

**THE  
MACARONI  
JOURNAL**

**Volume 58  
No. 4**

**August, 1976**

*Macaroni Journal*

AUGUST, 1976



Officers of NMMA

# PASTA AL FIBREBOARD.

Pasta packaging with a special touch. From Fibreboard and Rossotti. Not just spaghetti in a box, but folding cartons with a flair. Discover the difference our knowledge of your business can make. Call us for help with package design, money-saving combination printing runs, any folding carton question. Fibreboard Corporation, San Francisco, California. Eastern Carton Operations, 560 Skyway Avenue, Englewood Cliffs, N.J. 201-568-7800.



  
Fibreboard

## The Macaroni Journal

August  
1976  
Vol. 58  
No. 4

Official publication of the National Macaroni Manufacturers Association,  
19 South Bothwell Street, Palatine, Illinois. Address all correspondence  
regarding advertising or editorial materials to Robert M. Green, Editor,  
P.O. Box 336, Palatine, Illinois 60067.

### Officers

President ..... L. D. Williams  
Vice Pres. .... Paul A. Vermynen  
Vice Pres. .... Angelo Guido  
Vice Pres. .... L. R. Thurston, Jr.  
Executive Secretary .... R. M. Green  
Director of Research .... J. J. Winston

### Directors

Eastern Area  
Joseph P. Viviano  
Anthony H. Gioia  
Emanuele Ronzoni, Jr.  
Nicholas A. Rossi  
Lester R. Thurston, Jr.  
Paul A. Vermynen

Central Area:  
Ralph Sarli  
Lloyd E. Skinner  
Walter Villaume, Jr.  
Lawrence D. Williams

Western Area:  
Vincent DeDomenico  
Angelo Guido  
Robert William

Canada:  
John F. Ronald

At Large:  
L. (Andy) Anderson  
S. Ravarino

MACARONI JOURNAL  
Subscription Rates:  
Domestic ..... \$10.00 per year  
Foreign ..... \$12.50 per year  
Single Copy ..... \$1.00 each  
Back Copies ..... \$2.00 each

The Macaroni Journal is registered with  
the U.S. Postal Office.  
Published monthly by the National  
Macaroni Manufacturers Association  
at its office, Palatine, Illinois, since May, 1919.  
Second class postage paid at Appleton,  
Wisconsin, and Palatine, Illinois.

AUGUST, 1976

### In This Issue:

	Page
Cover Photo: left to right—Paul A. Vermynen, Angelo Guido, Larry Williams and Lester R. Thurston, Jr.	
Bicentennial Convention .....	6
The President's Address .....	8
World Wheat Outlook—Durum Crop Conditions .....	12
Benefits of Market Uncertainty .....	16
Personals—Industry Items .....	18-19
New Specifications for Corrugated Boxes .....	22
Food in the Future—Food of Our Fathers .....	26-28
Whey Fortified Macaroni? .....	30
In the Mills—Sticky Egg Problem .....	36-37
Index to Advertisers .....	40

### Good Meeting

The 72nd Annual Meeting of the National Macaroni Manufacturers Association was a success on several scores: it attracted a large attendance, a good bit of important business was done, every one enjoyed the locale, the facilities and service of the beautiful Broadmoor.

There was some satisfaction ex-

pressed about the progress that had been made in the last twenty as well as two hundred years. There was optimism as well as concern as to what might be ahead.

President Nick Rossi summed it up in his President's Address. And it was reiterated in the round-table discussions, summaries of which will printed soon.

### The Cost of Regulation

Just how costly is government regulation? General Motors made an assessment of the impact on its own operations. Here are the findings:

GM estimates government regulation will cost it at least \$1.3 billion this year. Vice Chairman Richard L. Terrell pointed out this was more than it cost to operate the federal government during its first 75 years of existence.

