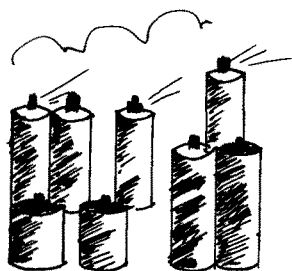


Aerosol foods seek larger market



Self-pressurized foods—sometimes called food aerosols—face some problems but they hold promise of becoming a larger portion of the total self-pressurized industry, Montfort Johnsen told AOCS members during a session on “Aerosol Packaging of Foods” at the Chicago fall meeting. Johnsen is vice president for research and development with Peterson/Puritan Inc. of Danville, IL.

What problems?

Water-based pan release (no-stick) sprays need sufficient acidity to prevent growth of microorganisms. If sprayed into a pan preheated to more than 270 F, the emulsion may splatter.

The water-base spray goes down in a very thin, opaque layer, Johnsen said. Lecithin/Fluorocarbon sprays already on the market are clear. The opaque film is regarded as a major marketing deterrent by firms already selling the other type of sprays, Johnsen explained.

Maple syrup can be dispensed by using a non-compartmented aerosol system pressurized with nitrogen gas. “The product comes out clear, then clouds and turns opaque as nitrogen bubbles form and enlarge,” Johnsen related. “In a minute or so the gas bubbles pop at the surface and the syrup again becomes clear. By that time, however, the startled housewife may already have tossed the can in the trash.”

Food technologists understand what’s happening, he said, but housewives don’t. Nitrous oxide may be used to give “a more pronounced reticulation and whitening effect.”

Consumer testing of self-pressurized pancake batters

indicated good acceptance among younger women, especially those who are single. The users liked being able to cook just two or three pancakes without having the mess involved in a large batch. Testers also said they would find the product convenient for outdoor meals and for camping trips.

Formulation and testing have ensured that bacterial growth will not be a problem, Johnsen said.

“Puffed” salad dressings also proved popular as they have only one-sixth the calories of the same volume of a conventional dressing, he said. Regular salad dressings contain about 36 to 50 percent blended vegetable oils, Johnsen told his audience. “It is possible to essentially duplicate these products in aerosol form using about half the amount of blended salad oil, then puff them with nitrous oxide or carbon dioxide gas to an overrun of about 200 percent,” he explained.

Finally among the new products, Johnsen listed a line of concentrated mixers for alcoholic beverages.

“Such mixed drinks as Manhattans, daiquiris, bacardis and mi-ti’s are almost never requested at private parties because of the relative difficulty of preparation,” he said. “In an aerosol blend, a straight stream of carbonated product is directed into the alcohol, after which ice is added.”

Testers who put ice in first discovered that the relatively narrow jet quickly eroded a small depression in the top ice cube and then splattered as tap water does when it hits the bowl of an upright spoon.

“We have many calls from housewives asking how to clean their ceilings,” he said.

During 1975, domestic aerosol food sales were at 150 million units, about 6.4 percent of all aerosol products, Johnsen said. Almost all was based on three products—whipped creams, pan release sprays, and cheese spreads.

Each product required several years of promotion and advertising before sales topped 10 million units annually, he noted.

Development of new products and acceptance by the consumer provide the growth potential. ●

Profit Study Forecasts Favorable Outlook for Chemical Industry

According to a new Arthur D. Little study on chemical industry profitability for 1975-82, net returns will average close to 11.7 percent for chemicals and allied products and 10.4 percent for basic chemicals.

These averages were 9.9 percent and 7.6 percent, respectively, during the 1967-74 period, the study said.

Growth in real terms for the domestic chemical industry will be about twice the rate of gross national product (GNP) growth during the period. The report forecasts annual growth in physical volume averaging 5.3 percent compared to the 6.7 percent average annual growth experienced by the industry during 1967-74. Real GNP growth, the report said, will average 2.5 percent annually through 1982 compared to 2.7 percent for the 1967-74 period.

Chemical sales of U.S. companies will reach \$228 billion by 1982 compared to \$94 billion in 1975, the report forecast. The anticipated increase would average 13 percent a year and is predicated on an average annual consumer price inflation rate of seven percent. Chemical prices should rise at a slightly faster rate than inflation.

Donald R. Gibbons, senior member of Little’s chemical management consulting staff and director of the Little study, outlined predicted shifts in growth rates for various chemical product categories.

Plastics should pull well ahead of synthetic fibers to

become the most rapidly growing commodity group, Gibbons said. Annual volume of plastic materials and resins will average 9.2 percent annual growth through 1982 compared to 5.9 percent for man-made fibers, he said. Both product groups average 10.7 percent annual growth during 1967-74.

“The advantages of plastics are strengthened by their lower production energy requirement as compared with metals,” Gibbons said. “The trend to lighter cars is among other favorable factors.”

“The growth of man-made fibers, while it will continue to be good, will slow somewhat because man-made fibers already dominate the U.S. market, and it will become increasingly difficult to substitute more synthetic fibers for natural fibers.”

“Environmental and safety regulations will cause a large portion of chemical plant investments to be for nonproductive purposes,” Gibbons said. “They are also an increasingly important factor in research and development budgets.”

“If the Toxic Substances Control Act is enacted, this will continue to be the case. For this reason as well as for other practical considerations stemming from the industry’s maturity, there is some question as to the amount of innovative research which the industry will do.”

Arthur D. Little, Inc., is a Cambridge, MA, firm providing management consulting, engineering, and development services. ●