

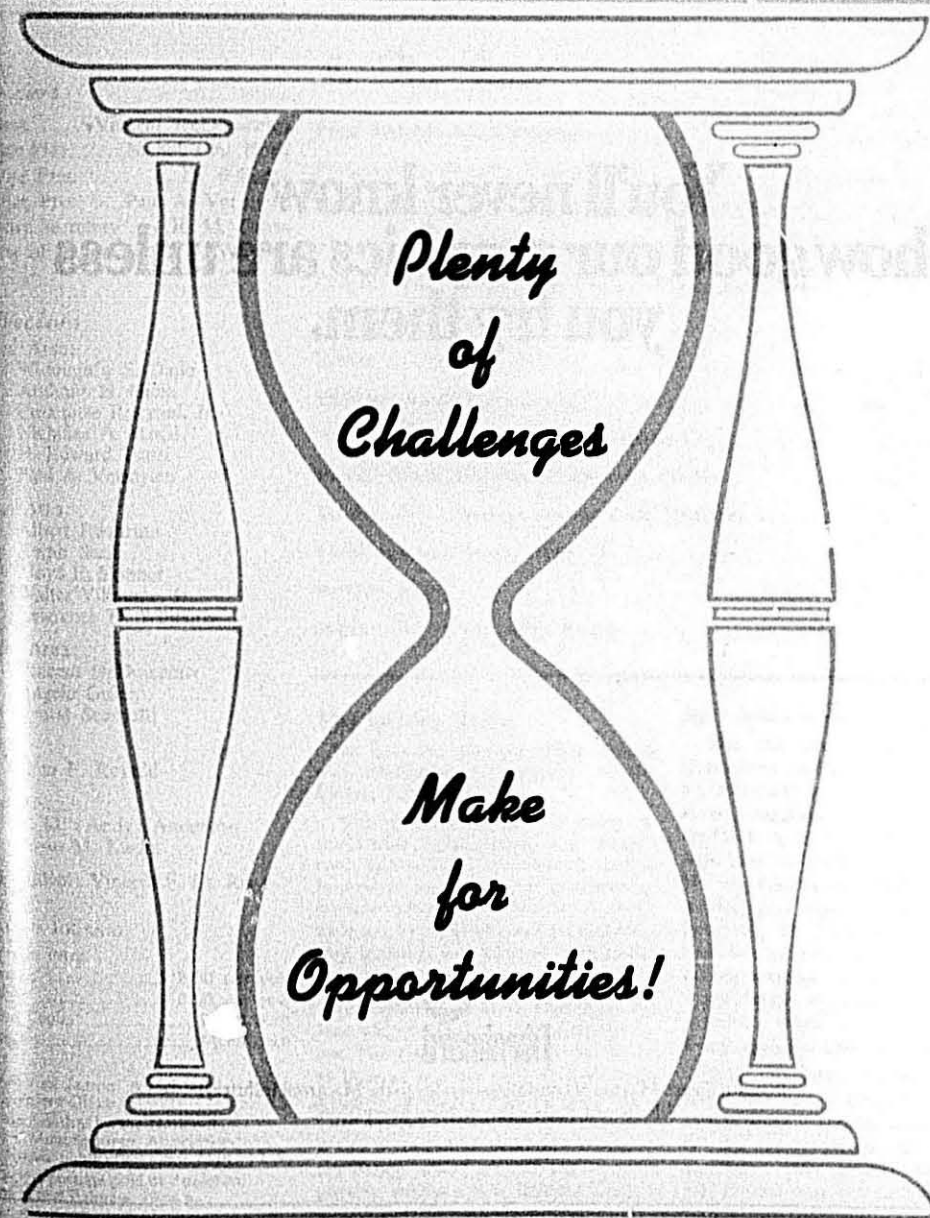
**THE
MACARONI
JOURNAL**

**Volume 55
No. 9**

January, 1974

Macaroni Journal

JANUARY, 1974



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Challenges*

*Make
for
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you try them.**



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The Macaroni Journal

January
1974
Vol. 55
No. 9

Official publication of the National Macaroni Manufacturers Association,
139 North Ashland Avenue, Palatine, Illinois. Address all correspondence
regarding advertising or editorial materials to Robert M. Green, Editor,
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MACARONI JOURNAL

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JANUARY, 1974

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The Energy Crisis

Dr. Carl H. Madden, Chief Economist, Chamber of Commerce of the United States, says:

"The great challenge of today is world-wide management, the enlightened international cooperation needed to analyze and solve the problems of modern industrial civilization. A have/have not world is increasingly unnecessary, unstable, and filled with the threat of war and cataclysm.

"The critical need to deal with the long run energy issue is knowledge-in-use. The rich nations of the world, by as little as one per cent of their gross national product, could develop carefully devised capital transfers and programs of technical assistance, bringing population under control and curbing poverty within a few decades. Such a

result would be real security.

"The other great threat besides war to machine civilization is to be buried by its own problems. Dr. Harrison Brown suggests the time is near to approach such problems on a knowledge basis rather than a political basis. We are dealing now with vast, interlocking, and complex systems of relationships. We have more and more tools to cope with these vast systems—energy systems, seeing the world as a whole; water systems and their management; urban systems; health delivery systems; and the like.

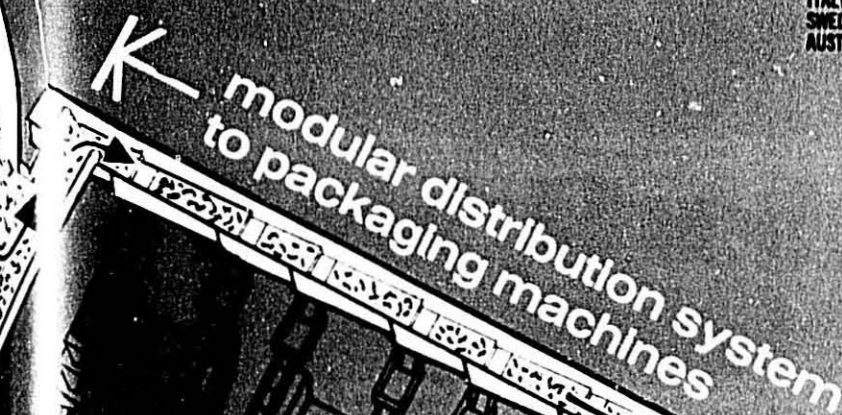
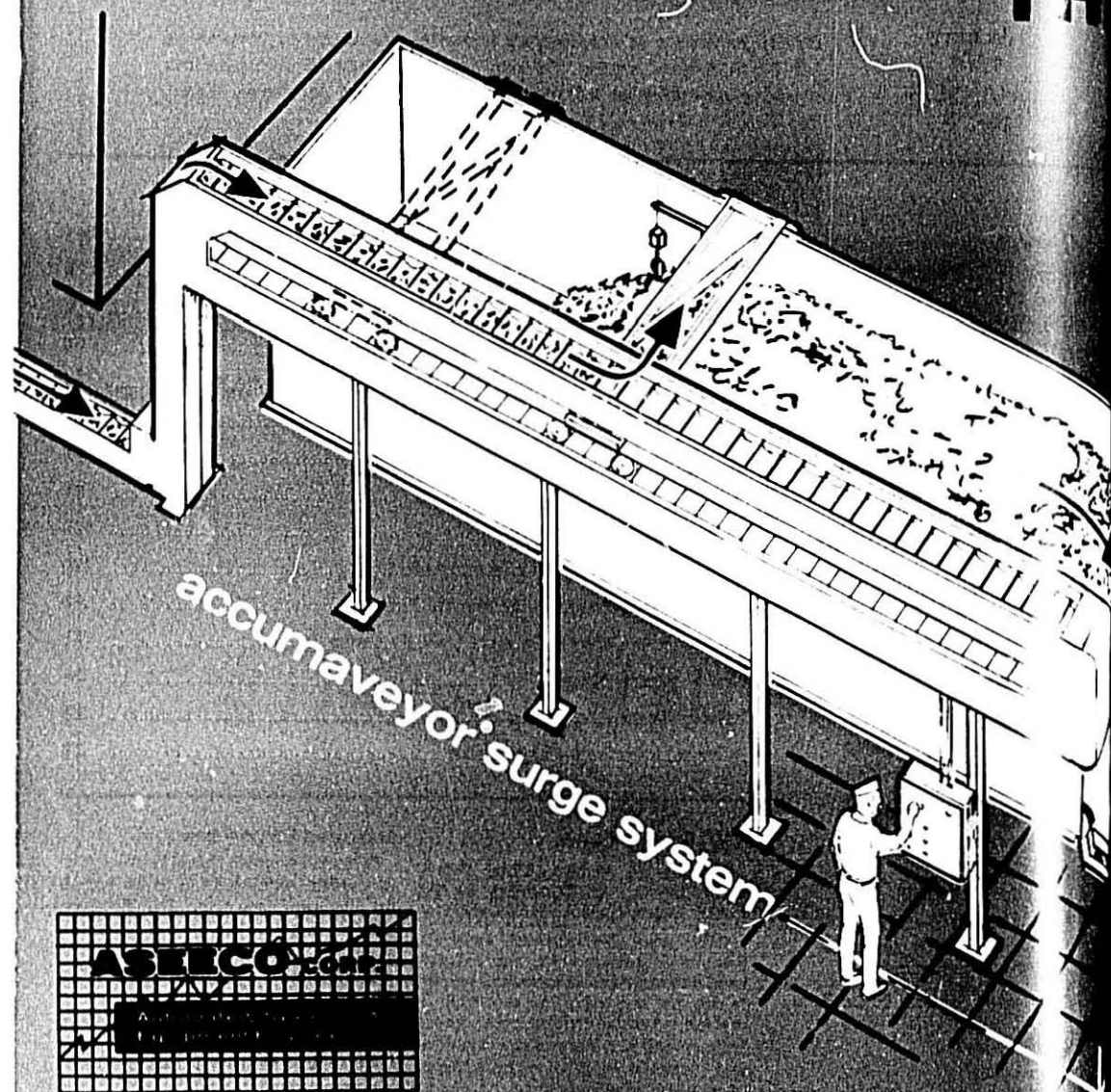
"Thus, far from no-growth, we have the means in our grasp to a future of self-fulfillment and freedom from want for the whole planet. As Dr. Brown concludes, 'The critical difference at this pivotal time will be brainpower.'"

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Food Patterns Are Changing

More Pasta Used

U.S. families, to a uniform and overwhelming extent, are buying less fresh meat and fresh poultry now than they did in early summer when there was an acceleration in the rate of increase in food prices. To a smaller and less uniform degree, they are buying less fresh fish and frozen foods.

So reports Home Testing Institute, a leading consumer research organization, in releasing the results of a survey it conducted among families in the firm's National Consumer Panel.

According to HTI, the survey also indicates that fresh fruit, fresh vegetables, spaghetti and macaroni products, and cereals are being purchased in greater quantities than in the past. Canned food and dairy product purchases remain about the same.

Wide Sample

The HTI survey questionnaire was mailed to a 2000-family sample of the 60,000-family national consumer panel. The families receiving the questionnaire represented a statistical cross-section of the total U.S. family population. By September 15, over 1600 replies had been received and these replies were processed for the survey. A series of follow-up phone calls were made by HTI's Telephone Research Service in November to a sub-sample of families participating in the mail survey. The calls sought to determine if the indicated food purchasing patterns had changed in a month and to uncover the "whys" beyond changing patterns.

"Our phone follow-ups found that housewives are not going back to their old food purchase habits, and seem determined to continue their shift away from 'too expensive' food," said Alexander C. Cortesi, president of HTI. "There seems to be a sincere effort to hold down expenditures while continuing to feed their family at a reasonably nourishing level."

Cutting Down On Meat

Mr. Cortesi said that so far housewives do not report they are cutting out meat or poultry meals.

"Instead, they are simply cutting down on meat, poultry or fish portions, and increasing the amount of pasta dishes, salads, or cereals served. Inflation seems to be doing what warnings from health specialists failed to accomplish—reducing the amount of high cholesterol foods consumed by American families."

Families in the survey were asked to indicate, for ten major food product classes, whether they were buying more, less, or the same amount compared to two months before. Results for all families replying follow:

	Buy More	Buy Less	Buy Same	No Report
Fresh Meat	3%	68%	30%	1%
Fresh Poultry	11	52	36	1
Dairy Products	13	16	69	2
Fresh Fish	17	26	52	5
Fresh Fruit	38	18	42	2
Fresh Vegetables	34	23	40	3
Spaghetti, Noodles	24	11	62	3
Cereals	14	10	74	2
Canned Foods	20	18	60	2
Frozen Foods	16	23	59	2

SMI Board Discusses Change

Changes in consumer buying habits brought about by increased food prices and the need for export controls in grains were explored at a recent emergency session of the Super Market Institute board of directors.

Permanency of shifts in food buying and consumption—such as a move from beef to other foods including pasta—was a topic of widespread interest as participants attempted to predict long-range reaction to increased food prices from consumers, the press and government.

"I am very concerned that we may have turned the consumer away from beef," said John A. Copeland, president of Swift Fresh Meats Co. and chairman of the National Live Stock and Meat Board, in reference to rising food prices.

"No, I don't think it is going to be permanent," he added. "What I am afraid of is that we may have the consumers thinking a little differently right now."

Leo J. Shapiro, president of Leo J. Shapiro and Associates, Inc., commented: "A national study done in March or April found about 70% of the population was consciously cutting down on their purchases of higher priced beef, going to lower priced things such as fish, poultry and spaghetti, pasta or going to certain vegetables. The consumer was then being blocked out of buying these substitute products as time progressed, by shortages and price rises, and the consumer began to accommodate again as those substitute foods began to get difficult to buy."

"An awful lot of people who are buying spaghetti now didn't know how low the price was before so they are now accepting the higher prices," Mr. Shapiro stated.

Mr. Shapiro said he expects "a tremendous bang for the buck in terms of advertising claims and in terms of stocking specific foods. My prediction would be that if everything runs its course, everybody's going to try and take advantage of the present situation in some way."

More Private Label

Arthur White, executive vice-president of Daniel Yankelovich, Inc., said of his company's consumer research, "We are finding in our work that there is an extraordinary increase in interest in the purchase of private label merchandise."

"The most basic change I think has taken place (and if this condition persists for another couple of months I think it will change the character of super market retailing on a fundamental level) is that the consumer used to be highly predictable. More and more shopped once a week and then replenished certain products on their shelves. That's been broken. People don't shop just to refill their freezer or just refill the refrigerator. People don't know what they are going to buy now and they are shopping more frequently."

Mr. White pointed to another trend—particularly large families with a lot of kids feel they can eat out at a fast food operation more inexpensively than they can eat at home.

Export Controls

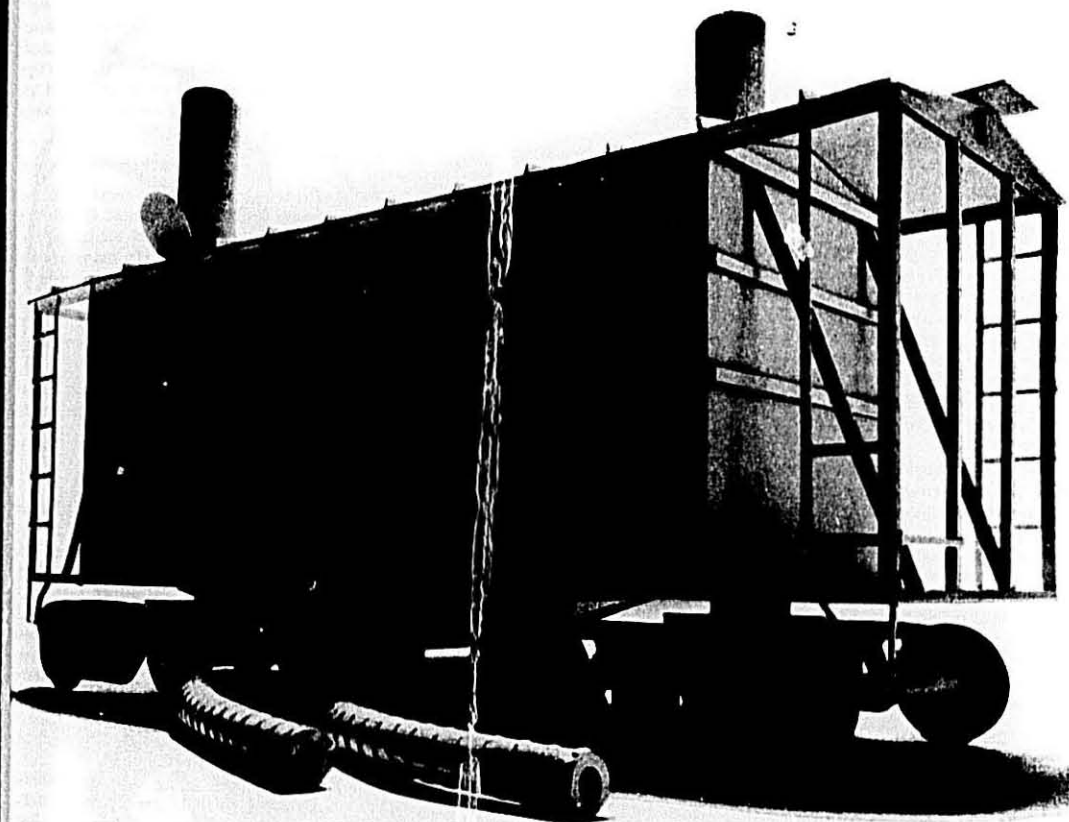
Controls on exports—especially on grains—was frequently discussed by the S.M.I. group. When asked how an embargo on grains would affect the livestock industry, Mr. Copeland said an embargo would lower grain prices and would encourage more livestock production.