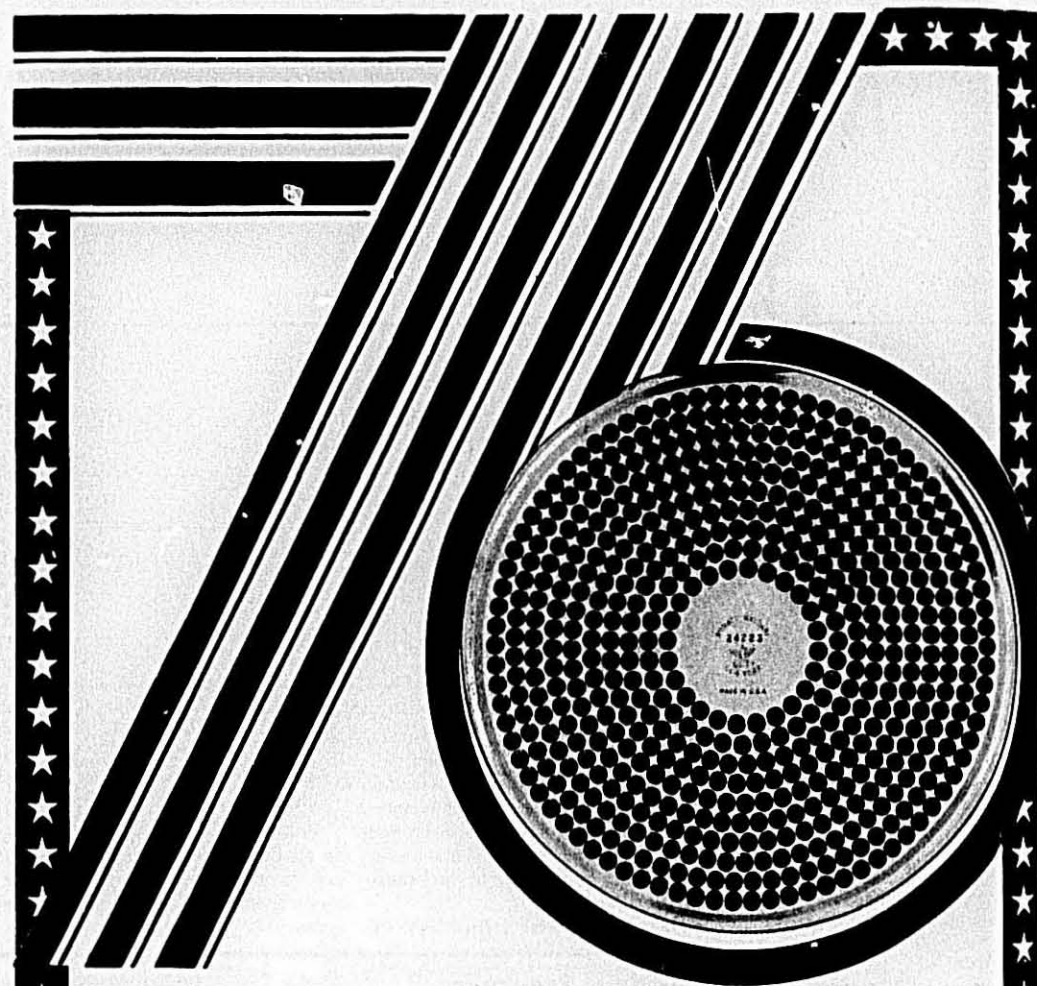
GM will spend that \$1.3 billion complying with—or anticipating—government regulations at all levels. Only twice in the past 10 years have the company's annual dividends on common stock exceeded that figure.

That \$1.3 billion figure was nearly as much as the company spent worldwide in 1974 for plant and equipment. It was one-fourth more than it spent worldwide for special tools. It is more

than a third greater than net income and fully a third more than dividends on common stock in 1974.

Mr. Terrell said GM doesn't believe all government regulation is bad. Nor does the company see government as the "enemy." But he believes that before more regulations are imposed, the country needs to weigh the costs to be sure they are indeed necessary for the welfare of the country and its people. He also feels the burden of proof should be on those who propose regulations, not on those affected by them.

"What really is critical," he said, "is the need for a commonsense national reckoning of costs compared to the benefits, wherever and however government regulations impact." Mr. Terrell made his remarks before the Detroit Chapter of the American Foundrymen's Society.



We salute the Bi-centennial year and extend our compliments to our forefathers on the founding of our nation in 1776.



**D. MALDARI & SONS, INC.**  
557 Third Ave., Brooklyn, N.Y. 11215  
Phone: (212) 499-3555

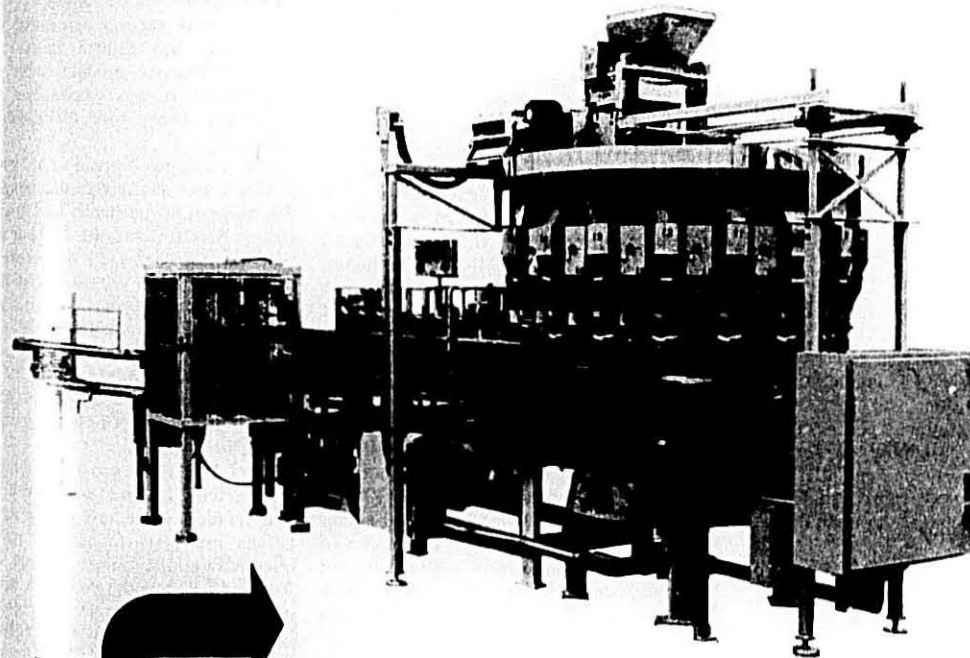
America's Largest Macaroni Die Makers Since 1903 - With Management Continuously Retained in Same Family

