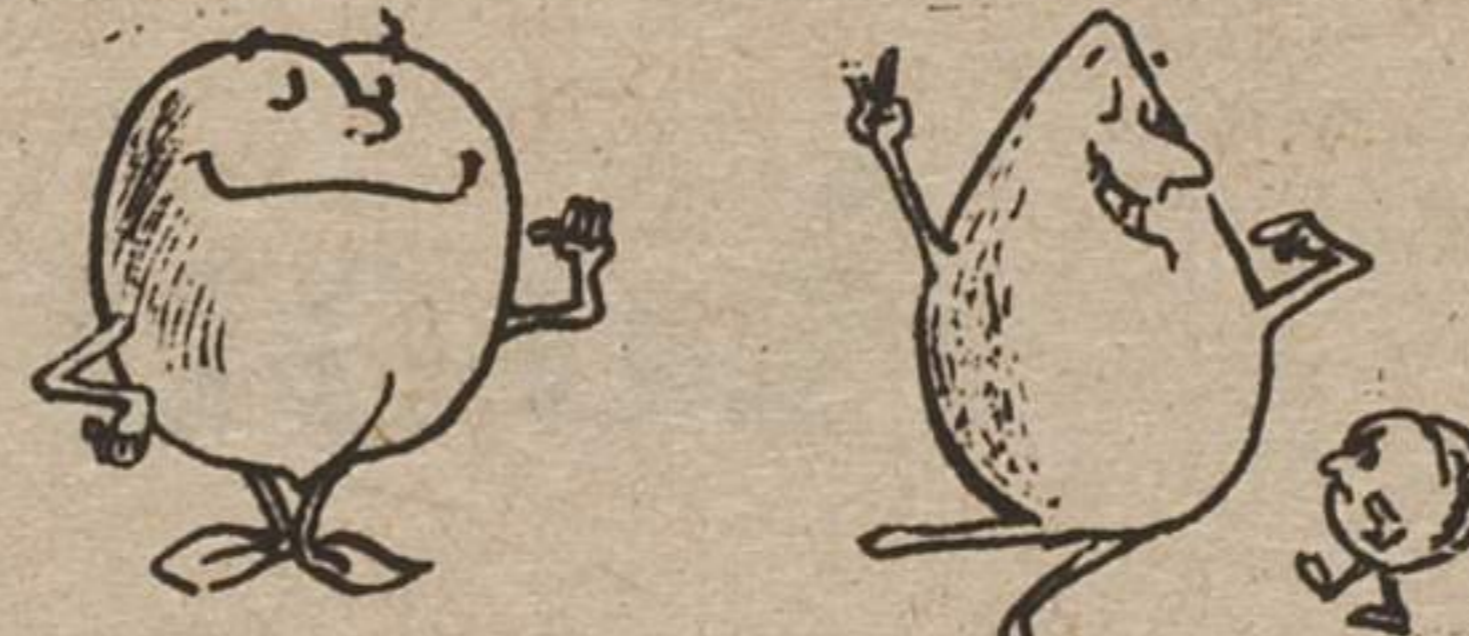
A loan that has proven to be very popular and one we're happy to make is a debt consolidation loan. This can allow you to combine all your various loan payments into one package payment. This seems to make payments easier to remember and keep track of. We also encourage people who have trouble budgeting their money to contact Volunteer Clearinghouse and set up an appointment for budget counseling. They can suggest some good ideas to help you watch your money.

The loan program is extremely important to the credit union. It is here that we can help people in the community and earn some dividends to return to our members. The CU is a financial cooperative and taking out a loan implies a commitment to the cooperative. By paying off loans on schedule, you can help generate dividends for members, save yourself interest, money and help keep the supply of money that can be reinvested, stable.

## Sprouts ?

By Pat Collier

My search for alternative work at the Co-op had involved growing alfalfa sprouts as a monthly job. But since I live 18 miles out of town, and since I'm not the most "on time" person around, Molly Van Hee suggested I think of something else to do. Before I could say anything, Molly asked if I could write. (Surely everyone learns how to write?)



She was saying that there had been discussion about the need for a column in Public Notice written for pregnant women and mothers on topics such as nutrition, pregnancy, breastfeeding, parenting, the 10,001 freakouts of a mother... whatever I could think of. So since I spend most of my time being a mother of two small children, learning how to feed them and take care of their needs as well as my own, I figured it was right up my alley.



Whenever I go to the co-op I always see new little kids & mamas, so I know there's a lot of us around. Whether we're able to spend our time with our children or work full or part-time, there are real basics we have to attend to everyday. With great hopes we can share these with you in the months to come in Public Notice. Any suggestions and questions are welcomed.