George L. Mehren, general manager of Associated Milk Producers, Inc., said: "I think we should expect, at least for another couple of years, massive downward pressure on food prices, while there is a massive inflationary explosion pushing our costs up."

"I also know that you distributors have no home in government whatever. The Department of Commerce is not your champion, and the Department of Agriculture is not your champion. So you haven't anybody pitching for you."

(Continued on page 8)

THE MACARONI JOURNAL



Gold Rush

When you need pasta flour—you need it clean, clear golden and often in a hurry. And you need it convenient to unload. This is why ADM has an available supply of air-slide cars ready to rush to you when you need them.

Clean, pasta-perfect Durum Flour and Semolina; when and where you want it! That's ADM's 24-carat gold rush service.



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Food Patterns Changing
(Continued from page 6)

Technically we dairy people and some others have Agriculture pitching for us, but it is a pale shadow of what they once were and I do not think we have the political clout to turn around these rather inconsistent policies of holding price down and costs up."

Commenting on government response to consumer and press reactions to food prices during the fall of 1973, David Ginsburg, S.M.I. legal counsel, said: "Underlying our entire discussion has been one question: Is there going to be a major change for the future—a change in food supply as it affects this country and the world? The answer seems to be yes. There are certain to be changes. We are not going to go back to the kind of system of food production and distribution that we had before."

The S.M.I. report of the briefing inserts the following comment: "As this transcript goes to press, the final crop forecast for grains is well above the Agriculture Department's August prediction. Therefore, export controls may be avoided. If controls are not applied, higher food prices than otherwise might prevail can be expected next spring."

Heard on Wall Street

by Joseph Rosenberg, Wall St. Journal

Chain supermarket stocks have gone through a meat-grinder experience. In the past year, they were chewed up in a fierce competitive battle with Great Atlantic & Pacific Tea Co., further mauled by price controls and shopped still further by a sudden shortage of meat.

"The tone has improved quite dramatically since last year," says R. J. Worobel, analyst with Merrill Lynch. "Profit margins have improved and we should see further improvement in the next couple of quarters."

"Although price discounting and generally intense competitive conditions are likely to continue throughout the industry, particularly in certain areas of the nation, the general atmosphere appears to be one of moderately increasing optimism," says Mr. Worobel.

The initial struggle in the supermarket industry was to meet the discounting policy of A&P's WEO, Where Economy Originates, begun early last year. Competition's reaction was to cut prices even further. The result: Industry profits and margins eroded to a 12-year low.

Phase 4 put the industry in a new bind, made worse by the meat shortage. But the competitive threat from A&P

has cooled down, revised Phase 4 regulations give supermarkets more flexibility and now there is plenty of meat. So prospects are brighter.

Protein-ettes

With meat prices now hovering at record highs, The Creamettes Company has come up with a timely new product idea—Protein-ettes, a Textured Vegetable Protein that housewives can use like meat, for one-third the cost.

The new product is being introduced via an ad campaign that includes a full-color, full-page ad in December Family Circle.

"Of course, Textured Vegetable Protein products aren't exactly new," says Creamettes. "They've been around quite a while—in frozen dinners, for example, and most recently as a meat extender for hamburger. But in Protein-ettes, Creamettes has developed, after eight years of research, a product good enough to replace meat, not just extend it."

Two Flavors

With a taste described as "excellent," Protein-ettes come in two flavors. A ground beef flavor can be used just as hamburger is used in a casserole or in spaghetti sauce, while a ham flavor can be used just like ham in salads or casseroles.

Inexpensive Protein

Protein-ettes sell for only 39¢ for a 3-oz. package—which reconstitutes to the equivalent of about a pound of meat—as much as normally used in a 2½- to 3-quart casserole. "In many markets today," says Creamettes, "we're being conservative in our advertising when we claim Protein-ettes can give families the protein they need for one-third the cost of meat."

According to the company, Protein-ettes nutrition stacks up well with that

Stouffer Frozen Foods

Stouffer trade advertising says: "In 1973, just one brand produced over 55% of the gross dollar profit in the frozen entree section with only 28% of the items. The same brand, Stouffer's, produced 51% in 1972."

	% of Case Space	\$ Sales	% of \$ Sales	Gross Profit/Sq. Inch
Macaroni and Cheese	3.2	228.80	6.0	.076
Escalloped Chicken & Noodles	1.3	104.94	2.9	.084
Macaroni and Beef	1.5	93.45	2.5	.057
Turkey Tetrazzini	1.3	85.20	2.3	.070
Tuna Noodle	1.5	82.45	2.3	.060
Noodles Romanoff	1.5	47.30	1.3	.014
All Stouffer Entrees	28.2	2,075.51	54.0	.076
In Nationality Foods:				
Lasagne	1.1	119.56	3.8	.057
Chicken Chow Mein	.5	10.04	.6	.022

of other quality protein sources like milk, eggs and meat. "They are 50% protein, fortified with vitamins and minerals, and they contain the eight essential amino acids the body needs to use that protein. And they are made of vegetable, not animal protein. They contain no harmful cholesterol and less than 1% fat. (Even extra lean ground beef is at least 15% fat)."

Foil Packets

Protein-ettes come in convenient foil packets which keep almost indefinitely in the cupboard. Tested recipes appear on the package backs. In many recipes, Protein-ettes and Creamettes pasta together can be added to the same boiling water. Once cooled, Protein-ettes should be treated just as cooled meat is, to prevent spoilage.

Protein-ettes have met with "great success" in test marketing, reports The Creamettes Company.

Red Skillet Dinners

Gooch Foods, a subsidiary of Archer Daniel-Midland Co. is moving its soy-protein Red Skillet TVP dinners into Chicago and the Midwest. The dinners, which have been in limited test areas, contain soy-protein instead of meat. They come in four varieties. National roll-out begins next year with advertising support in TV and newspapers.

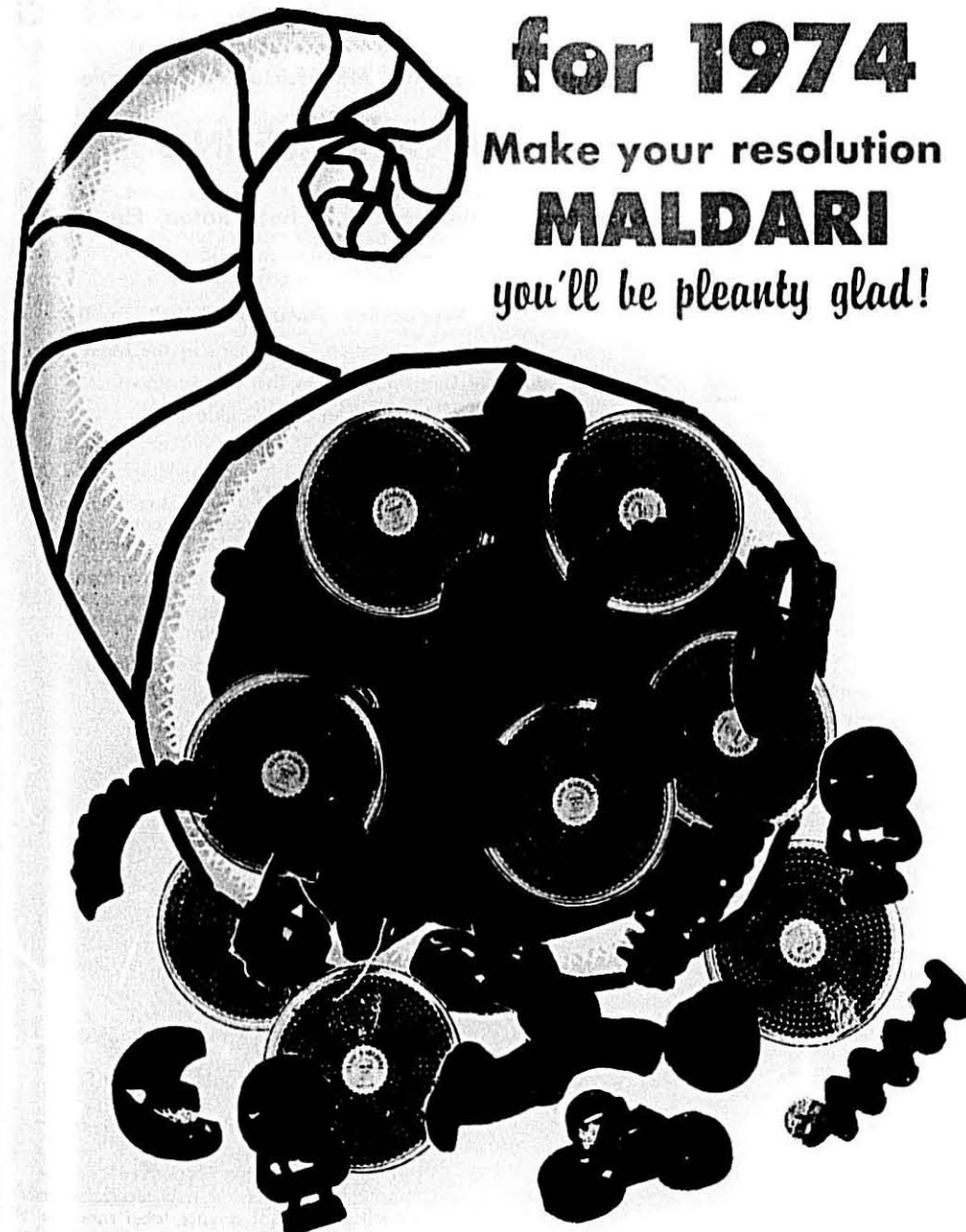
Push Pennsylvania Dutch Noodles

With sales going up—an increase attributed to their use as meat substitutes—Pennsylvania Dutch Egg Noodles are getting a boost with advertising in the Midwestern and Eastern regional editions of December Family Circle magazine. The ad features a testimonial from Chef Louis Szatmary, proprietor of The Bakery, Chicago's celebrated restaurant.

The 1973 Kings Survey shows the statistics: Total Freezer had 69 items in all products; 355,891 square inches of case space; \$38,947.31 in dollar sales and \$9,883.25 gross profit. Gross profit per square inch averaged .028.

Among twenty Stouffer entrees, six had macaroni products.

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In Nationality Foods:				
Lasagne	1.1	119.56	3.8	.057
Chicken Chow Mein	.5	10.04	.6	.022



for 1974
Make your resolution
MALDARI
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America's Largest Macaroni Die Makers Since 1903 - With Management Continuously Retained In Same Family
JANUARY, 1974



Boca Raton Hotel and Club

This Spanish castle is capable of handling a meeting of 1,200 people. The Macaroni Convention will run about 250, so there will be other groups in the house at the same time we are there.

With the completion of a \$14 million expansion and refurbishing program, the castle stands unchallenged as the most complete, modern and enjoyable meeting facility anywhere.

Tower Completed

Recently completed is a new 250 guest room Tower located in the southeast corner of the present hotel directly on the shore of Lake Boca Raton. The twenty-second and twenty-third floors are devoted to one- and two-bedroom suites.

Golf Villas

Nestled among the fairways of the Executive Nine golf course which borders the championship eighteen are 60 new Golf Course Villas. These offer one- and two-bedroom apartments with parlors and complete kitchens.

The majority of our group will be housed in the Main Building, and the meetings will be in the Convention Center.

Many Diversions

Then there are all the other diversions for which Boca is famous—a double crescent of cabanas on a wide expanse of magnificent beach; deep sea fishing; skeet and trap shooting; high goal polo every Sunday; fresh and salt water swimming pools—all in a setting of Mediterranean charm and Old World grandeur.

Boca now has 63 holes of golf, three 18-hole layouts and an Executive Nine. There are six new all-weather tennis courts and a new after-golf watering spot, the Court of the Four Lions.

TOP MANAGEMENT CONFERENCE

National Macaroni Manufacturers Association

WINTER MEETING

Boca Raton Hotel and Club, Boca Raton, Fla. 33432.

Wednesday, January 30

- 2:00 p.m. Convention Registration Desk opens in the Main Lobby.
- 2:00 p.m. Board of Directors meet in the Madrid Room.
- 6:30 p.m. Welcoming Reception in Cafe Galeria.

Thursday, January 31

- 9:00 a.m. First General Session in the Barcelona Room. Greetings from President Vincent De Domenico.
- 9:30 a.m. The Washington Scene, Counselor Harold Halfpenny
- 10:00 a.m. The National Macaroni Institute Report, Theodore R. Sills and Elinor Ehrman.
- 11:00 a.m. Presentation of the Pasta Recipe Contest Winners, H. Howard Lampman, Durum Wheat Institute. Adjournment at 11:00 a.m.
- 2:00 p.m. Tennis Tournament at the Tennis Courts—sign up in advance.
- 6:30 p.m. Suppliers' Social in Camino Hall.
- 7:30 p.m. Italian Dinner Party in the Great Hall.

Friday, February 1

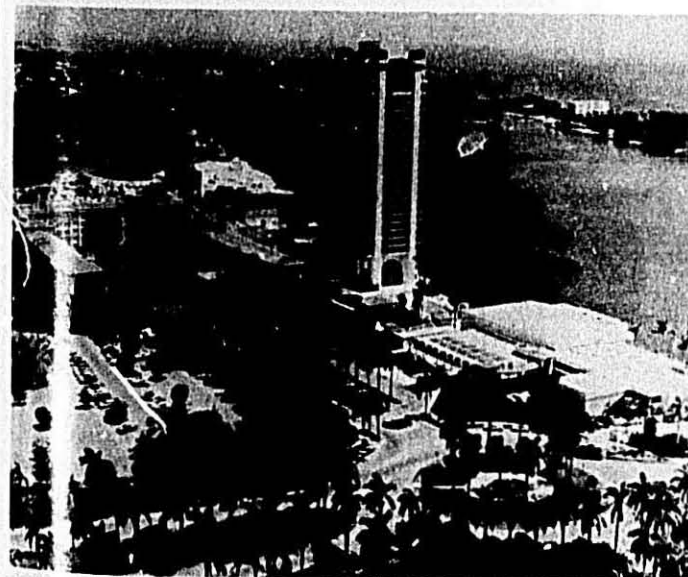
- 9:00 a.m. Second General Session in the Barcelona Room. **Grocers' Panel** moderated by Mark M. Singer, President, National Food Brokers Association. Panelists: Paul R. Bartak, Executive Vice President, E. Skinner Inc., Chicago; Edward J. Krenek, Grocery Merchandiser, Jewel Food, Chicago; Eugene A. Schackelford, Buyer, The Kroger Company, Memphis; Jack Hardy, Store Manager, Publix Markets, Hollywood. Panelists will comment briefly on (1) new product introduction; (2) space allocation; (3) private label rationale; (4) discontinuance of a line. Following their comments there will be questions and answers.
- 10:15 a.m. Break for Smaller Round-Table Discussions—twenty minutes with each speaker. Adjournment at noon.
- 1:00 p.m. Golf Tournament—sign up in advance.
- 6:30 p.m. Suppliers' Social in the Cloister Garden.
- 7:30 p.m. Dinner in the Cathedral Dining Room.