## A new Wright capability- MACARONI PACKAGING

Macaroni short goods yield to Wright packaging machinery capability. This new Rotary Net Weigher and cartoning system weighs and packages macaroni at speeds of 200 per minute. Faster because there are more weigh heads. More accurate because there's more time to weigh. And, the continuous motion of this system vs. standard stop-and-go motion means less wear, less maintenance. Minimum floor space, too.

Wright Rotary Net Weighers— recommended for high speed, weighing and packaging a variety of products in cartons, jars, or cans. An example of Wright Machinery capability to design, manufacture and service packaging machinery systems tailored to your requirements. Ask for our new Rotary Net Weigher brochure.

▶ DESIGN ▶ MANUFACTURE ▶ SERVICE



**WRIGHT MACHINERY COMPANY, INC.**  
Durham, North Carolina 27702 Tel. 919-682-8161

## Bicentennial Convention

The 72nd Annual Meeting of the National Macaroni Manufacturers Association at the Broadmoor in Colorado Springs at the end of June had mind-stretching presentations, round-table discussions and muscle-building events such as the tennis mixer and golf tournaments.

President Nicholas A. Rossi passed the baton on to incoming President Lawrence D. Williams of The Creamette Company, Minneapolis; 1st Vice President Paul A. Vermylen, A. Zerega's Sons, Fair Lawn, New Jersey; 2nd Vice President Angelo Guido of Anthony Macaroni Company, Los Angeles, California; 3rd Vice President Lester R. Thurston, Jr. of C. F. Mueller Company, Jersey City, New Jersey. All directors were reelected.

### Opening Session

In citing the progress of the past two years, Mr. Rossi pointed to the publicity and promotion garnered by the National Macaroni Institute, the developments of a reporting system for industry statistics and coping with the regulations pouring out of Washington. He said the future is optimistic as more women are working and need the convenience of foods like macaroni. The popularity of cooking from scratch will help our product category.

Director of Research James Winston reported the Standards Committee has met frequently in the past year concerning Good Manufacturing Practices in discussions with the Food and Drug Administration. His comments on vitamin enrichment and iron, sanitation matters and pull dates on pasta products will be reported in the next issue of the Macaroni Journal.

Jack D'Asaro of Ernst & Ernst said there are some macaroni manufacturers who are not participating in the statistical program. The present level of participation reflecting about 75 percent of the industry's level is good but it would be better if it were 95 percent. The program will be more significant when a full year's cycle is completed and comparisons can be made on a year-to-year basis. The Board of Directors determined that participants in the program would be recipients of the monthly reports with only generalized information to be



Nick Rossi passes the gavel onto newly elected President Larry Williams.

disseminated by Association communications.

Louis Marchese, Counselor of the firm Halfpenny, Hahn & Roche, declared that Government is organized opinion—what we do does make a difference. Business has not done enough in balancing the input to government of the Ralph Naders, labor unions, environmentalists, as well as other groups. He emphasized that politics are people. "Let your Representatives know where you stand," he urged. The NMMA Washington meeting with luncheon on the Hill and business sessions at The Mayflower Hotel will be held on Thursday, September 16.

### School Foodservice

Dr. John Perryman, Executive Director of American School Foodservice Association, stated school nutrition programs represent more than 10 percent of the \$50,000,000,000-a-year food service industry. He deplored present administration efforts to cut back on this type of program with bloc grants. He declared individuals must apply health information to their own benefit and a knowledge of food is desperately needed in school education. He observed that the increasing costs of energy will increase food costs and by the year 2000, it will cost the average family three times as much per week for food as it does today. He noted that with 8½ percent of the world's population the United States is consuming a disproportionate amount of the world's resources and

our wasteful ways are known and represented by the developing countries. He said change must come or the will be forced by socio-political developments.

### Dialogue with Grocers

In the Dialogue with Grocers, Ray Rose, President of King Soopers, Bill Thompson, General Manager of Associated Grocers of Colorado, and Jerry Mickelson, General Manager of Western Grocers, fielded questions along with a panel of three representative macaroni manufacturers: Bill Henry of Skinner selling branded merchandise to retailers primarily through brokers, Paul Vermylen of A. Zerega's Sons with the primary trade of private label industrial and institutional accounts on the Eastern Seaboard; and Nick Rossi with primarily branded merchandise in Western New York State and New England.

