MUCH AVAILABLE information for the consumer comes from the U.S. Depart-
←— ment of Agriculture, University of Arizona and other sources. Mrs. Simmons stands before the bulletin display in the Gila County Extension offices at Globe.

The Consumers' Corner

By Mary K. Simmons

Competition for the consumer's dollar takes place in forms other than price. For example, free delivery, credit, convenience of location or attractive store furnishings. Most consumers are unspecialized — they buy many products. Slight price raises are not noticed by the consumer, and usually he will continue to deal at the same place out of habit.

Most people have only a vague idea of the regular price of a promoted item. The way the retailer shows his item affects the way a consumer will buy. Articles at eye level outsell those above and below eye level. If you have to stretch or bend to get something, you will probably not buy it. People buy more from a full rack than from one half empty.

Once, when you bought potatoes, it was by the sack. Now there are au gratin, hash browned, mashed and french fried. Convenience has its price but the price is not always higher. U. S. Department of Agriculture research shows that out of 153 convenience foods, 42 cost more to fix from scratch.

You can't watch prices for a short time and conclude that the prices are "always lower at this store" and shop there forever after. To benefit from special prices you have to keep comparing.

1. Pay attention to prices; you never will be able to recognize a good buy until you know what you usually pay.

2. Note cost per unit; when things are sold in multiples, figure out what you pay for one. Do the same for things sold by weight. You then have a solid basis for comparing prices. (Remember the store where an item sold slowly at 8 cents? When the merchant put up a sign, "Special — 3 for 25c" it went like hot cakes).

3. Make a list — buy what you need but fight back the impulse to pick up things you neither want nor need.

Packages Captivate

Where there is little difference in price or quality among like products, the packaging design can make success or failure to a manufacturer. Advertisers target in on the ear, the eye and the nose. The approach through the nose is called Time Mist, which markets captivating whiffs of chocolate, stimulating fragrances of root beer and lemon pie, and are supposed to whet appetites and increase sales.

Color is also an important selling device — some colors put people in a buying mood. Research shows red is the most effective package color, but if too much red is used, it tends to make people restless. Yellow is the next best color — it has "appetite appeal". Sometimes the shape of a package causes consumers to buy. Fancy tissue boxes caused a rise in sales.

The shape of a bottle influences your choice. Research shows that regular weight watchers unconsciously pick up vegetable oil in a round bottle nipped in at the waist, even though it contained six ounces less than the old bottle. *Remember that most advertising and marketing practices are intended to impress rather than inform.*

New Labeling Law

With all these enticements, what chance does the poor consumer have? Well, there will be a new look on grocery shelves after July 1, when the Fair Packaging and Labeling Act goes into effect. Package labels must state the truthful net weight in ounces or pounds. If number of servings are listed, weight of each serving must be given. The phrase "jumbo pound" and "giant quart" have been eliminated. And, if and when the government decides that regulations are necessary to prevent deception, then non-

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This is second in a series of columns by Mrs. Simmons, Home Economist in the Gila County Extension office at Globe, Ariz.

Pesticide Detectives Analyzing Body Cells

By Donald A. Vessey, J. W. Stull and W. H. Brown

Use of agricultural chemicals has made it possible to increase yields and improve production efficiency in many crops and types of livestock. These materials include fertilizers, herbicides, defoliants and pesticides.

(See Photo on Cover)

In recent years there has been some concern about the residual effect of these chemicals after their initial application or use. The fact that these residues may linger in the environment — soil, water, food, air and animal life — long after their usage, has stimulated researchers to analyze the environment for the distribution or occurrence of these materials.

One type of chemical of interest is the pesticide DDT. If the effect of residual pesticide in animal life is to be accurately determined, investigations must be carried out at the level of individual body cells.

Trail of DDT

With this in mind, DDT has been fed to experimental rats and then the different components of a cell have been assayed for the pesticide. Furthermore, the manner in which the cell handles the DDT has been characterized. This was done by following the DDT over a period of time in various cell preparations, noting when, where and if it is changed (metabolized) to other chemical forms which are called DDD and DDE.

Research of this nature is confronted with two major problems. The first is concerned with how to separate the cell into its different components. This may be accomplished with a high speed machine called an ultracentrifuge. In this machine a suspension of broken cells is spun at an extremely high speed, thus developing sedimentation forces many thousand times greater than the force of gravity. The larger and heavier cell components are seen to settle out or sedimentize first, being followed by smaller and lighter components. Proper choice of the sedimentation force enables one to selectively remove the specific cell components from the suspension (namely; nuclear, mitochondria and, lastly, microsome) leaving behind soluble cell materials. Each of these fractions has specific functions in the metabolic processes in the cell.

The second problem is how to analyze precisely for small amounts of DDT and its metabolies (DDD and DDE). This is done by means of gas chromatography. Compounds are first separated on the basis of solubility differences on a long column loosely packed with the appropriate material. The separated components (DDT, DDD and DDE) are then passed on to a detecter which measures the chlorine atoms on the pesticide molecule.

Tracing Metabolism

Using these tools, it was possible to make the following observations on DDT uptake by liver cells from rats which had been fed DDT:

(1) The pesticide did not end up exclusively in any one cell fraction.

(2) Pesticide was depleted with time from the liver cells and was presumably excreted or stored in other tissue.

(3) The pesticide appeared to be transported around in the cell by means of certain other substances.

(4) The liver cells were actively changing or detoxifying the DDT to DDE and DDD within 16 hours after feeding, and the efficiency of detoxification continued to improve for a number of days.

(5) DDE appeared to be rapidly transported out of the cells while DDD remained longer to be further metabolized.

Amount and Time

The accompanying table contains a portion of the data used in arriving at the above conclusions. This table shows what percent of the total pesticide found in the respective fractions is represented by DDT and its detoxification products (DDD and DDE) for two points in time, namely 16 hours after feeding and 1 week post dosing.

Percent of DDT and Its Analogues in Cell Fractions

Fraction	*DDT*	*DDD*	*DDE*
16 hr. post treatment			
Microsome	69.4	25.7	4.9
Mitochondria	64.0	31.8	4.2
Nuclear	69.1	27.1	3.7
Soluble	67.0	28.8	4.2
1st week post treatment			
Microsome	61.2	27.6	11.3
Mitochondria	59.9	31.0	9.1
Nuclear	61.0	29.0	10.0
Soluble	54.0	30.8	15.2

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functional, slack-fill packages (for example larger than necessary cereal boxes), will be forbidden.

Although these provisions are not all that the backers of the bill had hoped for, the new regulations should make shopping easier, especially weight comparison.

But remember, there can be a big gap between passage of a law and results. A well-intentioned law may prove unworkable, and a workable law can be laxly enforced.

So don't leave everything up to the government. Don't abandon the oldest form of consumer protection — self-protection. Anyone who figures he can outsmart the market — get something for nothing — and who can't take the time to think before he spends, or figures it doesn't matter where his money goes — no one can assure him of getting his money's worth.