Saturday, February 2

- 9:00 a.m. Third General Session in the Barcelona Room. New National Wheat Institute Film: "Wheat Marketing—The Producer Has a Choice."
- 9:30 a.m. The Durum Situation—Research and Development; Dr. Kenneth A. Gilles, North Dakota State University; Dr. Mark A. Smith, Crop Quality Council
- 10:00 a.m. Production and Marketing—panel of growers led by Melvin G. Maier, North Dakota Wheat Commission, and Harold Hofstrand, United States Durum Growers Association; Norman Weckerly, James Ole Sampson, Dick Saunders, Bud Wright.
- 10:30 a.m. Comments on the Export Outlook—William R. Goodale, Continental Grain Company.
- 10:45 a.m. The Millers' Position—H. D. Joe Hale, A D M Milling Company; Robert Howard, International Multifoods; Mark Heffelfinger, Peavey Company Flour Mills.
- 11:30 a.m. Discussion. Adjournment at noon.
- 6:30 p.m. Suppliers' Social in Cloister Loges.
- 7:30 p.m. Banquet in the Cathedral Dining Room.

Sunday, February 3

- 9:00 a.m. Board of Directors meet in the Seville Room. Adjournment by noon.



Aerial view of Boca Raton Hotel and Club.

Stately Pleasure Dome

Mizner's Masterpiece

Swiftly invading sleepy Boca Raton, Addison Mizner in 1925-26 built his masterpiece, the implausible, almost impossible Cloister Inn. It has been called both one of the most magnificent aburdities of all time and one of the

most beautiful buildings ever erected. Mizner called it his "epitaph." Others, more recently, have called it "the enchanted sanctum" of Boca Raton Hotel and Club.

Elysian Splendor

In 1928, to Clarence Geist, life was found wanting. Having been succes-

sively farm boy, horse trader, railroad brakeman, entrepreneur, public utilities magnate and multimillionaire, Clarence Geist could buy anything he wanted. But to get everything he wanted, Geist needed Boca Raton. And Boca Raton desperately needed him.

Two years before, Addison Mizner created an architectural masterpiece called the Cloister Inn. But the Florida land crash took the Cloister Inn. And death took Addison Mizner. So Geist took Mizner's dream and multiplied it fourfold, with \$10 million out of his own pocket.

No American ever paid so much to create a tradition. And at Boca Raton Hotel and Club, tradition lives on.

Now Owned by Arvida Corp.

Boca Raton Hotel and Club has been awarded the five-star rating in the Mobil Travel Guide. Only six resorts in the United States received this top rating this year.

In a letter to L. Bert Stephens, vice president of Arvida Corporation and general manager of the hotel, making known the award, Jason C. Berger, vice president and director of the Guide, said the five-star rating "indicates that we consider the Boca Raton Hotel and Club one of the best in the country."

How to Get There

Boca Raton is located on U.S. Highway No. 1 and Florida A1A in the heart of the Gold Coast, 22 miles south of Palm Beach and 45 miles north of Miami.

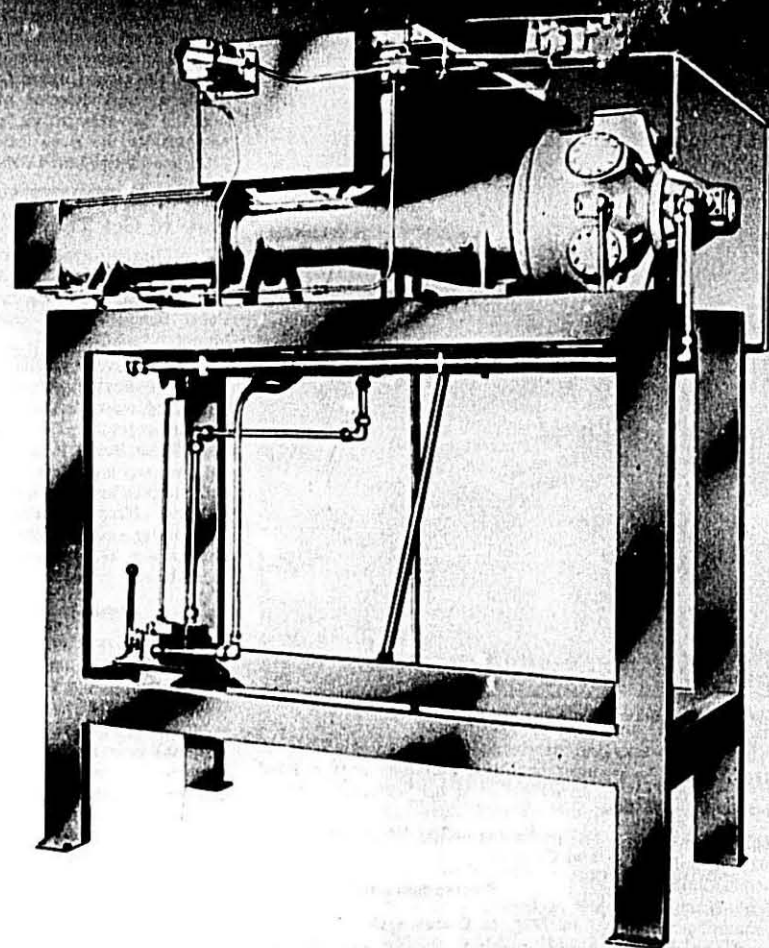
By air, travel to Miami, West Palm Beach or Fort Lauderdale. Miami is served by every major air carrier and has daily jet service to major cities. West Palm Beach is served by National, Eastern, etc. Fort Lauderdale has daily flights by Northeast, Eastern and National. Miami International Airport is 45 miles south of Boca Raton; Fort Lauderdale, 22 miles south; and West Palm Beach, 25 miles north.

Limousine Service

Limousine service is available at all times and will meet all trains and planes upon notice of date, time or arrival and carrier. If by air, the flight number is required.

Rental cars are available and upon pre-arrangement can be made available at any airport or railroad station. Rates and other information available upon request—write Morse National Car Rentals, Boca Raton Hotel and Club, Boca Raton, Florida 33432. Convention delegates are extended a 20 per cent discount.

cleaner!

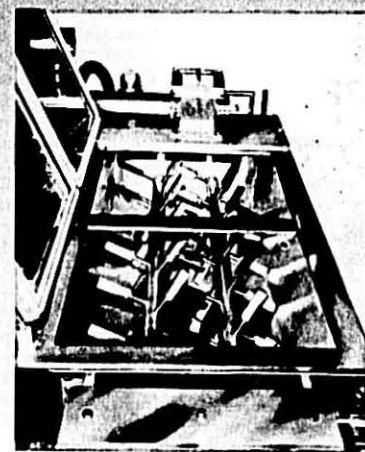


The new Sanitary Extruder by Demaco is engineered for quick, easy cleaning. Just hose it down in place!

Gear box, pulleys and motors have been removed from Extruder. Mixer paddles are welded to shaft, eliminating all joints. No cracks, no crevices where bacteria may form. No corrodible material to contact the product at any time.

Production is 500 to 3,000 lbs. of dough per hr.

In other words — compared to others on the market — Demaco's Extruder is a clean hit! Call now for the complete run-down.



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The Wheat Situation

Economic Research Service,
U.S. Department of Agriculture

Wheat use in 1973/74 is expected to again exceed U.S. production, resulting in a further sharp stock reduction next summer.

The 1973 crop is estimated at a record 1,727 million bushels, 7% above the old record set in 1971 and 12% above 1972. However, because of reduced old-crop stocks, total supply is down a tenth from last season. Also there are prospects for another year of near-record demand. Exports continue strong and current indications point to a 1973/74 total near last year's record 1,184 million bushels. Shipments to the Soviet Union have talled off, but the People's Republic of China, India, North Africa, and West Asia are taking up the slack. Although domestic use will be down a little this season, total disappearance will again exceed the harvest, dropping stocks by the summer of 1974 to around 250 million bushels, the least since 1948.

Record High Prices

Recent wheat prices reached record highs, reacting to heavy early season exports, vigorous mill demand, and continued transportation bottlenecks which have reduced the availability of market supplies. Farm prices eased to \$4.22 per bushel in October after reaching \$4.62 in September. For the remainder of the marketing year, prices are likely to ease further if a record world harvest of grains is forthcoming and prospects are favorable for the 1974 crop.

The record 1973 world wheat harvest reflects larger acreages and generally favorable growing conditions, with most of the grain coming in the major exporting countries and the USSR. USSR imports are expected to be down sharply from the 15 million metric tons in 1972/73 but that decline will be nearly offset by increasing requirements elsewhere. World import demand in 1973/74 may be down only modestly from last year's record 73.5 million metric tons. The increased supply without increased trade points to some easing in world wheat prices.

Durum Wheat

Smaller supplies this year are being buffeted by a strong world import demand and increasing consumption of durum-based foods at home. The apparent early season tightness of supplies skyrocketed durum prices. During July to August, prices at the major markets tripled then receded to \$5-6 per bushel during the fall and early winter.

DURUM SUPPLY from U.S.D.A. Quarterly Durum Reports (in thousands of bushels)

Year	July 1 Stocks	Production	Imports	Supply
1970-71	80,724	52,771	0	1,494
1971-72	58,489	91,805	0	1,294
1972-73	69,251	85,106	0	1,357

DURUM DISTRIBUTION (in thousands of bushels)

Year	Mill Grind	Feed and Other Use	Seed	Exports	Disappearance	Total
1970-71	31,697	362	4,061	38,886	75,006	
1971-72	33,066	589	3,584	43,804	81,043	
1972-73	35,736	655	4,200	64,961	105,552	

	Durum Wheat Prod. 1,000 Bushels			Yield Per Acre Bushels			Harvested Acreage 1,000 Acres		
	1971	1972	1973	1971	1972	1973	1971	1972	1973
Minnesota	1,880	992	2,030	40.0	31.0	35.0	47	32	58
North Dakota	8,063	65,493	75,980	32.5	28.5	29.0	2,525	2,298	2,620
South Dakota	4,782	2,175	2,886	31.0	25.0	26.0	122	87	111
Montana	3,527	4,221	4,140	23.0	31.5	23.0	160	134	180
California	400	156	70	40.0	39.0	35.0	10	4	2
Total U.S.	91,805	73,037	85,106	32.1	28.6	28.6	2,864	2,555	2,971

Quarterly Durum Report

Durum wheat production was forecast at 85,106,000 bushels by the Crop Reporting Board on the basis of Oct. 1 conditions. This is up 17% from 1972 but down 7% from the record high 1971 crop. Acreages were larger than the year before in all states except California. An average yield of 28.6 bushels per acre was indicated October 1, the same as a year before.

Carryover stocks in all positions on October 1 totaled 98,000,000 bushels, down sharply from the 114,200,000 one year ago. Farm holdings of 77,000,000 and off-farm stocks of 21,000,000 were down 14% from last year. Disappearance during July-September 1973 amounted to 22,700,000 bushels compared with 28,100,000 a year earlier. Smaller supplies this year were directly related to a strong world import demand and increased consumption of durum-based foods at home.

Strong World Demand

Strong world demand put durum exports for the quarter July-September at 11,709,000 bushels. This was less than a year ago but export commitments were substantially above a year ago.

Export durum commitments for 1973-74 were 88.3 million bus as of Nov. 4, comprised of undelivered sales of 69.6 million bus and shipments to same date of 18.7 million, according to third release of undelivered export sales data by Statistical Reporting Service of U.S.D.A. and weekly inspection information. Commitments decreased by 1.2 million bus in week. Aggregate of 88.3 million bus compares with 79 million bus listed as available for export and carryover in the revised review of the wheat situation by the Department. Undelivered export sales comprised 26.1 million bus to known destinations, 31.9 million unknown, 3.6 million as ex-

porters' own accounts, and 8 million optional origin. Obviously, since a "minus carryover" is impossible, adjustments must eventually be made in the undelivered sales. U.S.D.A. estimates domestic disappearance of durum for 1973-74 at 42 million bus, against 41 million in 1972-73.

Durum Destination	Million Bu.
European Community	6.7
Japan	.5
Africa	17.3
West. Hemisphere	1.6
Total	26.1
Unknown Destinations	31.9
Exports for own accounts	3.6
Optional Origin	8.0
Total undelivered sales	69.6
Shipments to Nov. 4	18.7
Total sales & shipments	88.3
Available	9.0

Export durum commitments for 1973-74 were 79.2 million bus as of Nov. 4, against availability for export and carryover estimated at 79 million bus.

Australian Crop Estimate

The Australian Wheat Board in mid-November estimated that current crop wheat production should be in the range of from 420 to 430 million bushels, down from an earlier estimate of 480 million bushels.

The Wheat Board is seriously concerned about the rust and weather damage to the crop. Depending on the extent of the rust damage, the availability of milling quality wheat could be reduced. Australia has the option in its recently concluded one million ton sale to Egypt to supply that country with an unspecified amount of offgrade wheat, which will consequently provide one export outlet for a portion of the wheat crop marked by reduced milling qualities.



At the Crop Quality Conference: Seated left to right: Lloyd Skinner, Mark Heffelfinger, Henry Putnam. Standing behind them is Vance Goodfellow.

Comment From The Crop Quality Council Conference

Don Paarlberg, Director of Agricultural Economics, U.S. Department of Agriculture, observed: "Very substantial export commitments have been made out of the U.S. crop that has just been harvested. Increasing populations, improving diets, and the rebuilding of reserves in the importing countries seem likely to keep supplies on the short side for at least a while. The situation is tightest for rice, next tightest for wheat, continuing tight for feed grains, and easing for soybeans.

"Agriculture has kept a half-step ahead of the increasing population and the average person in the less-developed countries is fed better than was his father. There has been no major famine in the world since World War II. There is no known like period of equal length in the world's history. The present concern about the world food situation is perhaps more a reflection of rising aspirations than a deterioration in the actual situation. The hunger and starvation that the world once tolerated is no longer acceptable. This is a long forward stride.

World Food Problem

"What is called for in the world food problem is:

"1. Research and action on family planning, including the medical, economic, social, ethical, political and programmatic aspects of the problem.

"2. Research on food production, processing and marketing, covering all the relevant disciplines. To those who fear that an effort of this kind might plunge us into a surplus problem, we should remind ourselves that in this kind of business, where hunger and human lives are involved, if we are to err, it is better to err on the side of abundance rather than of scarcity.

"3. We should assist the less-developed countries to adopt and use improved methods of food production. Every worthy consideration counsels us to do so: economic, diplomatic and humanitarian.

"4. We should assist those countries that experience disaster, whether from drought or flood. This does not mean that we should take these nations on as permanent relief clients. That would be to their disadvantage, and ours. Over the long pull, these nations will have to meet their own food needs, either by production or purchase."



Left to right: Roy Wentzel, Kene Kuhn, Vance Goodfellow.

Grain & Transportation

H. R. Diercks, Vice Chairman of the Board, Cargill, Inc. had this to say on the grain and transportation situation: "Four major developments of the decade 1962-1971 which have implications for the present and future can be highlighted: (1) a 3% increase in utilization of the four major grains produced in the U.S.; (2) The creation and implementation of the trade-distorting CAP of the European community; (3) The reduction of world grain supplies triggered by the Indian crop failures of the mid-1960's, followed by the production recovery of the "Green Revolution"; (4) The closing and much later reopening of the eastern European market to U.S. agricultural exports.

"Like most systems, an unprecedented and unanticipated surge in demand for service creates problems. The 30-million ton increase in U.S. grain exports last year did create problems—bottlenecks, tie-ups and car shortages. Given the magnitude of this surge, however, the successes achieved are even more remarkable than the problems which arose.

"Shipments on the Russian sales could not begin on a large scale until the shipping agreement between the U.S. and the Soviet Union was put in place. This did not occur until December, 1972, and, as a result, 10 months of grain movement had to be compressed into approximately five. Export shipments by rail between June, 1972 and mid-March, 1973, doubled compared to the same period the previous year, reaching nearly 1.5 million bushels.

Looking toward the future, the main objective for the transportation system must be to increase the effective commodity-moving capacity of our rail system. This goal can be reached in two ways: more modern, efficient equipment; and more efficient utilization of equipment.

"Agriculture—America's largest industry and a leading natural resource—can and should be seen for what it is

and can be: the foundation for improved well-being here and abroad and a national asset whose strength can be used to pay our way in the economically inter-related world of the 1970's."