There was general agreement that dry mixes and canned sauces had helped macaroni product sales immeasurably. It was emphasized that tie-ins are always good for additional sales.

Bill Thompson urged that manufacturers and distributors use imagination and not be mechanics tied to computers. Ray Rose stated 24 hour lead time for store deliveries was necessary to cope with the critical out-of-stock problem. Their Cosmos computer program with the National Association of Food Chains has helped measure productivity by movement of products and development of space allocation based on that movement. Cosmos is used for schematic layouts.

Jerry Mickelson noted that the consumers have become more vocal and that retailers must have consumer relations managers to conduct interviews and consumer research. Ray Rose added that the consumer movement is one of the greatest things that has ever happened—"it made us better merchants."

### Bicentennial Salute

The final day's program began with the multiple slide presentation of "200 Slices" by the Sosland Publishing Company, publishers of Milling & Baking News. Markets Editor Mel Sjerve made introductory remarks to the Bicentennial Salute showing graphic de-

(Continued on page 7)

# If you want results, call the durum people.



You can measure the results when you start with the best. The best durum wheat is raised on the prairies of North Dakota, and the North Dakota Mill uses only the best durum wheat for our durum flours. If you want the best results, start with Durakota No. 1 Semolina, Perfecto Durum Granular or Excello Fancy Durum Patent Flour. Call us today — you'll get the results you want. The best.

the durum people



NORTH DAKOTA MILL  
Grand Forks, North Dakota 58201  
Phone (701) 772-4841

## Bicentennial Convention

(Continued from page 6)

velopments from miller George Washington up to the present day with historical pictures of the grain trade, milling, baking, breakfast cereals and pasta.

### Macaroni Publicity

Elinor Ehrman also used slides to report results thus far in the Bicentennial Year for publicity placements in behalf of the National Macaroni Institute. She noted that there were 19 outstanding magazine placements out of a total of 67 appearing in the first six months of 1976, and now that the Pasta Portfolio Kit is available in quantity, a major effort will go into Youth Programs. National Macaroni Week, October 7-16, 1976, will have as a theme "Back to Basics".

Pointing to the April issue of the Seventeen Magazine and the widening role of carbohydrates as an energy source for active sports persons, Miss Ehrman announced that one of the themes for publicity for 1977 would be "Score High With Pasta".

Lead-off man of the opening session was Ron Useldinger of the Physical Fitness Institute of America, San Jose, California. Mr. Useldinger said the human body needs rest, fuel and exercise. Most of us get enough rest—most of us get too much fuel—most of us don't get enough exercise. A regular daily program of isometrics or isokinetics will help the problem.

In reporting the activities of the Durum Wheat Institute Chairman Bob Howard said that the durum millers' objectives are to promote macaroni and the use of durum wheat. He stated they must evaluate operations periodically and they are going through the process at this time. They will want to review areas of cooperation such as the distribution of films, "Macaroni, Nutrition and Numbers" and "Durum, Standard of Quality"; quantity recipes; and Durum Wheat Notes which are going out quarterly to some 52,000 home economists, food editors and thought leaders.

### Durum Grower

Wayne Tessman of Goodrich, North Dakota representing the U.S. Durum Growers Association said that prospects for 1976 crop are excellent. The North Dakota crop report for the week ending June 29 noted that light

showers had improved prospects for late seeded crops but early seeded grain in drought stricken areas in the southeast showed little improvement. Three percent of the durum crop is in the milk to dough stage with 29 percent in boot and 33 percent jointing or earlier.

In the final round-table discussions at the convention there was general agreement that progress had been made in the last twenty years in the Macaroni Industry and that the prospects are bright for continued progress despite the many challenges and problems that appear. Details of some of these conclusions will appear in the next issue of the Macaroni Journal.

### Our Thanks to the Hosts of the Suppliers' Socials:

ADM Milling Company, Shawnee Mission, Kansas

Amber Milling Division, St. Paul, Minnesota

Ballas Egg Products Corporation, Zanesville, Ohio

Briabanti Corporation, New York, New York and Milan, Italy

Builer-Miag Corporation, Minneapolis, Minnesota

Cooley Sales Company, Shawnee Mission, Kansas

DeFrancisci Machine Corporation, Brooklyn, New York

Faust Packaging Corporation, Central Islip, New York

Fibreboard Corporation/Rossotti Sales, Englewood Cliffs, NJ

General Foods, Pendleton, Oregon

General Mills, Palo Alto, California

Henningsen Foods, Inc., White Plains, New York

Hoskins Company, Libertyville, Illinois

International Multifoods Corporation, Minneapolis, Minnesota

D. Maldari & Sons, Inc., Brooklyn, New York

Microdry Corporation, San Ramon, California

Monark Egg Corporation, Kansas City, Missouri

North Dakota Mill & Elevator, Grand Forks, North Dakota

Peavey Company Flour Mills, Minneapolis, Minnesota

Rossotti Consultants Associates, Inc. Fort Lee, New Jersey

Schneider Bros., Chicago, Illinois

Seaboard Allied Milling Corporation, Kansas City, Missouri  
Milton G. Waldbaum, Company  
Hinsdale, Illinois

### The President's Address by Nicholas A. Rossi

I'll bet that there is not a single person here who is not aware that there's a bicentennial celebration going on. It seems as if half the people in the country are looking back to the past two-hundred years, or they're talking about the next two-hundred years. That may be how I got the idea about talking about the future.