**MEXICAN FOOD**

**CASA DE TACO**

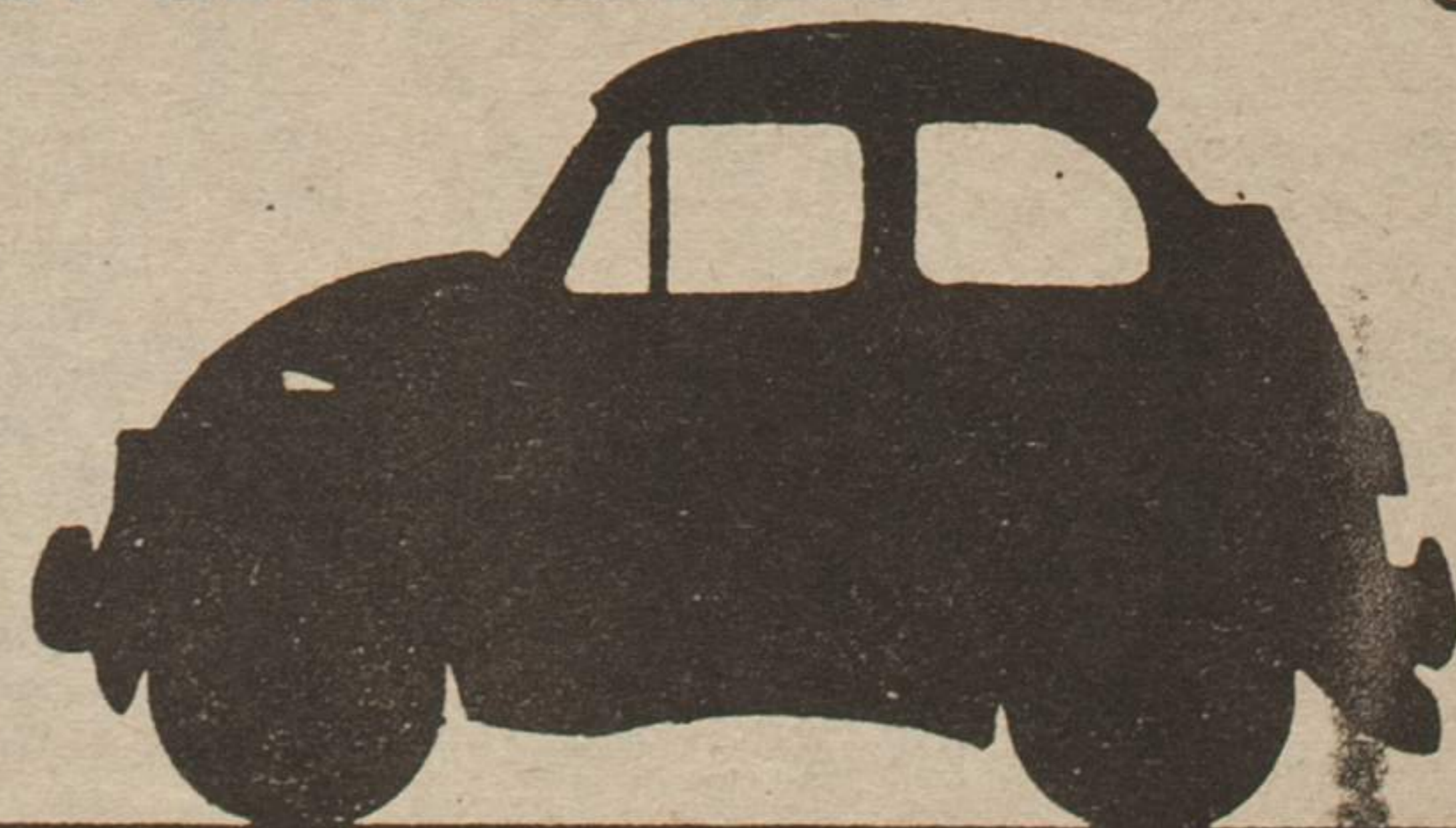
You'll Enjoy It

**CASA DE TACO**

Happy Hour 5 - 6 P.M.  
1105 MASS. STREET

FOREIGN CAR REPAIR

841-2123



**MIKE GORTENBURG**  
**LAWRENCE VW REPAIR**

**WE'VE MOVED!**

... and increased our inventory to include American Auto and Truck Parts, as well as Foreign Auto Parts. See us first for All your auto parts needs. Come in soon, visit us and see our new home!

**JAMES GANG**

1830 W. 6th St.  
Phone 843-8080  
7:30-6:00 MON.-FRI. 7:30-4:00 SAT.