Efficient Agriculture

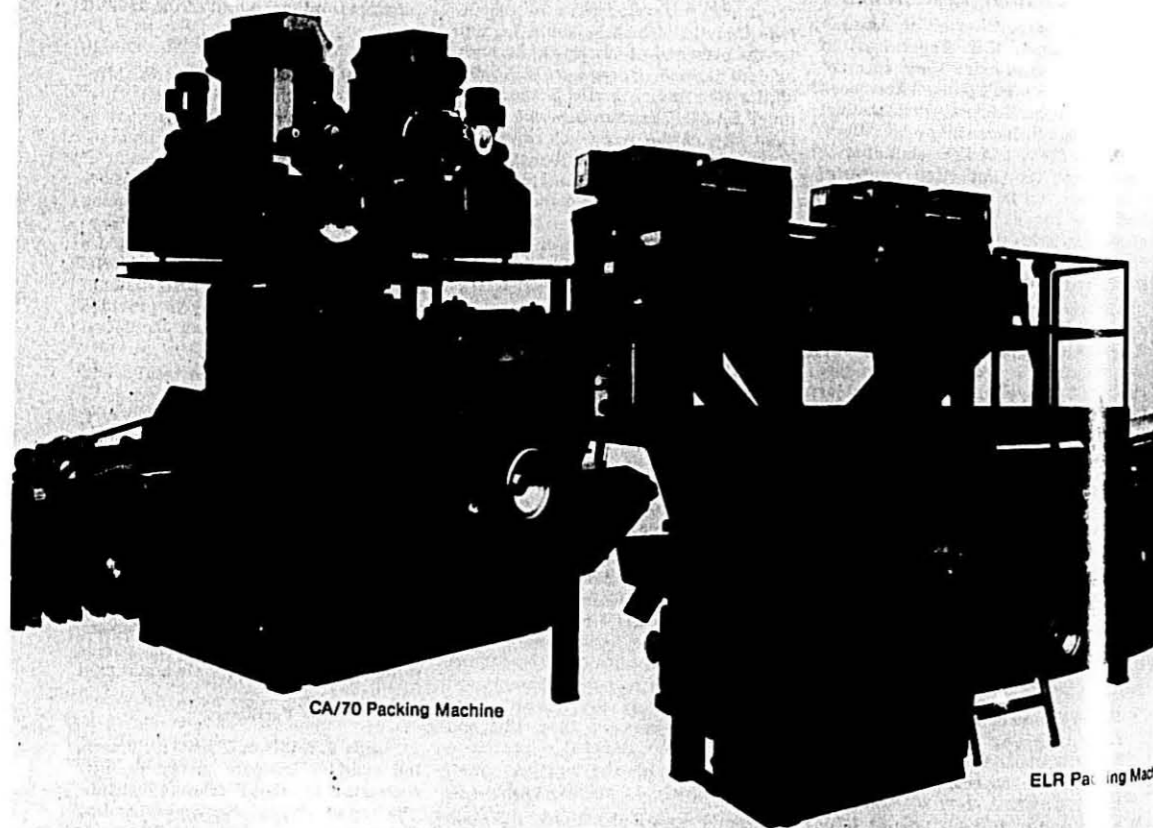
William F. Hueg, Jr., Director, Minnesota Agricultural Experiment Station, stated: "I believe the record is good on how agriculture has manipulated the environment to the benefit of mankind. Just the simple statistic of 5% of our population on the land producing the raw products of the vast food supply we have in this country for our use and to share with the rest of the world. Even greater is the fact that 80% of this food and fiber supply is provided by some 2% of the total population farming.

"In the crunch, research results will help us through some of the crises of the next three to four years. However, the time span between generation of new knowledge and the adoption or adaptation of that knowledge is shortening each year. This means that we have two fronts to keep active—the front of generating new knowledge and the front of making whatever shifts in present knowledge are necessary to meet the critical needs of the energy crisis, the screams of the environmentalists, and the real needs of people throughout the world for abundant food and fiber."

Fertilizers

Joseph P. Sullivan, President, Estech, Inc. cited an industry survey recently completed by the Fertilizer Institute. The report showed September ending inventories down 39% for 20 major products from the previous year. Nitrogen products were down 48%, phosphates down 18%, potash products down 39% and multinutrient products down 31%.

With the lifting of price controls the Cost of Living Council and the Fertilizer industry have now pushed the (Continued on page 38)



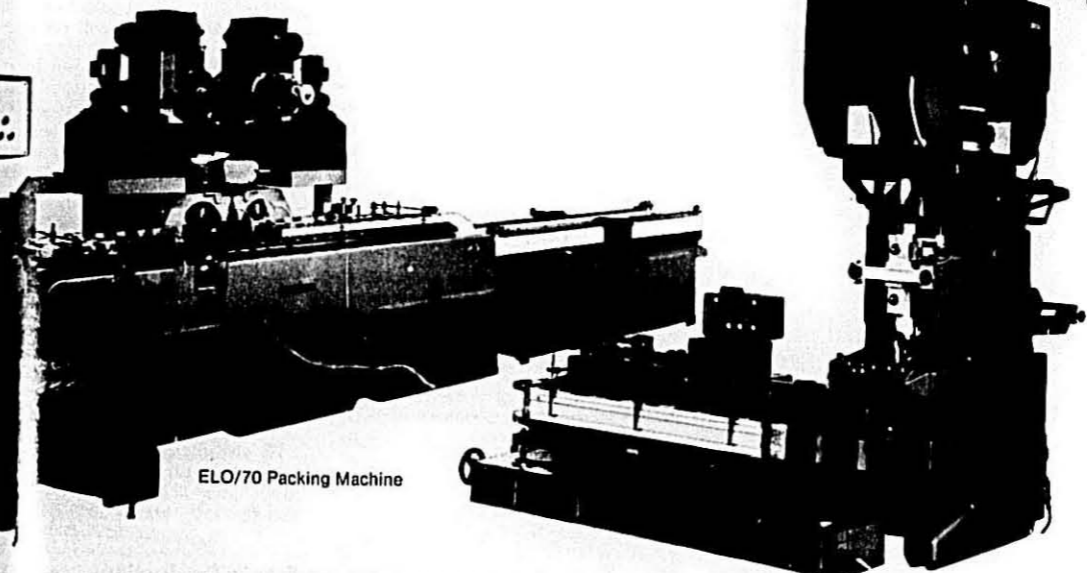
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Durum Variety Research

by James S. Quick, Associate Professor of Agronomy,
North Dakota State University

THE present durum improvement program encompasses many departments and scientists all working together to provide varieties which will satisfy the farmer, miller, processor, consumer, and exporter. New varieties must have improvements in one or more characteristics over the present varieties.

During development one must consider the area where durum is grown. This is especially true relative to maturity, height, straw strength, etc. A list of objectives are then organized and hybridization and selection follows. The major objectives are as follows and not necessarily in the order listed:

Agronomic	Quality
Grain Yield	Kernel Size
Test Weight	Vitreousness
Kernel Weight	Spaghetti Color
Height	Semolina Color
Maturity	Semolina Yield
Lodging	Semolina
Resistance	Absorption
Weathering	Semolina Specks
Resistance	Semolina Protein
Disease Resistance	Cooking
Stem Rust	Characteristics
Leaf Rust	Spaghetti
Foliage Diseases	Firmness
Insect Resistance	
Cereal Leaf Beetle	
Wheat Stem Sawfly	

Stem rust resistance must have top priority because without it, other objectives are meaningless. At present the North Dakota durums are the most resistant in the world, and we must continually search for new sources of resistance from durums in other parts of world or wild species.

Without high quality we cannot compete in the export market and substitutes would be used domestically.

Yield

Yield is a trait effected by many other traits and is of primary importance to producers. There are components of yield such as number of tillers, kernels per head, and kernel weight which are directly related to yield. Other factors such as diseases, lodging, maturity, and insects can indirectly effect yield. The diseases of most importance are root-crown rot, blackpoint, scab. Good genetic resistance exists for most of these.

There is good reason to be optimistic about a continued increase in yield po-

tential since we possess excellent genetic variability for each of the major yield components. The success, as measured by the speed of development of higher yielding types, is directly related to the money and effort invested in the breeding program. It doesn't look very promising at present with a decrease in project funds and an increase in operating costs.

Lodging Problem

The lodging problem has been attacked for many years. You have seen the results in shorter, stiffer straw in new varieties. As our head size increases putting more weight on the stem, and the stand is thicker or more tillering exists causing weaker straw due to mutual shading, stiffer straw will be needed. We hope that the durums will get shorter without yield or quality reduction. In 1969 a stable medium height type was found which would be intermediate between the normal Leeds height (42") and the semidwarf height (30"). Considerable effort has been made since 1969 to improve the yield and quality of this height class. We feel that about 70-80 percent of the present durum area could utilize this 36" height class. A semidwarf height would be most desirable for the more fertile areas—about 10 per cent of N.D. About 10-20 per cent of the area, primarily in the west, would be best served by the present height level.

Other Areas

There are other areas which should receive more attention such as seedling vigor, post-harvest dormancy, tolerance to salinity, the root-crown rot disease problem, root development, hybrid durum, etc. but time and money are limiting. Your suggestions or guidance would be appreciated at any time in establishing priorities for these problems.

Any improvement in crop varieties involves a tremendous cooperative effort.

Recent Accomplishments

The most recent accomplishments of these programs in the past six years are: (1) Stem Rust Resistance; (2) Yield—15%; (3) Maturity—3 days; (4) Height—5 CM; (5) Kernel Size—30%; (6) Spaghetti Color—3%; (7) Leaf Rust Resistance; (8) Foliage Diseases. These advances have been made with two new varieties: Rolette and Ward. There have



Dr. James S. Quick

been other accomplishments involving development of parents for use in further hybridization, and basic studies on agronomic practices, genetic analyses of various traits, mutation studies, and chromosome manipulations.

Based on information we have at present we can speculate as to how some future varieties will perform:

By 1975-1980

1. Shorter Straw
2. Stiffer Straw
3. Larger Kernels
4. Higher Spaghetti Color
5. Cereal Leaf Beetle Resistance
6. Sawfly Resistance

By 1980-1985

1. Improved Seedling Vigor
2. Increased Yield
 - a. Higher Fertility
 - b. Larger Grain
3. Slightly Earlier
4. New sources of Stem Rust Resistance
5. Improved Resistance to other Diseases

I'll speculate on durum variety distribution in 1974: Leeds—10%; Wells—20%; Hercules—3%; Wascana—5%; Rolette—40%; Ward—20%; Other—2%.

Potato Production

The 1973 fall potato crop is forecast at 252,714,000 hundredweight. The first forecast for the 1973 season is 25 percent above the 1972 crop of 248,811,000 hundredweight and 5 percent below the 1971 crop of 266,686,000 hundredweight. The 1973 acreage for harvest is placed at 1,066,300 acres, 5 percent more than the 1972 total of 1,011,700 acres but 5 percent less than the 1,120,200 acres harvested in 1971. The average yield per acre is forecast at 237 hundredweight, 9 hundredweight less than last year and one hundredweight below 1971.

Service to Changing Markets

by Melvin G. Maier, Administrator,
North Dakota Wheat Commission

Change is an everyday and expected characteristic of the wheat producing and marketing industry. The marked turn-around in North Dakota wheat and durum markets during the past year were due to more than just the one-time announcement of a 400 million bushel purchase of wheat by the Russians. Awareness of the worldwide desire for better diets became a startling reality because of a year in which world food production was less than adequate. Food reserves in this and other countries have been drastically reduced. The effects of these changes will long be remembered.

Not only has this been a year of record price, it was also a year in which our marketing and transportation system was severely tested and, in the minds of many, found lacking. It had become accustomed to a long history of surplus production and market prices largely determined by an artificial support price. The challenge of the system was to move unprecedented volumes of grain to market at prices reflecting fears of world shortage of food.

For most of the past year, prices have been off the price support peg in response to real market needs and perhaps in part by fear of world food shortage. Daily fluctuations of 20¢ in the futures market and even greater swings in the cash markets have been common. The United States, which was once the largest grainery for the world, has found its projected wheat stocks reduced to minimal levels.

Developing Markets

The role of commodity groups in developing markets has also been altered. The market development activities of the North Dakota State Wheat Commission, especially overseas, have been to promote sales, provide technical assistance and provide present and potential customers with information on the qualities, supplies and availabilities of N.D. spring wheat and durum.

Never before has so much North Dakota wheat and durum moved to so many domestic and overseas mills as during this past year. There are quality differences in world wheats. It is the miller's job to get the most from the various imported wheats purchased by the mill buyer. Not surprisingly, they have had little difficulty making adjustments to higher percentages of U.S. wheat in the grists. This is a tribute to

past sales promotion efforts of the U.S. producer.

For years, our representatives overseas, have patiently and diligently worked to acquaint customers and potential customers, alike, with North Dakota wheat and durum. Trade teams to this country get the same information firsthand.

Market Servicing

Now, with tight U.S. supplies of wheat, the emphasis on sales promotion has diminished, but market servicing has not and, indeed, has been given added attention. Demand for our wheat has increased, as have the demands for service and information to the market. As an example, a representative of the largest Italian pasta producer earlier this month called directly to our office for information on the 1973 North Dakota durum crop and the general price and availability of U.S. supplies.

We are also expanding our program of providing North Dakota wheat producers with current market information. Fortunately, due to the foresight of past members, the adjustments in the Wheat Commission's program have been easy. We know the quality and availability of our product and understand the marketing system in which it moves.

Industry Expanded

Market development efforts have served to not only help dispose of surpluses, but to develop and expand the wheat industry as well. Average annual wheat production in North Dakota, for example, has increased by 50% since the Wheat Commission was established in 1959. Technology, in the forms of higher yielding varieties and improved production practices, will continue to challenge those involved in the marketing of wheat.

Change is an everyday occurrence in our industry. Our challenge is to react in a positive and effective manner. World food supplies are certain to expand in reaction to higher prices. Many believe we will again produce ourselves into a burdensome oversupply of food. Certainly the American producer, given incentive and using the resources and technology at his disposal, can contribute to that trend.

Our competitors will again have more exportable surpluses. Competition in

quality, price and service will again be more important than it is today. Your Wheat Commission will be ready to meet that challenge. We've done it before.

North Dakota Wheat Commission Program

At their annual meeting in Bismarck, the North Dakota Wheat Commission elected George Smith, Amentia, as Chairman for the 1973-74 year. Andrew Headland, Ypsilanti, was elected Vice Chairman.

Three new members joined the Commission July 1. George Kubik of Manning, J. Ole Sampson of Lawton, and Norman Weckerly of Hurdsfield are now on the seven-man Commission.

Projects

In order to fulfill the objectives of an expanded program, Mrs. Judi Adams was appointed to expand effort in consumer education and domestic promotion.

The Commission has approved a massive transportation research project at the Upper Great Plains Transportation Institute for an investigation and analysis of the entire North Dakota grain handling system.

In the area of quality maintenance and control, funding for research into the development of hybrid wheats has been continued. The annual crop quality surveys will be continued.

The Commission's foreign market activities, either directly or through Great Plains Wheat, Inc., include market analysis, sales promotion, technical assistance, international trade policy and information dissemination. There will likely be a de-emphasis on aggressive sales promotion, considering the current wheat situation, but the balance of the work load will be maintained or expanded.

The Commission is granting \$50,000 to North Dakota State University for basic research to investigate the nutritional value of durum foods in the human diet and to develop high nutritional foods made from durum. An additional \$180,000 is being contributed by the National Wheat Institute for this three-year study.

ADM Earnings Up

Archer Daniels Midland Co. posted net earnings in the first quarter ended Sept. 30 of \$4,933,941, equal to 66¢ per share on common stock, compared with \$3,033,397, or 41¢ per share, in the first three months of the preceding year.

Peavey doesn't quit working until dinner is served.



When the durum wheat is still growing in the North Country, Peavey goes to work. Checking field samples for quality and anticipated yield. Then, we collect and move the harvest through grain elevators and carriers to the mills. Not just flour mills. Durum mills.