Of course, no one needs an excuse to think about the future, because everyone is interested in it anyway. Not only businessmen, but housewives, employees, government officials, students, writers, you name it.

But as businessmen, you and I have to pay particular attention to the future, because you and I have to make those decisions which affect the livelihoods of our businesses and everything else connected with them.

### Look to the Future

We have to be fortune tellers in a way. Good businessmen have to be able to predict whether the market will call for larger or smaller inventories, whether capital expansion will be justified, when to hold out for low commodity prices, and so on.

Unfortunately, we don't have crystal balls to help us with our planning, but we do have two things: just as we look at the past and the present.

Science fiction writers have been especially adept at accurately predicting the future, and Isaac Asimov, one of the most famous such writers, once indicated that with enough information about the past and the present at hand, it's hard not to be able to predict the future.

Let's try an example. I think in the past two years, our macaroni industry experienced some amazing events. In 1975 we weathered wildly fluctuating prices of durum, yet emerged with one of our best years ever. Part of that success may have been due to the high prices of competing foods, but most of it, I think, was actually due to the enormous effectiveness of the promotional efforts put forward by our industry.

(Continued on page 8)

THE MACARONI JOURNAL



D. D'Agostino, of tv-cooking and cookbook fame, serves up proof-packed pasta at Minneapolis' popular Sammy D's restaurant.

# The proof is in the pasta!

If it looks good and tastes good. That's good pasta! But good pasta requires good products. Like Amber's Venezia No. 1 Semolina, Imperia Durum Granular, or Crestal Fancy Durum Patent flour.

Thanks to uniform high quality, color and granulation, these ingredients make your pasta operations run more smoothly.

Amber works exclusively with the finest durum wheat grown by farmers of the northern plains. And Amber grinds this fine durum in its modern efficient mill.

And Amber serves you right...by matching your specs and by shipping when promised. And the consumer gets a break, too, because the proof is in the eating. Call Amber now for your own proof.

AMBER MILLING DIVISION of THE GRAIN TERMINAL ASSOCIATION  
Mills at Rush City, Minn. • General Offices at St. Paul, Minn. 55165/Phone (612) 646-9433



## The President's Address

(Continued from page 8)

Would you care to draw a conclusion from just that little bit of information? I would. It's not hard. It should be obvious that if our products are to continue to hold their share in the marketplace, if we are to continue to attract the shopper's attention, we can't depend on quirks in the weather or the whims of competing foods. An active, aggressive Institute is a must for the promotion and exposure we need. Not one of us is big enough alone to saturate the national media to the extent necessary.

Most of you are probably already aware of this. I say this because I have some things in mind which support it. One is that such a large percentage of you are voluntarily reporting your production figures, and the other is that attendance at our spring seminars in Detroit and California broke all previous records. These things wouldn't happen if the members didn't have faith in their association. This is exciting. I think I can safely predict, based on this enthusiasm, that our Association is going to become stronger, become still more effective in meeting our needs. Participation goes a long way. So many of you are realizing that the more you put into our Association, the more you get out of it. And by the way, I don't think it will be long before the number of members reporting production figures reaches 100 percent.

### Change

You know, if you look at our nation's society, you can see important changes taking place. More and more families are headed by parents who both have full-time jobs. You can be sure that this is creating a fantastic demand for foods which are quick and easy to prepare. Foods like macaroni. But someone's got to tell the consumer that. You and I know about the convenience macaroni offers, not to mention its superb flavor, but we've got to keep reminding the consumer of this. You can be sure our competing foods will be doing it. In this game, if we do nothing, we move backwards.

Another popular movement is the interest in cooking with pure, natural ingredients. Personally, I think this is great. Starting from scratch is, for me anyway, the only way to cook. It's a step in the right direction as far as



Nicholas A. Rossi

the nation's eating habits are concerned. But again, someone's got to tell the consumer that macaroni is an ideal basic ingredient for this kind of cooking. It's natural, it's versatile. You and I know it, but the consumer has got to know it, too. Simply advertising our own brands doesn't do the job. But our Institute, with its budget of less than \$200,000, is reaching national magazine food editors, newspaper columnists, television and radio reporters, home economists, and so on. If we were to have to pay for this coverage, it'd cost us literally millions of dollars.