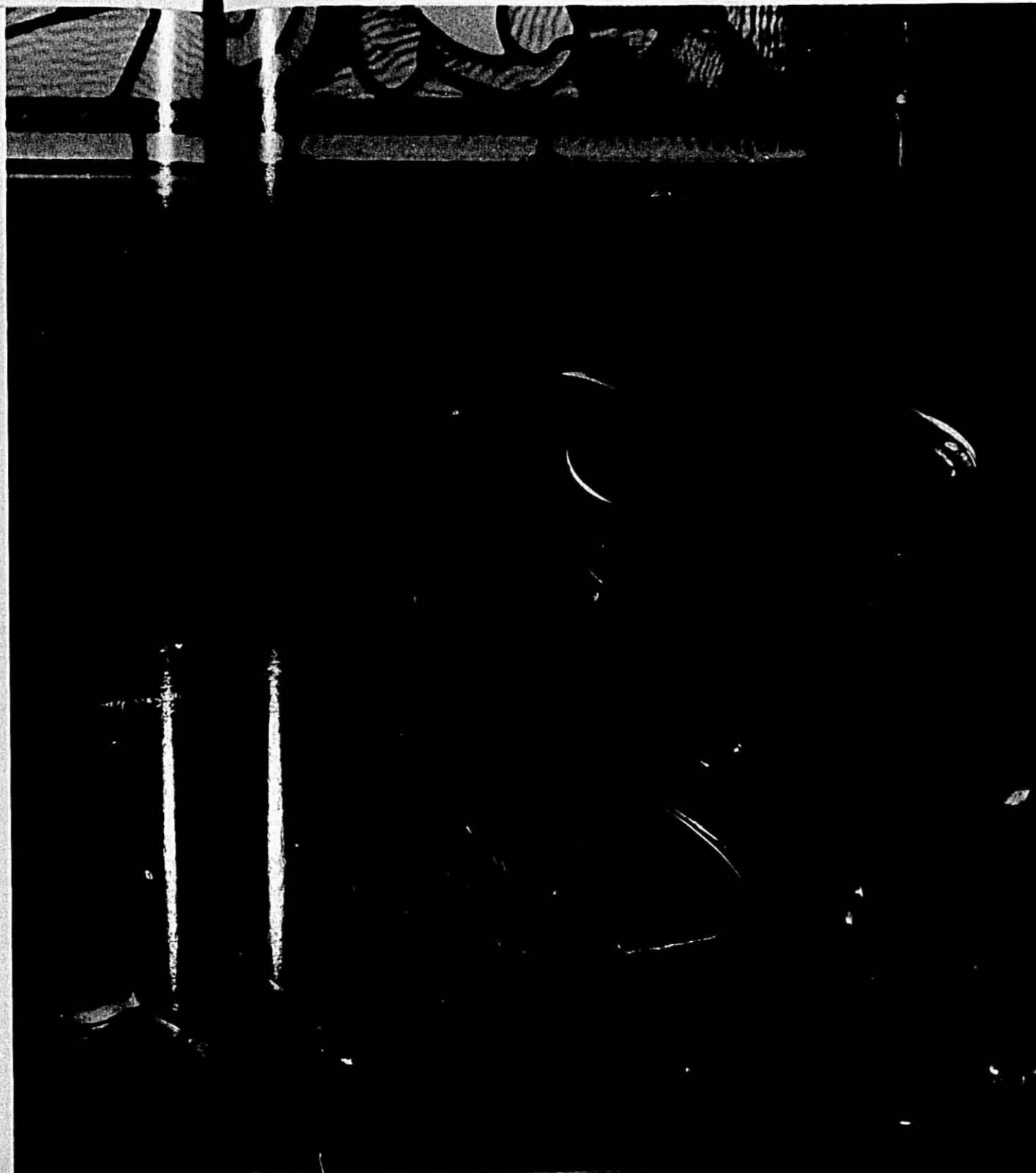
There the grain is processed into the finest King Midas Semolina and Durum flours. By this time, our sales offices are already matching our supplies with your requirements. So you get the finished flour where you want it. When you want it. But we don't stop there. Our Technical Center continues to look



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Microwaves and Pasta Drying

by Marvin E. Winston, Assistant Director,
Jacobs-Winston Laboratories, New York City

Microwave Basics

MICROWAVES are simply electromagnetic waves of short wavelength varying from 0.1 centimeter to 1,000 centimeters. As a consequence of this, they have high frequencies varying from 30 to 300,000 million cycles per second (megacycles). Often used is the word gigacycle meaning 1,000 megacycles. Conversion from 10 gigacycles into a wavelength can be readily made using the well known equation

$$\text{Wavelength} = \text{Velocity} \div \text{Frequency}$$

Since 10 gigacycles is equivalent to 10^{10} cycles per second and the velocity of radiation is 3×10^{10} c.p.s.

$$\text{Wavelength} = \frac{3 \times 10^{10}}{10^{10}} = 3 \text{ cm long}$$

A further classification is as follows:
Millimeter Waves—Wave frequencies are substantially higher than 10 gigacycles.

Centimeter waves—Wave frequencies in the range of 10 gigacycles.

Decimeter waves—Wave frequencies are substantially lower than 10 gigacycles.

In nature, microwaves are emitted from the thermal radiation of warm bodies while for industrial use, microwaves of a single frequency are generated by the magnetron tube. (J. R. Free—1973—details the actual operational theory behind these devices).

Theory of Microwave Drying

Water molecules exhibit a certain degree of separation of charge. This is the tendency of the oxygen atom to exert an attractive force on the electrons in the vicinity of the two hydrogen atoms. Such attraction gives rise to a slight separation of charge termed the electric dipole moment. In the presence of an electric field, the charged species attempt to realign themselves with the positive and negative terminals of the field. However, the high frequency of oscillation of microwaves causes a continuous reversal of the poles in the electric field. Thus at 915 mc (megacycles) which is the frequency used for pasta drying, the electric field is actually changing at a rate of 915 million times each second! This rapid orientation change of the water dipoles causes internal friction which raises the temperature of the material with which it is in contact. A high velocity air system eg. 5000 CFM, quickly removes the evaporating moisture.

This represents the important difference between conventional conduction or convection type heating units and microwave units. With the former, moisture must first migrate to the surface of the product before being evaporated. With the latter, heating throughout is more uniform and moisture equilibrium is maintained.

Microwave Penetration

Food penetration by microwaves is inversely proportional to the frequency of irradiation. This is due to differences in the dielectric loss factor (loss tangent) also known as the microwave heating factor. This factor indicates the efficiency of absorption of microwave energy in a given food. The greater the value of this factor, the less the penetration into a food. At the same time, this means that the temperature is higher per unit volume of food penetrated.

The term half-power depth can be calculated from dielectric loss measurements and represents the food thickness necessary to reduce the incident radiation in half. Thus, a low half power depth signifies high microwave absorption in a particular food.

These generalizations can be made:

1. There is greater microwave penetration at 915 mc than at 2450 mc.
2. Dielectric loss is inversely proportional to temperature.
3. As water is evaporated from a food, the half power depth of the food increases.

The Federal Communications Commission has specified the allowable microwave frequencies for commercial use as follows:

Frequency-mc/sec.	Wavelength-inches
890-940	13.0
2450-2500	4.8
17,850-18,000	0.7

The selection of the proper microwave frequency must be based upon the characteristics of the food to be processed. The potato chip industry makes use of the 2450 mc frequency cause it provides a better half power depth ratio between water and oil. This allows moisture to be removed from the chips with minimal adverse effect upon the chip color. Whereas for macaroni products, the 915 mc frequency is used because it allows for high microwave penetration with a lower drying rate intensity. See Table A.

Microwave Drying of Pasta Products

The microwave drying system currently available is restricted to short goods and easily dried pasta forms such as egg noodles. Golden Grain Macaroni Co. (California), Gooch Foods Inc. (Nebraska), and D'Amico (Illinois) have already installed microwave drying units.

Initial experiments in which pasta was exposed to microwaves after extrusion from the press resulted in an unsatisfactory product because of excessive checking. Checking represents a cracking of the macaroni product due to the temperature and moisture changes within the dough layers. Apart from the unattractive appearance of such products, the pasta breaks up during the cooking stage and results in a highly turbid cooking water which contains a substantial amount of both suspended and dissolved solids.

(Continued on next page)

Table A
Comparison Between Conventional and Microwave Drying System.
Based on 2000 Pounds Per Hour Capacity
Conventional System

Drying Stage	Dry Bulb °F	Wet Bulb °F	% R.H.	Initial Moisture %		Final Moisture %		Average Pounds of Water Evaporated per Minute	Drying Time (minutes)
				d.b.	w.b.	d.b.	w.b.		
1. Shaker	155	130	47	43	30	37	27	40.0	3
2. Preliminary	122	113	75	37	27	25	20	1.85	130
3. Final	113	100	67	25	20	14.3	12.5	1.01	212
									Total 345
Microwave System									
1. Shaker	155	130	47	43	30	37	27	40.0	3
2. Preliminary	120	100	50	37	27	28.2	22	5.0	35
3. Microwave	200	?	15	28.2	22	16.3	14	21.64	11
4. Controlled Cooling	?	?	High	16.3	14	14.3	12.5	8.0	5
									Total 54

d.b. = dry basis
w.b. = wet basis

THE MACARONI JOURNAL

Since drying intensity is a function of the moisture content of the product being dried, (and moisture lowers the half-power depth) efforts were made to pre-dry the pasta before exposure to microwaves. It was found that if a conventional preliminary drier was used to reduce the moisture content to about 22%, the microwave drier could complete the drying satisfactorily. The drying is effected by microwave transmission from the power unit to the drying chamber by means of waveguides which are hollow metal cavities.

Heat build up at the interior of the product during the microwave exposure was found to overdry the pasta after removal from the drying chamber. To prevent this, the pasta product was brought into a conventional drier where the heat was removed in the presence of high humidity. Later, the Microdry Corporation included a controlled cooling section within the microwave unit, eliminating the bulk of an additional unit.

A graphic comparison between conventional and microwave dryers shown below was prepared by the microwave equipment manufacturers. Technical articles emanating from macaroni companies which have installed microwave units substantiate to a degree this comparison. See Table B.

Power Requirements

Commercially available microwave drying units with a capacity of 3000 pounds per hour suitable for pasta require the following:

1. Electric power of 100 Kva, 440 volts—3 phase 50-60 cps.
2. Natural gas of 500 SCFH with 12" w.g. for the hot air system.
3. Cooling water with flow rates of 100 GPM; 40 PSIG minimum with a temperature of 85°F maximum.

Effect on Microbes

An advantageous by-product of microwave drying is the resulting decrease in viable bacteria in the macaroni product. Lipton (Canada) was first to discover this and subsequently processed their thin soup noodles by microwaves. Laboratory tests thus far indicate that Total Aerobic Plate Counts of microwave processed pasta are always under 1,000 and are usually under 500. Likewise, danger from the toxin elaborated by Staphylococcus Aureus is precluded because microwave pasta tests out consistently coagulase Staphylococcus negative.

At the present time, it is believed that the high temperatures reached during microwave drying is responsi-

ble for the decline in microbial population. Conventional dryers are usually operated at substantially lower temperatures and thus are unable to effectively destroy bacteria.

Conclusions

There is little doubt that under the proper conditions, certain types of macaroni-noodle products can be advantageously dried with microwaves, even though microwave drying technology is in its early stages. At the same time, much is unknown about the mechanism of microwave interaction with human health and the possible consequences of long time industrial exposure to even low levels of such radiation.

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Occupies 75% Less Floor Space, Dries 2000 lbs. Pasta per Hour—Cuts Processing Time 95%." Food Processing, January 1972.

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Note: The text of this paper has been submitted to satisfy a requirement for the Food Processing course given by Professor Edward Seltzer at Rutgers University.

Microwave Power for the Food Industry

On January 10, 1974 the International Microwave Power Institute will present a one day short course in the New York City area on "Microwave Power for the Food Industry." The course is geared to people from the processing industries who have little or no background in microwaves but who are potential benefactors and users of this form of energy. Emphasis is placed on achieving practical knowledge which will permit attendees to make reasonable judgments both technically and economically regarding the potential use of microwave power in their companies.

When are microwaves best for a particular process? How do you judge microwave heating against other forms of heat? How do you evaluate the economics and resulting efficiencies? What are the facts about safety and microwave radiation? How can microwaves help develop new food products and concepts? These questions will be explored and actual processing will be done on pilot equipment.

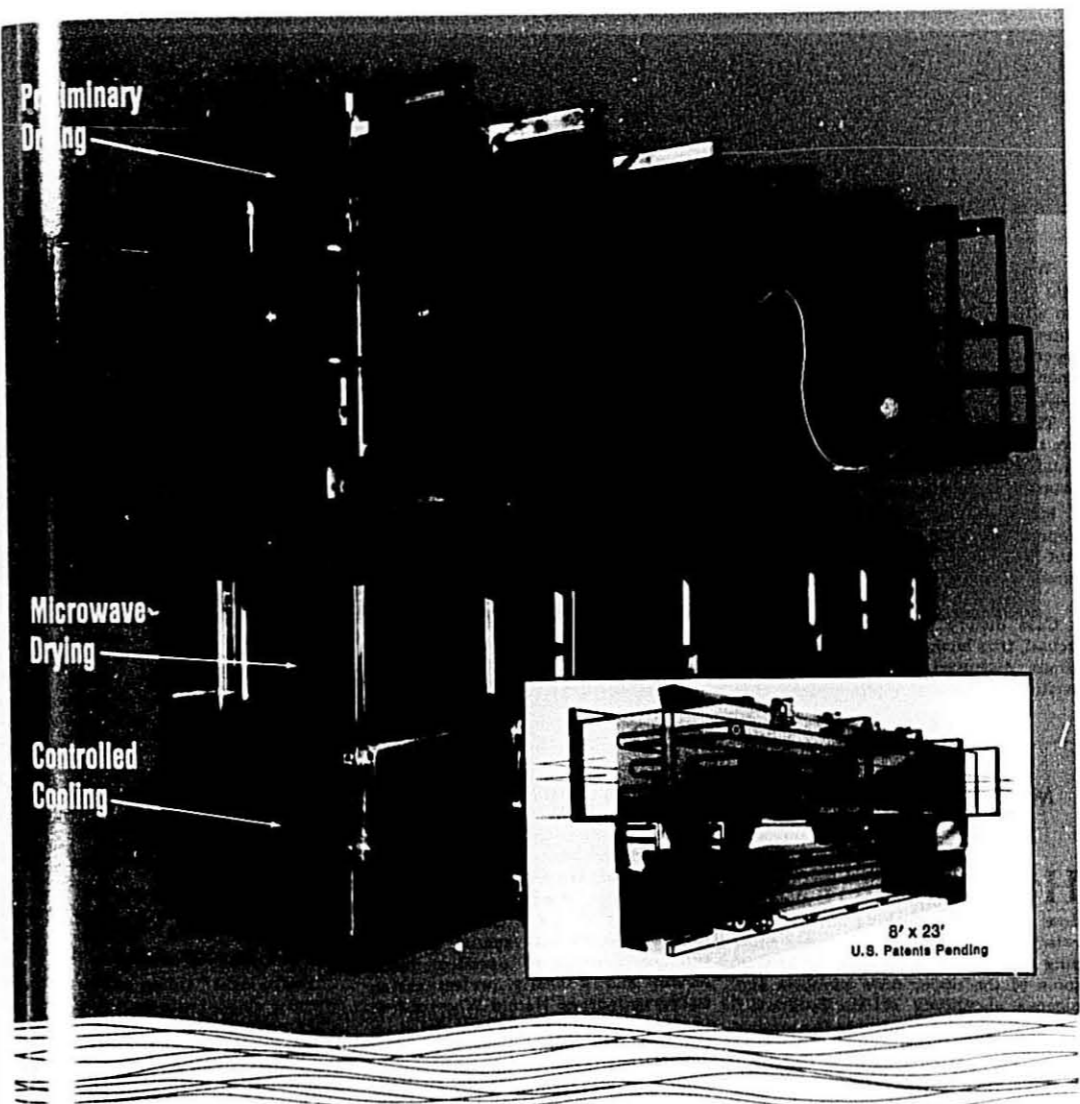
The program is presented by the International Microwave Power Institute which is a non-profit International Technical Society that was formed in 1966 for the purpose of studying and disseminating information in the science of non-communications applications of microwave energy. The guest speakers are recognized scientists, engineers, and businessmen in this field.

Information about the course and registration can be obtained by writing: IMPI, P.O. Box 1556, Edmonton, Alberta, Canada, or by calling the local course manager, Mr. R. Schiffmann, Alpine, N.J., (201) 767-3200.

Table B - Comparison between Conventional and Microwave Pasta Drying

Cubic space—conventional dryer		
MW	Microwave allows you to double or quadruple production without adding more space.	
Drying time—conventional dryer		
MW		
Cleaning time—conventional dryer		
MW	Adds the equivalent of a shift a week to production.	
Load-in and load-out time—conventional dryer		
MW	Adds the equivalent of at least a shift a week to production.	
Downtime per ton of production—conventional dryer		
MW		
Operational costs per ton of production—conventional dryer		
MW		
Maintenance—conventional dryer		
MW		
Equipment cost—conventional dryer		
MW		
Microbiology count—conventional dryer		
MW		

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When standard preliminary drying immediately precedes microwave drying (as in complete unit shown above) it eliminates the need for equilibration periods and reduces time and space needs of preliminary drying as much as 60%.

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Will S. Dade

Simulated Case Histories of Problem Situations In Corporate Management

Will S. Dade, president of San Giorgio Macaroni, Inc., did a masterful job in writing up four case studies of management problems typical of macaroni operations concerning capital investment, marketing strategy, product recall, and succession of management.

Their problems were discussed in round-table sessions at the 69th Annual Meeting of NMMA. As the foreword says, there are no pat answers.

Mr. Dade has given us permission to reprint the cases for those who were not able to participate in the discussions.

FOREWORD

Case history studies are usually of actual, true business experiences, sometimes disguised, but frequently are written in the past tense, without con-

cealing names, places and circumstances.

The reader will understand that these fictitious case histories are made up from whole cloth of the author's imagination. Each case depicts in narrative form a plausible management decision making situation. Any similarity between persons living or dead is unintentional. Any likeness to an actual problem in the reader's experience is purely coincidental and unintended. The figures and situations are meaningless except to shape the case.

Credits are given to Dr. Wayne A. Lee, Ph.D., Professor of Business Administration, Penn State University Extension, Harrisburg, Pennsylvania, for assisting with ideas and helping with the framework. Also, to my associates at San Giorgio Macaroni, Inc., especially Henry J. Guerrisi for helping to keep the numbers in reasonable perspective.

You are requested to read for the issue and relative pertinence in each case and to form your own opinions on the available choices or on decisions which must be made. There is not pat answer to any of the problems. You should try to have reasons for your decisions based on data before you, even though the author acknowledges there are endless alternatives and supporting facts which were not adduced. If the characters did not know the right questions, then you must ask them of yourself for a good answer toward a solution which satisfies you.

This is respectfully submitted for your reading pleasure and hopefully to make you think.

Will S. Dade

*A student of business with tact
Absorbed many answers he lacked.*

*But acquiring a job,
He said with a sob,*

"How does one fit answers to fact?"

—Anonymous

MA'S BEST NOODLE CO.

A Product Recall Problem

HAROLD Wheeler, President of Ma's Best Noodle Co., stood at the window of his office looking out at a vacated building where he stored shipping cases. The glass was broken in some of the upper floor windows and pigeons abounding on the roof were cooing their happiest. It was the mating season. That building must be a harbinger for every bird in town, Wheeler thought. He knew that Willard Goodson, Manager of Quality Control, had assured both him and Charles Dillon, Plant Manager, that the first floor had been sanitized and sealed from the upper floors. Nevertheless, every day a dollyman made at least one trip and sometimes two trips for supplies. One time Goodson wrote a memo to Avery Hanson, Executive Vice-President, and suggested that the dolly wheels should regularly be disinfected; but when Hanson talked with Dillon, the objections of method and cost seemed paramount and nothing was done.

In the morning mail, there was a letter from his brother who was Vice-President of the Nutty Candy Co., whose principal product was a chocolate covered cream center, telling of a brush with FDA over a reported illness

from eating Nutty candy. The letter went on to say that one of Nutty's employees had come to work covered with boils, which were concealed by his clothes; and because he needed the money to support a desperately ill wife, he had not disclosed the fact to his foreman. Nutty was spared an ugly situation because of excellent batch records and a nearly perfect carton coding system. As Harold Wheeler rose to go to the window, he speculated on the absolutely many ways a sanitary plant could become infected. Somewhere in his reading, he had come across the strangest incidents alleged as having been the cause of a product recall. For example, the wife of a young chemist brought a lunch to her husband daily and sometimes dangled the baby on a table in the laboratory. Then there was the instance of an employee who raised chickens and was tracking filth into the plant. And, in another case, two conveyor belts passed, one carrying raw materials while the other carried finished but unprotected product.

Doing Some Checking

Wheeler decided to do some checking on his plant practices. He called in Charles Dillon. "Chuck," he said, "do any of our employees raise chickens or maintain a dairy herd?"

"Yes, as a matter of fact," Dillon responded, "I believe that Jess Holman, our General Sales Manager, and his wife have such a project for an avocation."

"Oh, yes, I forgot about that," Wheeler interjected, "but he seldom goes into the plant, isn't that right?"

"You're right," Dillon answered, "but recently since business is better, he pokes around in the plant to see how well we are doing. I doubt he ever wears clothes and shoes he uses on the farm."

Then, Wheeler launched into discussion with Chuck about the risks in running a food plant, and how careful everyone must be. Wheeler knew that a product recall, especially one involving a distribution problem, could break the company Sales of Ma's Best were \$8,000,000, or about \$687,000 a month. These sales had been developed on an excellent quality reputation. A total recall might exceed \$1,000,000 in product, not to mention the cost of gathering, returning, and disposal. It seemed to Wheeler that his whole organization was aware and practiced good sanitary manufacturing procedures. "Chuck, before you leave, I want to satisfy myself on a point that came up in our meeting the other day," Wheeler went on.

(Continued on page 28)



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A Product Recall Problem

(Continued from page 26)

"Holman reported that too many packages are getting out of here that are not date coded or the ink is smeared. Has our maintenance crew fixed the faulty coder?" Wheeler inquired.

"Mr. Wheeler," Chuck said as he winced slightly, "you will recall that there was a priority list given to me in the previous meeting which you said that because those things to be done were OSHA related, I was to do them first, do you recall?" Mr. Wheeler nodded he did remember. "Well, because of those directions to me," Chuck continued, "we have not taken it into the shop for repair."

Wheeler was not altogether convinced and said, "Try to get it done, will you please, Chuck?"

"Yes, sir," Dillon replied, "right away."

Large User of Eggs

Ma's Best Noodle Co. was a large user of eggs; and since eggs are produced seasonally, it was economically feasible to buy large quantities frozen and hold them in public storage. As the eggs were brought into the plant, they were Salmonella tested, though it was Ma's procedure to use the eggs, when thawed, before a report came back from the laboratory. Also, Ma's shipped finished product before the report was back from the laboratory. Batch records were good; and distribution, though in over 20 states, was recorded and tracked as well as any competitor did it. Besides, to hold all raw materials and finished product for the requisite five days would place a financial cost on the company that Wheeler had decided would be unbearable. He knew it was a business risk but not uncommon in the industry.

There was that one time when everyone had a scare. The laboratory report on eggs came back Salmonella positive on the first test, but Salmonella negative on the second test. As nearly as batch records could relate to the eggs used and so tested, the product of the same period tested Salmonella negative. Mr. Wheeler was vacationing in Europe with his family when the incident happened. He wondered how he would have handled the matter if he had been available for a decision. It was this scare that made Wheeler realize the need for vigilance; but because there were no reports from any source, he reasoned he might be emboldened to take the same risk if the decision were to fall to him to make.

It was several weeks later when Willard Goodson called Mr. Wheeler

and asked to see him immediately. "It's very urgent," he said. When Willard arrived at Mr. Wheeler's office, he got permission to close the door. "Mr. Wheeler," he said, opening the conversation in a state of agitation, "ten days ago, we began a test of a composite lot of egg noodles, and the results were Salmonella positive. We then tested the backup sample of the same lot, and the result was Salmonella negative. I then went into the warehouse and opened a case for a sample, and the result was Salmonella positive. The test from the case of product is not a composite and is not reliable data, even though it verifies the first test. I want you to know that any Salmonella test by the best method is only 95% accurate. Most of the finished product has gone into distribution."

Mr. Wheeler was stunned. He said, "Willard, I want to get Mr. Hanson in here, and I want you to repeat what you have told me."

The story was then repeated to Mr. Hanson. The first thing he said was, "Willard, why have you waited until now to reveal this?"

Willard replied, "We have a new young microbiologist in the lab, and I was just sure he had made a mistake; and when the second test was negative, I felt my first thought was correct, that a mistake had been made. Now, I am confused."

Wheeler turned to his Vice-President and said, "Well, Avery, we have batch records. We code the product. Perhaps we can trace shipment of that product into distribution. Get hold of Holman and see what can be developed. Report to me by noon tomorrow. Work quietly until we get some facts. Avery, I'm sure you see what we may be up against."

Mr. Wheeler came to work at his usual time the next day, after spending an apprehensive night. He was a worried man. What are the chances of making someone ill? If I decide to do nothing about it and win, the company will save a lot of money, he even allowed himself to think, wondering if Avery would go along. "How in the world can Salmonella be in this plant?" he asked himself.

Two Gentlemen from FDA

It was at the height of this self-examination that the telephone rang. It was his secretary. "Mr. Wheeler," she said, "there are two gentlemen from FDA in the lobby. Mr. Frank Pettelli is from Washington, D.C. Shall I show them in?" she asked.

"Yes, yes, by all means," Mr. Wheeler said, nervously.

Mr. Pettelli introduced himself and his associate, who was from the district office. He began to speak. "Mr. Wheeler, a family has reported to our district office that a noodle product made by your company has caused the illness of a young child and a grandparent. The baby is in serious condition. We have verified the facts. Our tests show the product to be Salmonella positive. The product was yours. The woman had used only a part of the package."

"Mr. Pettelli," Wheeler said when he collected his wits, "we code our products, and I am sure we can isolate that run."

"Mr. Wheeler," replied Mr. Pettelli, "I regret to tell you it won't be so easy. There were two packages in the home. There was no code on the one partly used package, and smeared ink on the other unopened package made legibility impossible." Instantly, Harold Wheeler realized the magnitude of these words. The threatening danger made him feel sick inside.

"Mr. Wheeler, I want to ask you some questions, if you don't mind," he said, trying to allay Mr. Wheeler's obvious tenseness. "How do you defrost eggs?" was the first query. Mr. Wheeler answered that they remove them from the freezer and set the canisters out over night. "Do you mean that the defrosting takes place without a longer time in a chill room?" Mr. Pettelli asked with a concerned voice.

"Yes, I believe that is the way we do it," Mr. Wheeler answered.

It seemed to Mr. Pettelli that Harold Wheeler missed the import of his question. "Now, then, Mr. Wheeler," said Pettelli as he continued the questioning, "do you have a formally prepared recall plan, as it appears we have such a situation on our hands—I'm afraid a total recall."

"No, sir, we do not," Wheeler said, and it was in that instant he realized how remis he had been in the providing a plan of action.

Mr. Wheeler wondered, as he prepared to face the ordeal ahead, how many members of his industry had formal recall plans with each step spelled out to be the responsibility of previously named people. Do you, dear reader?

For the Reader

What do you believe most likely caused a Salmonella problem? Can you suggest an outline of procedures which Ma's must now follow? What are the elements of a formal recall plan?

(Continued on page 30)

THE MACARONI JOURNAL

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JANUARY, 1974

Ponce De Leon was really looking for Nebraska!

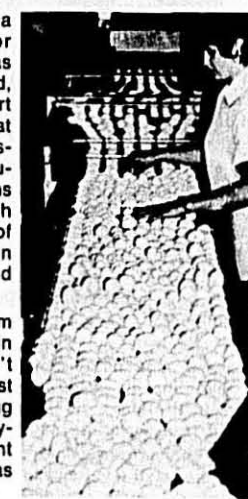
You blew it, Ponce! Nebraska, not Florida has the secret to long life. According to the American Medical Association, people in Nebraska have the longest life expectancy in the U.S. And, the Public Health Service recently noted that Nebraska has a death rate of nearly a third less than the national rate among men 45 to 64. Nebraska water flows through limestone rock. A balanced combination of calcium and magnesium makes for healthy hearts according to some scientists...so, maybe it's the water.



Maybe it's the water ...but it's a lot more!

Something in Nebraska contributes to superior football teams, as well as healthy, loyal fans. And, wholesome foods are part of it. Regardless of what you might hear, Nebraskans eat a lot of eggs...nutritious eggs (from hens that drink the same high quality water). The kind of eggs you get from us in dependable year-around supply.

Maybe we should call them eggs fed from the Fountain of Youth...but we can't prove that. So, we'll just say they're the best egg products you can buy anywhere, and, if you want proof, just try us. We're as close as your telephone.



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29

28

Product Recall Program

(Continued from page 28)

"Organizing A Product Recall Program." National Canners Association Bulletin 34-L states: "Every company should have an organized plan for withdrawing products from distribution as a logical extension of its overall activities for consumer protection. To proceed without such a plan, should a recall become necessary, may lead to confusion, wasteful actions, and sometimes needless adverse publicity." Copies may be obtained from the National Canners Association, 1133 Wath Street, N.W., Washington, D.C. 20036.

USDA-FDA Step Up Salmonella Control

Steps leading to what government officials said would greatly reduce Salmonella and other food-borne illnesses were announced at a recent joint press conference of USDA and HEW.

In releasing the reports of internal task forces USDA and HEW officials advocated:

- Expansion and coordination of an intensive consumer education campaign aimed at eliminating careless food handling practices in the home and food service establishments.

- Continuation of a cooperative federal-state-industry program coordinated by the FDA to eliminate Salmonella from rendered animal by-products used in animal feeds.

- Modification of processing procedures and facilities in meat and poultry plants under USDA inspection to reduce bacterial cross-contamination of products and equipment.

- Intensified support of industry and USDA financed research aimed at controlling and eliminating Salmonella throughout the food chain.

- Development by FDA of model ordinances governing sanitation and food handling in retail stores, food service institutions, and standards for the food transportation industry.

Noting that improper handling of food at the retail level and in the home is the major source of Salmonella infection, Dr. Charles C. Edwards, HEW's Assistant Secretary for Health, emphasized the importance of a joint educational effort by USDA and HEW. "We are convinced that an effective consumer educational program can accomplish more than the millions of dollars spent on additional government regulatory programs," Dr. Edwards said. He also explained the actions FDA is undertaking to develop uniform ordinances for state and local government units, standards for the transpor-

tation industry, and the redirection of FDA's re-inspection resources.

It would appear that the emphasis for control of Salmonella is moving into the handling of food after it leaves the food manufacturer and specifically the handling of food in the home and food service kitchens.

USDA Checks Residue Rating

The discovery of insecticide residues of three parts per million in a flock of broiler chickens produced by Central Soya, Inc., Monroe, North Carolina has resulted in a stepped-up program for residue testing of poultry and livestock going to slaughter in southeastern states. The U.S. Department of Agriculture's Animal and Plant Health Inspection Service, the agency conducting the tests with Central Soya emphasized that the action is precautionary and that so far no other residues of the insecticide, Chlorodane, have been detected. The affected flock has been destroyed.

Pest Control Breakthrough

The Fumol Corporation, a leading pesticidal and ecological services company, has introduced Fumol 125, a high strength insecticide which yields results far superior to those of conventional insecticides now in use.

In making the announcement Alan Becker, president, said that Fumol 125 is specifically formulated for food processing plants, restaurants, institutions and industrial plants for use against cockroaches, ants, flies, waterbugs, spiders, moths, and many other species of flying and crawling insects.

"Fumol 125 is a high insecticidal concentrate which is dispersed in the newly introduced Ultra-Low Volume insect control equipment," Mr. Becker said. "The ULV concept discharges an ultra-small insecticidal particle which can penetrate into tiny cracks and crevices where insects breed and hide."

Mr. Becker said use of Fumol 125 results in considerable savings for users because of the small amounts needed and the potency of the insecticide itself. "The insecticide contains the most powerful insect killing formula available on the market today, and a minute dose can control any insect problem," he said.

The Fumol Corporation is now offering a manually-operated ULV sprayer with a one gallon reservoir. The lightweight sprayer is highly flexible and has an adjustable valve which permits a setting to disperse a particle ranging in size from 8.5 to 30 microns. The cost

of this equipment is less than that of similar units currently on the market.

Fumol 125 is registered with the U.S. Environmental Protection Agency. For additional information, contact the Fumol Corporation, 49-65 Van Dam Street, Long Island City, N.Y. 11101.

Conference on Viruses in Water

An invitational conference on the public health hazards of viruses in water will be held June 9-12, 1974, in Mexico City, sponsored by the American Public Health Association.

Internationally known virologists, engineers, and epidemiologists presenting scientific papers at the conference include Albert Sabin, M.D., Fogarty Scholar in Residence, National Institutes of Health, and developer of the Sabin vaccine for polio; Hillel I. Shulval, M.P.H., professor of environmental health, Hebrew University in Jerusalem; Edwin H. Lennette, M.D., Ph.D., deputy director and chief of the laboratory program, California State Department of Public Health, Berkeley; Gerald Berg, Ph.D., chief of virology, Federal Water Pollution Control Administration, Cincinnati; John R. Quarles, L.L.B., deputy administrator, Environmental Protection Agency, Washington, D.C.; and M. S. Mahdy, Ph.D., director, Canada Centre for Inland Waters, Burlington, Ontario.