When I think about it, we must be crazy for donating less than two cents per hundredweight to our Institute. What if we were to make it three cents? It wouldn't be a hardship to any of us, and can you imagine what a fantastic job the Institute could do with over half a million dollars! And if you don't think the Institute is worth it, think again. You'd better believe that the Dairy Industry recognizes the importance of its association. I'll say it again the again: no one is in a better position to help us than our own Institute.

### Save Small Business

Another trend which has been predominant in our country, and I'm not too happy about that one, is the tendency for businesses to consolidate, with many small businesses being replaced or swallowed up by fewer and fewer big ones. Look at the auto industry, for example. Unfortunately, I'm not sure that our macaroni industry is immune from this.

At the present, our Association is made up predominantly of small businesses. This is great, because I think that small businesses are the backbone

of America. But if the little guy is to survive, there's got to be an association like ours to represent his interests in a way which he himself couldn't afford by himself. How else, for example, could our interests be so effectively represented in Washington? An individual would never be heard, you can be sure of that.

Since I mentioned Washington, perhaps this would be a good time to say a few things about government regulation. If things keep going in the direction they have been, there soon will be a time when all our packages will have to be made out of stainless steel, there'll be so much information required to be on the label that no room will be left for our brand name and every single piece of macaroni will have to carry a certificate that says it's been examined by microscope, X-ray, and chemical analysis for impurities. Now, I may be exaggerating just a bit, but the point is that government regulations do affect us in a very real way, and they're doing so more and more. Just wait until Consumer Manufacturing Practices take effect the next few months.

### Participate

I sincerely believe that if you are a member of the business community but you are not involved in public affairs, you're selling yourself short. The climate in which we operate is very much affected by what goes on in government, and you know it. Our Association helps, of course, but here I'm urging you to participate on an individual basis in your own communities. The Association works on a national scale, but only you can take an active part in your own locality.

In general, I suppose you can think of business as a relay race. We are trying to stay ahead of our competitors, while at the same time, the rules and the course are being changed not only by government, but also by the other runners as well as the spectators. In all this confusion, it's our Association which keeps us on the right track. Without it, we'd be out of the running, and that's for sure.

So as I pass the baton to our Association's next President, I urge membership to support him as if it were me. The past two years have been wonderful for me, I enjoyed them immensely, and I think it was a great two years for our Association as well.

# KNOW-HOW.

There is no substitute for the engineering expertise that comes with experience. Buhler has it. Over one-hundred years experience in the design and operation of hundreds of modern, efficient macaroni plants and machines in practically every country of the world where macaroni is made.

- Single screw presses from 600-4000 lbs./hr.
- Double screw presses from 1200-8000 lbs./hr.
- Four screw presses up to 16,000 lbs./hr.
- Shaking pre-dryers for short goods
- Short goods belt dryers from 600-16,000 lbs./hr.
- Two-stick spreaders and four-stick spreaders
- Long goods dryers from 600-4000 lbs./hr.
- Long goods accumulators for one shift per day discharge
- Long goods cutters
- Raw material handling systems
- Complete production lines
- U.S.-made motors
- U.S.-made electrical controls
- U.S.-made climate controls
- Engineering services including design, planning and installation of complete macaroni processing plants

If it's anything to do with macaroni plants or equipment, talk to the experts at BUHLER-MIAG, INC., 6325 Wayata Blvd., Minneapolis, Minn. 55426, (612) 545-1401. Eastern Sales Office: 580 Sylvan Ave., Englewood Cliffs, New Jersey 07632, (201) 871-0010/BUHLER-MIAG (Canada) LTD., Don Mills, Ontario, (416) 445-8910.

Complete Macaroni Plants by

# BUHLER-MIAG



Skilled, experienced BUHLER Engineers develop the optimal processing system after making a careful analysis of the customer's particular plant layout, operation and specific requirements.



Every facet of machine operation undergoes scrupulous examination by Buhler Design Engineers. Extrusion of short goods will be viewed in extreme slow-motion from high-speed, 500-frames-per-second movie camera used above.



Buhler designs, fabricates and installs all types of macaroni equipment for any size operation. Above, world's largest short goods press (4-screw, 16,000 lbs./hr. capacity) dwarfs 100 lb./hr. laboratory model shown in inset.

## World Wheat Outlook

### Less Wheat Harvested 1975

A wrap-up of the 1975 world wheat crop shows a harvest of 344 million metric tons, down 2 percent from 1974. The poor crop in the USSR was principally responsible for the smaller harvest. World production, excluding the USSR, would be 278 million tons, 10 million tons larger than for 1974.

Argentina and Australia finished up the world's 1975 harvesting season with good crops. After a poor start, Australia experienced exceptionally favorable weather during the growing period and the 1975 wheat harvest is currently estimated at 12 million tons, up around 300,000 tons from 1974. Argentina's 1975 wheat harvest was well enough developed to escape a dry December. Production is estimated at 8.6 million tons, over 40 percent greater than 1974's and the third largest in 15 years.