Objectives of the conference, as determined by an APHA Planning Committee, are to bring together and update information on whether viruses are an ecological and public health problem in water; identify the "state of the art" of isolating and identifying viruses in water, including the sensitivity of recovery in polluted waters; exchange information on studies currently in progress; review and delineate the methods useful in recovery of viruses from water and beneficial research techniques; and exchange information to determine which, if any, specific viruses constitute a public health problem.

Members of the planning committee, representative of university, health department, and federal regulatory interests, include Berg; Howard Hodily, Ph.D., professor of microbiology, Brigham Young University, Salt Lake City; Lennette; Joseph Melnick, Ph.D., professor and chairman, Department of Virology and Epidemiology, Baylor College of Medicine, Texas Medical Center, Houston; and Theodore Metcalf, Ph.D., professor of virology, University of New Hampshire, Durham.

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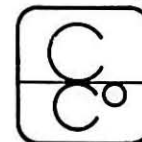
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JANUARY, 1974

UPC Film Masters Available

The availability of new, fully modified film masters of the Uniform Grocery Product Code Council's UPC symbols was announced recently by Photographic Sciences Corporation in Webster, New York.

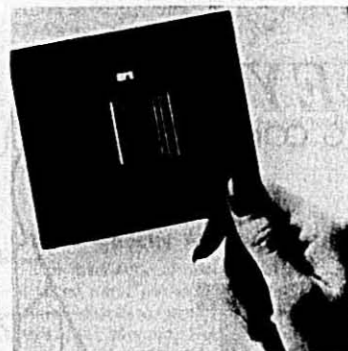
According to John E. Blackert, president, Photographic Sciences Corporation can produce the modified film masters to tolerances of within .0002 inch. Blackert says most printers and packaging houses have a problem with magnification factors and line width reductions required for different printability ranges. "The most efficient and economical solution to compensate for press printability differences is to obtain a fully modified film master," he adds.

Blackert explains that most printers and packaging houses are not used to working to such close tolerances. "A modified film master lets them adapt to the new requirements with a minimum of expense and quality control adjustments. All they have to do is tell us the magnification and line width reduction required and we take it from there." The Photographic Sciences modified film master is available in either negative or positive format, with emulsion up or down.

The UPC film master is expected to become increasingly important to printers, food processors and packaging houses. While computer scanning hardware is not expected to be available until mid-1974, Blackert notes, major grocery chains are now gearing up for the changeover. "We know the UPC move is coming," he says, "but chains want to see at least 50 per cent of their merchandise carrying the UPC symbol before they invest in the expensive scanning equipment. We expect 75 per cent package conversion will have taken place by the end of 1974."

"One large food processor we are working with," Blackert adds, "now has 5,000 products committed to the UPC code and they just recently received 100,000,000 labels from a Rochester, New York printing firm. We expect processors to fully commit themselves to the UPC symbol soon after January 1, 1974. And this is only the beginning. More than 2½ million products will be involved in this changeover, and we see it as a substantial growth business."

Further information is available by contacting Frank Cicha, UPC Coordinator, Photographic Sciences Corporation, 23 West Main Street, Webster, New York 14580. The phone number is (716) 872-4503.



Seminar Airs UPC Problems

Cost and problems of symbol-marking products with the Universal Product Code; compatibility with other, non-grocery codes, and UPC benefits for manufacturers were discussed at a seminar held recently in New York City.

Fritz Biermeyer, vice president, information systems, Supermarkets General Corp. and a member of the UPC council, told the American Management Association-sponsored seminar that all the costs were not falling on the manufacturers.

Retailers, he said, will be making large investments in electronic checkstand equipment, and will probably have to replace the checkstand conveyors as well as the registers, since check-and-bag scanning operations will require a higher counter.

Responding to a question on compatibility with non-food codes, Biermeyer told the group a bar code was chosen in part because it could be expanded to include non-foods. He added that non-food manufacturers will have to make their own decisions about a code, that the UPC council could not force a decision on them.

The availability of marketing information for manufacturers was also on the minds of the approximately 125 people there.

Most of those attending were from smaller food processors and from non-food firms which sell products through supermarkets.

Question of Time

When one audience member asked for more time to comply with code labeling, Arthur Harkham, director of corporate packaging, Thomas J. Lipton, Inc., and Robert H. Knies, packaging design manager, Mont-Wesson Foods, co-chairmen of the seminar, replied that the pressure was coming from supermarket chains that wanted some return on investment in electronic front-end

equipment, and not from some arbitrary timetable.

Earlier in the meeting, Harkham noted each of the major chains could probably have an electronic cash register system in at least one store by June and be looking for some return. "If you don't have symbols by then, you're going to be under tremendous pressure to get it on the package," and that pressure will increase with each system that is installed.

Marketing Information

Wallace N. Flint, senior vice-president, Distribution Number Bank, Washington, administrative agency for UPC, outlined the development of the code and symbol and discussed some of the advantages.

When he mentioned that, in return for symbol-marking packages, manufacturers would be able to get marketing information, the questions started.

"How do we get that information?" an audience member asked.

"Probably like you do now—buy it," Flint replied, adding he expected firms similar to Selling Areas Marketing, Inc. (SAMI) and A. C. Nielsen would handle such data.

"Are chains looking on that data as a potential revenue source?" was another question.

"Now they sell to SAMI and Nielsen," Flint replied. "I assume they will continue to do so."

When a manufacturer suggested retailers should provide marketing information free as an incentive, and in return for symbol-marking at the manufacturer level, Flint noted manufacturers would probably want marketing data for a whole area, not just one chain, and that would necessitate a middleman of some sort. With UPC, he added, marketing information should be available much sooner.

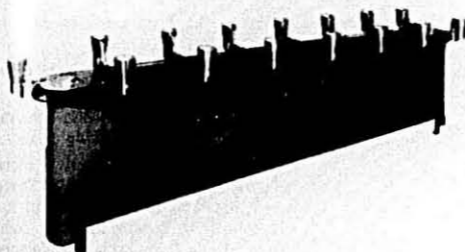
Asked what kind of controls would be put on the distribution of marketing information, Flint said that matter was not in the jurisdiction of DNB or the UPC council.

Regarding coupon control, Flint explained that in-store computer with scanners could be programmed to reject coupons if the product had not been purchased, cutting misredemption.

To Get Help

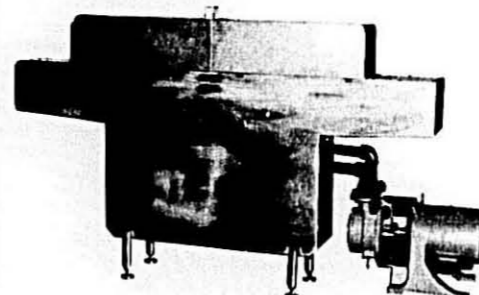
Harkham told the group DNB had formed a committee to help with technical problems in symbol location and printing, the Symbol Technical Advisory Committee. He suggested manufacturers with specific problems contact that committee.

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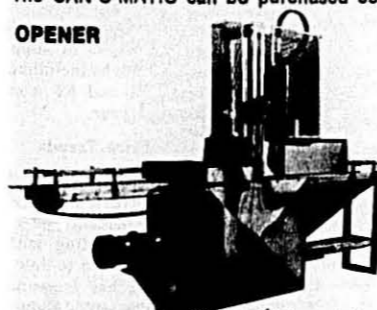
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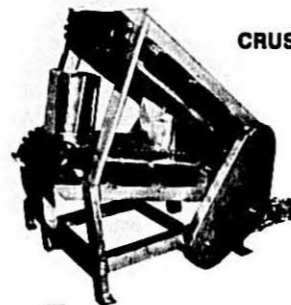
- COMPLETELY AUTOMATIC SYSTEM THAT SAVES UP TO 3 MEN (PAYS FOR ITSELF IN 1 YEAR)
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Containerboard Supply Tight

"The current economic upturn is pointing out all our policy and regulatory mistakes of the past several years. Energy and ecology are headline news items today, not because of the business boom . . . but because many basic long-term factors have been altered quite permanently," a leading business economist told the annual meeting of the Fibre Box Association.

William G. Copeland, chief executive officer of McKay-Shields Economics, a New York consulting organization, told the 300 executives of the corrugated box industry that "the nation is in the midst of a structural shift, contending with a dimension of problems that have taken years to develop and which will require almost as long to resolve. Coping with these issues adds new social responsibility to both consumers and corporate management, and an added financial burden and inflationary push to our already price-sensitive economy."

Raw Material Outlook

"The raw material outlook is a basic consideration at this point in time, not only in the paper industry but in the economy as a whole," Copeland said. "Basic industry in this country (steel, chemicals, paper) has been operating at record levels, and supply shortages have begun to appear in areas where the problem was one of traditional over-supply."

Copeland added that, "In the 20-20 vision of hindsight, it has become readily evident that inadequate earnings and poorly conceived legislative requirements have combined to curtail capital investment in a number of key areas. As a result, the additions to capacity and the expansion of existing plants have been sharply curtailed during the past several years."

Thus, he said, after two years of rapid economic growth, the nation—including the paperboard industry—finds itself acutely short of the traditional margin of adequate supplies.

During the past decade, the containerboard mills—the source of supply for the corrugated business—have increased their capacity about 4 percent a year. This year, he said, mill improvements will add approximately 5 percent to capacity, while next year some 3 percent is scheduled to become available, with another 5 percent gain slated for 1975. "This has raised the obvious specter of acute shortages," Copeland noted.

This rapid change from ample supply to tightness is also partially ex-

plained by the fact that the demands on the corrugated industry during the 1972-'73 period are equivalent to the demands placed on it in a three-year period during the business expansion of the 'Sixties.

"Although both linerboard and medium mills were running at a full 100 percent of rated capacity this year, substantial tonnage was lost by abnormal weather conditions, rail car shortages and wood supplies," Copeland said. "Yet even in this environment, the industry was able to meet customer requirements."

Next Three Years

Looking ahead for the next three years, Copeland said that he anticipates that there will continue to be an unparalleled tight supply situation, but one in which the industry's mills, running at unprecedented historic levels, will be able to meet the demands placed upon them.

"Next year, the economy's real growth will be less than half the rate it has been, and even in 1975 it will be below its long-term growth rate," he said. "This pattern, and the shift of the economy's thrust away from consumer-oriented products toward heavy industry, indicate that fibre box customers can feel reasonably assured that the industry will be able to meet their demands; but, by the same token, the skyrocketing cost of fuel, wood and other raw materials will inevitably have to be borne by the consumer."

Corrugated packaging materials are an integral part of our sophisticated consumer-affluent society, according to Copeland, and "perhaps corrugated is one of those products whose contribution has too often and too long been overlooked."

Corrugated Volume, Prices Up

"Two points which stand out starkly are these: volume gains continue, giving every indication that previous records will be exceeded" for the corrugated box industry, and the "rate and direction of price trends" reflects market conditions, according to Robert F. Rebeck, Vice President of the Fibre Box Association.

"Both of these factors augur very well for improvement in the well-being of the industry. But it isn't all gravy, either," he told 300 corrugated industry executives at the Association's Annual Meeting.

Rebeck gave the audience, representing producers of 85 percent of the \$4 billion industry's volume, a statistical

summary of their composite operations and trends, noting that:

—The continued volume growth in 1973 is certain to be of benefit to the corrugated industry through the generation of added marginal income.

—Favorable price conditions will also be a positive influence.

—Material costs are also on a rising trend.

—Wage settlements have created pressures on profitability.

—Expanded volume has consistently offset escalating operating costs.

But on all points, he noted, there are questions about the future. "There remain negative factors sufficient to cast doubt on the notion that the industry is yet at the point of a satisfactory return on investment at the converting level."

Shipments

Beginning with industry shipment data, Rebeck said that the average annual growth in the last decade, 1963-1972, has been 5.7 percent. The period was topped by the 1972 growth of 10.5 percent.

For the 1973 period to date, quarterly growth has been 11.0, 9.8 and 5.4 percent, for a nine-month average of 8.8 percent. With a fourth quarter projection of 4.3 percent, the final figure for the year would be 7.5 percent.

Consumption of containerboard to date, Rebeck said, has shown an identical increase of 8.8 percent. However, production by paperboard mills has increased only 7.1 percent.

The inventory figures on September 1 showed 4.8 weeks of supply in box plants and 5.3 weeks including mill supply, against 5.2 and 5.7 weeks at the same time last year.

Price Trends

Industry overall price trends, Rebeck said, have increased by an annual average of 1.1 percent per year in the past decade, concluding with a 1 percent in 1972. For 1973 to date, he noted, the price trend has increased by 12.7 percent, or \$2.26, to \$20.06 per thousand square feet.

Over the years, the industry prices have increased at rates slower than the Bureau of Labor Statistics' all-industry average. Despite the impressive 1973 data, Rebeck showed that the spread between corrugated and other industries continues to increase.

In 1970, he said, the spread between the corrugated trend and the BLS average was 38 points. In 1971, it grew to 46 points, and in 1972 was 51 points. For 1973 to date, it has grown to 63 points.



Identical

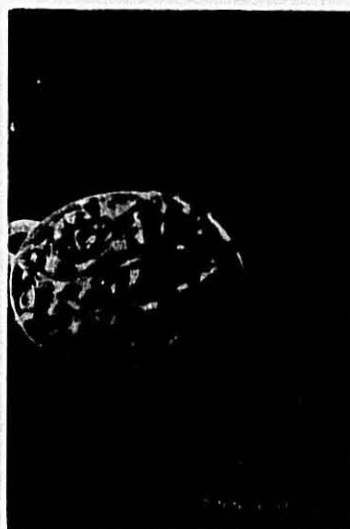
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Ronco Advertising

A Noodles and Chicken recipe is featured in a full-color ad for Ronco Egg Noodles in Southern regional editions of December Family Circle and Woman's Day. The ad series is supported by an extensive 24-market TV and radio campaign featuring a suave Mediterranean-type spokesman extolling the Continental appeal of dishes made with Ronco pasta, as well as their economy and ease of preparation.

Chefs Surprise

Chefs Surprise, a new "add meat" packaged dinner line, is being introduced by Kraft Foods.

Each of the new six dinner products includes all major ingredients, with the exception of meat or fish, in one compact package. They cook in minutes using a single pan for minimum clean-up. The versatility of Chefs Surprise offers consumers a wide choice of fresh meat and fish, and a delicious use for left-overs in these varieties:

- **Ranchero Supper**—a combination of beef stew seasoning mix, garden vegetables, and sliced potatoes with the recommended addition of beef cubes or strips, left-over roast pork or beef, or meatballs.

- **Homespun Supper**—country-style combination of vegetables, beef stew seasoning mix and macaroni, to which are added ground beef, frankfurters or meatballs.

- **Colonial Supper**—a creamy cheese sauce mix and golden egg noodles, with the addition of ham or luncheon meat cubes, dried beef or sliced frankfurters,

- **Fisherman's Supper**—with cheese sauce mix, toasted onion and egg noodles, with the consumer adding tuna, salmon, chicken or crabmeat.

- **Chili Macaroni**—a peppy chili seasoning mix, red kidney beans and macaroni, with the addition of ground beef, frankfurters or meatballs.

- **Sloppy Joe Supper**—a combination of tomato sauce, Sloppy Joe seasoning mix and macaroni. The consumer adds ground beef, left-over roast beef or pork, frankfurters or meatballs.

Chefs Surprise Suppers are attractively packaged in boxes resembling book "volumes" and provide the consumer with a "library" of appetizing meals which is easy on her time and budget.

Chefs Surprise is backed by ads and cents-off coupons in October Family Circle and Better Homes & Gardens, November Good Housekeeping and Woman's Day, December McCall's, and TV Guide the week of December 2. Heavy primetime television supports the campaign.

Service To Women's Clubs

As a community service to women's groups in the San Francisco Bay area, Golden Grain Macaroni Company is creating good will by providing speakers to address clubs, church groups and school home economic classes. The subject of these talks is food with emphasis on pasta products and other foods manufactured by the company.

Mrs. Catherine Reichert, home economist for Golden Grain, is the principal speaker appearing before these groups. Her talk, "Quick Meals for Busy People," offers cooking hints, provides nutritional information and suggestions on how to stretch a food budget. Often a demonstration on how to prepare macaroni products correctly is part of the program.

Mrs. Reichert has appeared before more than 100 groups within the past year.