World wheat exports for 1975/76 (July-June) are now estimated at 67 million tons of which the United States is expected to account for about 50 percent. Canada, Australia, and Argentina will account for about 40 percent.

### Durum Outlook

From *Wheat Situation*, May 1976

According to April 1 planting intentions, wheat growers expect to seed about 21 million acres to spring wheat, 12 percent more than a year ago and 6 percent more than indicated on January 1. However, the story in the Spring wheat belt is the reduction in planting intentions for durum wheat from January as well as from 1975.

It appears that recent reductions in durum prices have caused growers to shift their plans from durum to hard red spring wheat. Also, there may have been some shifting from earlier plans to seed oats, barley, flaxseed, and perhaps sunflowerseed. As a result, prospective acreage of other spring wheat was up 11 percent from January indications and 17 percent from last year.

Durum wheat has recently been introduced in the Southwest as will become particularly apparent in 1976. Since this wheat is all irrigated extremely high yields are expected.

Much of it is contracted for export. Durum acreage in Arizona and New Mexico, which is reported for the first time in 1976, totals 325,000 and 20,000 acres, respectively. While there was a significant area planted to durum in these States in 1975, much of the current estimated acreage represents expansion this year. However, durum growers in North Dakota, the leading State, expect to reduce plantings by 10 percent while acreage in South Dakota and Montana is also expected to be down sharply.

### Rapid Seeding Progress

Seeding of spring wheat progressed well ahead of schedule throughout all major production areas. A combination of generally adequate moisture conditions, accompanied by extended periods of open weather allowed growers to finish field preparations and permitted expedient planting. While wet weather has plagued preparations in some areas of North Dakota, planting is still ahead of normal and as of May 9, over 80 percent of the crop in the four Northern Plains States had been planted compared to less than 20 percent last year and around 50 percent normally.

### Stocks

Durum stocks as of April 1 totaled 71 million bushels, 44 percent above last year. Farm holdings accounted for 75 percent of the total. Stocks in North Dakota, which are now reported individually, accounted for four-fifths.

Disappearance during April-June is expected to continue reasonable heavy with exports slightly larger than domestic use. In recent years, sharply higher prices of competing foods set the stage for an increase in the consumption of pasta products. However, durum was left in the wings as upward spiraling durum prices caused pasta manufacturers to substitute hard wheat flour for semolina. In fact, 1974/75 consumption of pasta products was reported to be up significantly while durum grind fell. Weakening durum prices and lower quotes for semolina this year have apparently helped durum regain at least part of its traditional share of the U.S. pasta market. Seed use may fall somewhat short of last year's level as farmers indicate reduced plantings.

### Usage

For the crop year, total use of durum is expected to climb to nearly 100 million bushels, second highest on record. Domestic use would be about 10 percent, due to the increased mill grind.

The foreign market for U.S. durum has held up well as evidenced by the pace of this year's exports. Algeria continues to be our largest market followed by the European Community and Eastern Europe. Through March over 40 million bushels have been inspected for export. By early May another 3 million bushels have been shipped but outstanding sales had slipped to 5 million. This does not include 5 million bushels reported as optional origin sales, however, additional sales are projected.

If the disappearance estimates prove correct, they would still leave about 25 million bushels available for adding to stocks, pushing total this July up to around 45 million.

### Prices

Durum prices at Minneapolis have declined precipitously from the high levels of recent years and are currently trading near traditional levels. Early May, No. 1 Hard Amber Durum at Minneapolis was selling for about \$4.00 per bushel, over \$2.00 less than it commanded just 1 year ago. Projections for a large buildup in stocks will keep durum prices under pressure for the remainder of the year.

### Improved Crop Conditions Noted by Crop Quality Council

In a report released June 24, the Crop Quality Council, based in Minneapolis, indicated that moisture conditions were quite good in most parts of the spring wheat area and that recent rains had materially improved the condition of the crops. The Council stated that the drought had thinned crops and somewhat reduced the potential, but they still expect a crop which will be near average. The southeast corner of North Dakota was the most severely affected, and in some parts of the Red River Valley yields are expected to be no more than 25 bushels, as compared to

normal yields of 35 to 50 bushels per acre. Parts of Minnesota have also been severely affected, but the wheat which has come through the drought is now in very good condition. Montana is reported to be in excellent condition. The main durum area in North Dakota was the least affected, and durum is in excellent shape. The Council estimates that the wheat is maturing rapidly and that this is the earliest season on record, probably a little earlier than in 1971/72. Early maturing of the crop makes it vulnerable to hot weather in July.