Nutrient Data Bank

The U.S. Department of Agriculture has established a Nutrient Data Bank to collect data from food packers and manufacturers, in cooperation with the Food & Drug Administration. The Bank will update USDA's Agricultural Handbook No. 8, "Composition of Foods—Raw, Processed, Prepared." Current data is needed for nutritional labeling regulation. FDA does not accept old data. New Handbook will be in loose-leaf form.



Robert Montesi (right), manager of Montesi's on Madison in Memphis, and Eddy O'Connor of Ronco Foods.

Spaghetti Display in Memphis

How much spaghetti does it take to feed 75,000 people?

You can find out by seeing the World's Largest Spaghetti Display now at Montesi's on Madison. The display was built by Ronco Foods of Memphis. (When cooked, spaghetti volume increases 2½ times.)

Ronco built the display by using 600 cases. With 24 one-pound packages to the case, that comes to 14,400 packages of spaghetti, or a little more than seven tons. The size of the servings will be generous, too, as well as delicious.

The display covers 50 square feet of floor space at a Montesi's head. At the highest point, it's over ten feet tall.

From another viewpoint, the strands of spaghetti would reach from Montesi's on Madison to Chicago in a straight line.

All we need now is a very, very large cooking pot.

Tom DeDomenico Named To Symphony Board

Thomas DeDomenico, Vice-President of the Golden Grain Macaroni Company of San Leandro, California, is one of eight new members named to the Oakland Symphony Orchestra Association Board of Directors. The board is charged with presenting and maintaining the orchestra which celebrates its fortieth anniversary season this year. Home of the orchestra is Oakland's new Paramount Theatre of the Arts. A prestigious roster of guest artists has been signed for the season.

DeDomenico is active in cultural and civic life of the Bay Area. His firm sponsored the Dollar Opera Performances in San Francisco for many years.

Lent Begins on Ash Wednesday, February 27
Easter Sunday is April 14

New Member

Maktes, trade name for Makarnaçilik ve Ticaret T.A.S., in Bayrakli, Izmir, Turkey, has joined the National Macaroni Manufacturers Association.

This company is one of the main producers of macaroni in Turkey. They have a semolina mill with a daily capacity of 75 tons. They produce 16 different kinds of macaroni in a plant with a capacity of 45 tons daily. Their products have won prizes in European contests and has established an international reputation for quality. At present the company exports merchandise to England and Germany.

British Pasta Market Grows

Britain is rapidly catching up on some of the major pasta markets of Europe. From a modest baseline in 1965,

consumption in this country was 20,000 tons. Total home sales of all forms of pasta had risen to 32,380 tons by 1972 and the estimate for this year amounts to 35,000 tons.

If the current sales pattern continues—and there is no indication to the contrary—then Britain will have doubled its pasta consumption over the 10 years to 1975, with sales exceeding 40,000 tons.

This is the pattern that emerges from the most recent figures published by the Ministry of Agriculture, Fisheries and Food. At the same time, two other significant facts emerge. First, the market share absorbed by imported product has fallen from just under one third in 1965, to little more than a quarter in 1972, and is expected to be even less this year. Further, British exports have risen from 600 tons in 1965 to 1,040 tons in 1972.

Peter Pence Retires

Peter M. Pence retired December 31, 1973, after 38 years' service to General Mills.

He started with the company March 28, 1935, as a lab assistant in Spokane after graduating from the University of Idaho with a BS degree in Chemistry.

He transferred to Bakery Sales in 1938 and worked in Sacramento, Calif., until he entered the service in 1943. After serving with Naval Intelligence on Admiral Nimitz's staff with the rank of Lieutenant Commander, he returned to GMI as a bakery salesman in Oakland, Calif.

As Executive Account Sales Representative, he has served the bakery and macaroni industries in the Bay area for

35 years. He and his wife, Joan, will reside in Hayward for the present.

Dr. Maurice William Dead

Dr. Maurice William, the Brooklyn dentist whose writings were credited with causing Dr. Sun Yat-sen in 1924 to reject Marxist doctrine, died at the age of 92 on September 15.

His widow, the former Marie Kresky; a son, Robert, President of Western Globe Products, and seven grandchildren survive.

An immigrant from Russia, the son of a tailor, Dr. William grew up in a leftist atmosphere, but expressed disappointment with the Socialists. He wrote a book "The Social Interpretation of History," published in 1921 and brought to the attention of Dr. Sun Yat-sen, founder of the Chinese Republic. The book was read and pondered by Dr. Sun, who adopted its social and economic theories in guiding the new Republic. He incorporated large sections of it in his work, "The Three Principles of the People." Dr. William is mentioned in the text, an unusual honor.

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- 8—Nutritional Analysis

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Crop Quality Conference

(Continued from page 15)

"start" button on new capacity, but this will not materialize for almost two years.

"Throughout the recent era of losses or inadequate profits, the fertilizer industry strived to continue to meet domestic demands. But," Mr. Sullivan declared, "it is undeniable that the export market was increasingly attractive because it was profitable."

Fertilizer Use Up

Commercial fertilizer used in North Dakota during the year ending June 30, 1973, totaled 489,220 tons, according to the North Dakota Crop and Livestock Reporting Service. This is an increase of 43 per cent from the same period a year earlier. Mixed fertilizers at 243,243 tons increased in importance, accounting for 50 per cent of total tonnage used compared with 48 per cent for the preceding 12-month period.

Direct application material (N, P₂O₅ and K₂O) totaled 260,807 tons. Nitrogen

materials used amounted to 141,851 tons, up 71 per cent; phosphate materials 108,217 tons, up 39 per cent; and potash materials 10,739 tons, up 14 per cent from a year earlier. Natural organic materials totaled 300 tons compared to 140 tons the previous 12-month period. Data originated with State Laboratories Department, Bismarck, North Dakota.

Fertilizer consumption in the United States and Puerto Rico during the year ended June 30, 1973 is estimated at 42.5 million tons. This is up 3 per cent from the 41.2 million tons consumed during the 1972 fertilizer year. Consumption of total primary nutrients, at 17.8 million tons, increased 3 per cent from the 17.2 million tons a year earlier.

Egg Review

5,495 million eggs were produced in October, 3% below a year ago, but 4% more than September, 1973 according to the Crop Reporting Board. There were 291.5 million layers on farms November 1, down 3% from last year and 1% above a month earlier. Rate of lay on November 1 averaged 60.8 eggs per 100 layers compared to 60.7 last year and 61.5 a month ago. Egg-type hatch in October totaled nearly 46 million, up 21% over the 38 million produced during October a year ago. The cumulative January-October hatch of 456 million, 7% above 1972. Egg-type eggs in incubators on November 1, 1973, was 36 million, up 15% from a year ago.

Egg breaking stock in the Central States eased in price during October but firmed in November as the Thanksgiving holiday approached. Frozen eggs were steady in November about 5¢ under the October level. Dried eggs also were steady about 10 to 15¢ under the October level.

Packaging Show

In a major step that consolidates an important facet of packaging within a single annual national event, the Society of Packaging and Handling Engineers (SPHE) will conduct its National Packaging and Handling Symposium in conjunction with American Management Associations' Annual National Packaging Conference and Exposition beginning in 1974. The combined event has been jointly announced on a formal basis this week by AMA executive vice president and general manager, C. Whitford McDowell, and SPHE president, Richard M. Reutlinger (Chicago). It will begin with AMA's 43rd Annual program, April 22 through April 25, at New York's Americana Hotel (conference) and Coliseum (exposition).

Overall, the consolidation serves to stress the continuity of the packaging function—from package concept and design to actual packaging concept and shipping and handling. Visitors to the joint event will be provided with a more complete overview of the industry's total function; hence should be better able to plan more of their own systems through attendance at one event.

The National Macaroni Manufacturers Association will hold its Spring Seminar on Packaging April 22-23 at St. Moritz on-the-park, 50 Central Park South, New York City.

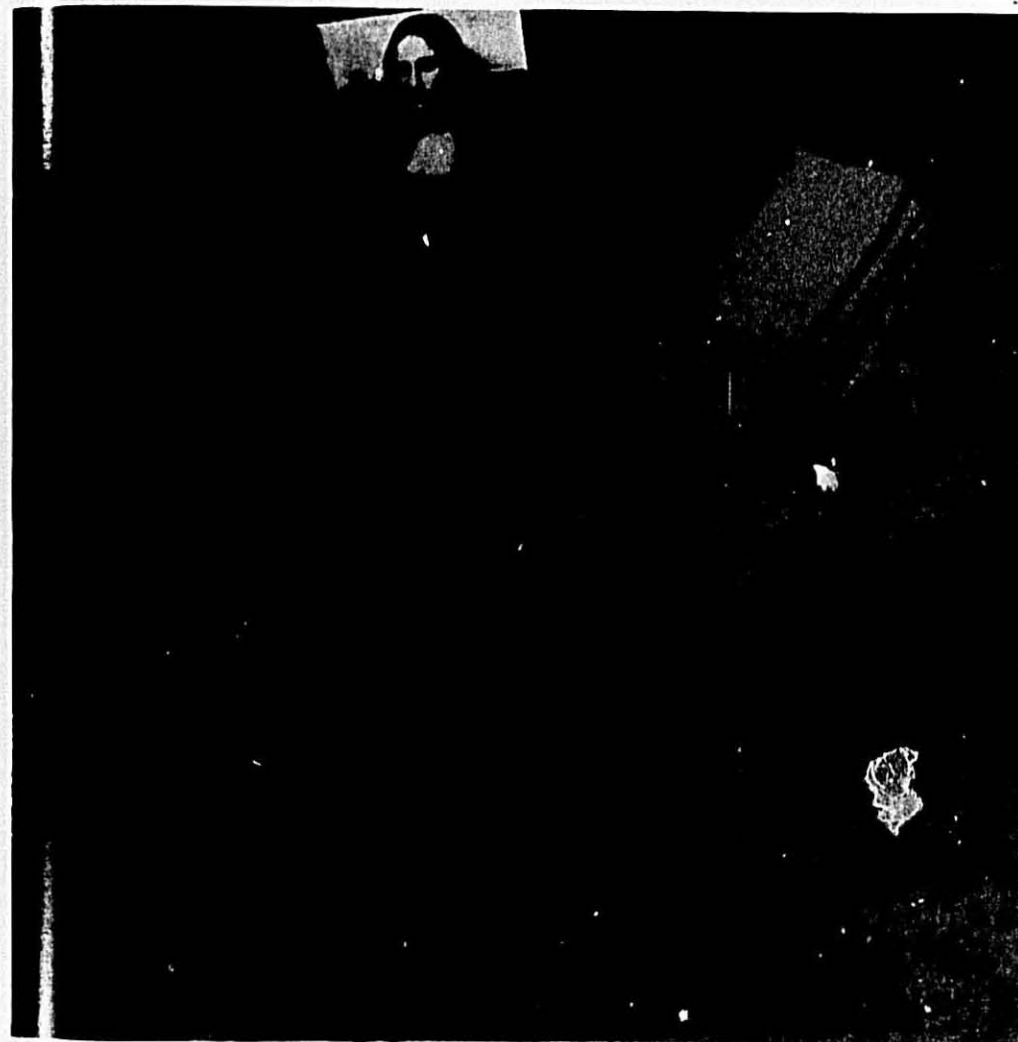
Massachusetts Labeling Regulations

Further hearings were held in Boston on November 9 concerning the proposed food labeling regulations of the Massachusetts Department of Public Health. The original regulations were highly controversial in that they deviated from Federal FDA regulations, calling for more information to be included on labels for foods marketed in Massachusetts than that required by FDA for labels on foods shipped in interstate commerce. They deal with such matters as mandatory nutrition labeling, percentage ingredient labeling, and open dating.

The hearings were scheduled in order to allow business the opportunity to comment on the regulations. Dr. Ogden Johnson of FDA also testified, emphasizing the necessity that Massachusetts regulations conform with those of FDA on a Federal level. Representing industry were National Canners Association, the American Meat Institute, the Grocery Manufacturers of America, the American Frozen Food Institute, the National Association of Food Chains, and the Salt Institute, among others. Attendees at the hearings believe that the case for uniformity was well stated by Dr. Johnson and the other participants. They feel, furthermore, that the opinions offered by the industry representatives seemed to be received more openly by the board as compared to the reception granted at hearings earlier.

Although effective dates were changed and extended for the three main parts of the regulations, industry spokesmen still said the deadlines for labeling could not be met, mainly due to the time required to gather data.

The effective dates now in the regulations include Jan. 1, 1975, for nutrition labeling, with a possible extension to July 1, 1975; July 1, 1974 for ingredient labeling with a possible extension to Jan. 1, 1975, and July 1, 1974, for open dating of perishable foods and Jan. 1, 1975, for non-perishable foods.



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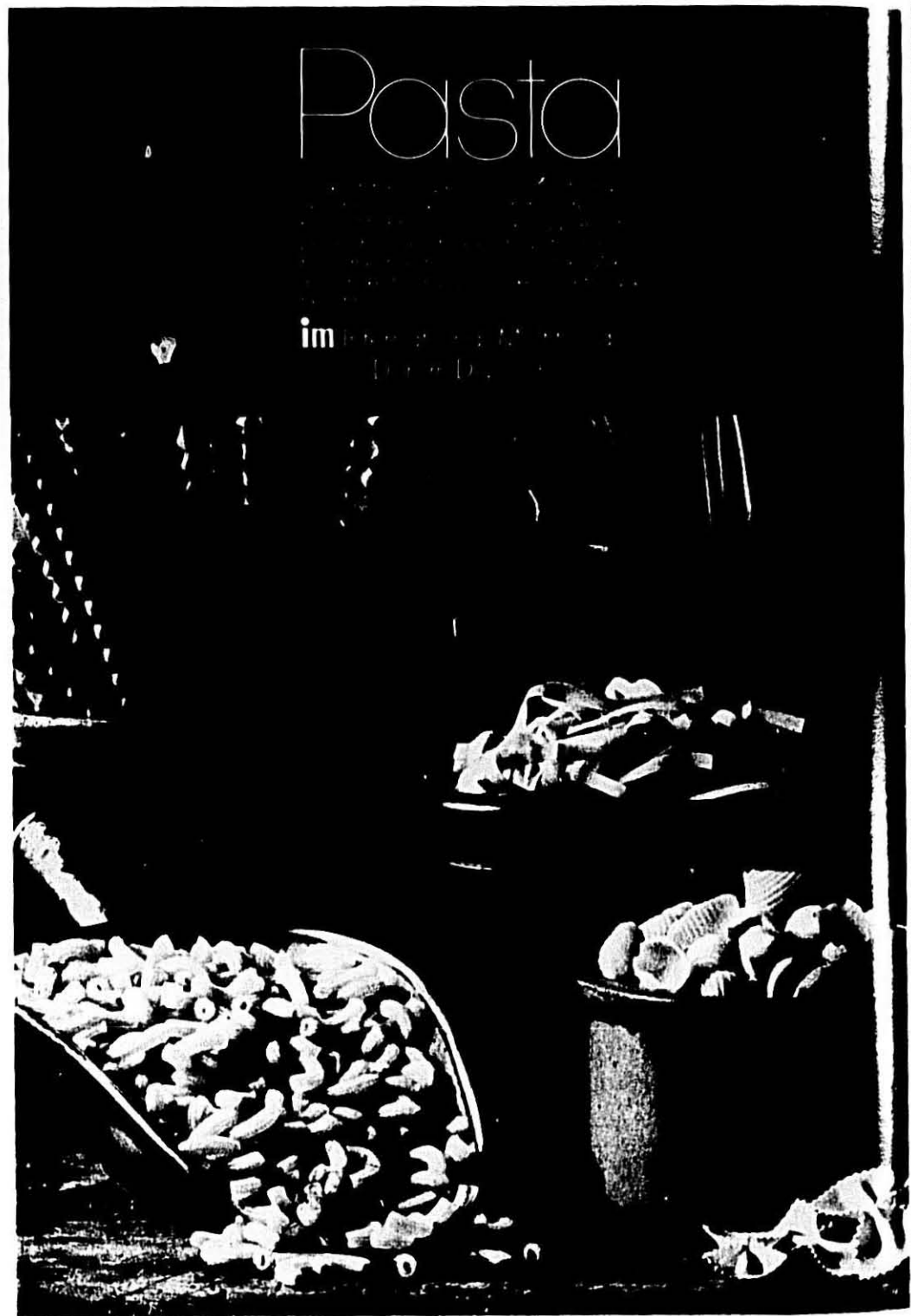
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