### Arizona Durum Harvest

The much publicized Arizona durum crop is being harvested. The USDA Crop Reporting Service estimated production at 22 to 23 mil. bu. with merchandisers saying 15-18 mil. bu. is a better figure. Yields are averaging 70 to 75 bu. per acre with isolated cases of 135 bu./acre crop. Best estimates indicated that about 80% of the crop was contracted before planting at from \$1.60 to \$4.50 per bushel. Quality reports have ranged from 90 percent or better vitreous kernels to around 25 percent. The quality has been variable due to grower inexperience with the crop under irrigation. The lighter sandy soils in Yuma county were prone to yield yellow berry while the heavier soil of Maricopa and Pinal counties yielded the best quality. The Arizona Republic, an area newspaper, stated that practically all of the crop is expected to be shipped to Long Beach and San Diego, California and Houston, Texas for export. The article went on to say that some grain is being shipped to one of the country's major milling companies for use in a pilot project for soft wheat.

### Export Items

Some Arizona durum is going to the U.S. Plains. Wheat reports a total of 44 million bushels. The U.S. government accepted bids for 800,000 tons from international stocks. The European Community in early March boosted the minimum import price for durum wheat to \$7.35 per bushel with a guaranteed price of \$8 to their producers. Algeria signed a three-year agreement with Canada for 37,000,000 bushels of durum.

### Canadians Sell Durum

According to trade reports, the Canadian Wheat Board sold what may amount to as much as 200,000 tons (about 7.3 million bushels) of durum to international traders. Although the prices were not given, the durum was reportedly sold at a price discount to U.S. durum. The aggressive pricing by the Canadian Wheat Board indicates the Board's desire to supply as much as it can of a smaller world market for durum this year. Durum markets have been depressed because of large durum stocks in the principal producing countries and prospects for large crops in durum importing countries. The Canadian durum is expected to fill export orders which might have been supplied with durum from California and Arizona. Reports indicate that the quality of the Southwestern durum has been disappointing, with much of it grading only "Amber Durum," which exporters cannot supply against orders calling for "Hard Amber Durum," a higher grade.

### New Semidwarf Durum

Cando, a new durum wheat variety, has been developed and released by the Agricultural Experiment Station, North Dakota State University, in cooperation with the United States Department of Agriculture. Cando is the first semidwarf durum variety released by the Agricultural Experiment Station and represents a continuous research effort over a 20-year period. Cando has been about equal to Ward and ranked higher than Rolette and Wells in grain yield during the past four years over northeastern and north central North Dakota and the Red River Valley. Cando is a tall semidwarf with excellent lodging resistance and has been similar to Rolette in disease reactions. It is about 1 1/2 days later in heading than Ward.

Milling and spaghetti processing characteristics of Cando were satisfactory when evaluated over a three-year period (1973-75) in North Dakota drill strips. The test weight and wheat and semolina protein of Cando were lower than Ward and Rolette; however, average semolina yield was higher than Wells and Rolette, but lower than Ward. Kernel distributions was slightly higher than Wells and Rolette and slightly lower than Ward.

The authors are Dr. James S. Quick, Associate Professor, Department of Agronomy, North Dakota State University; Dr. B. J. Donnelly, Associate Professor, Department of Cereal Chemistry, NDSU; and Dr. J. D. Miller, Plant Pathologist, U.S. Department of Agriculture, Fargo, North Dakota, as reported in the North Dakota Farm Research Bimonthly Bulletin.

### Hearings of Wheat Food Bill

The Livestock and Grains Subcommittee of the House Committee on Agriculture is considering H.R. 13099, the Wheat and Wheat Foods Research and Nutrition Education Act.

The bill, enabling legislation authorizing a cooperative program of research and nutrition education among wheat producers, processors, end product manufacturers and consumers was introduced in the House on April 7.

The bill, introduced by Representative Thomas S. Foley of Washington, chairman of the House committee, and 19 co-sponsors, is supported by American Bakers Association, Millers' National Federation, National Association of Wheat Growers and the Wheat and Wheat Foods Foundation.

### Estimating the Crop

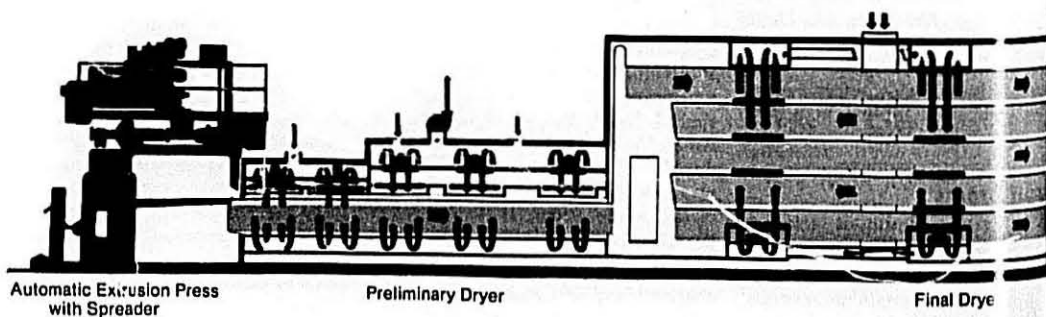
The Agriculture Department is required by law to issue the estimates monthly during the growing and harvesting season. Once of interest primarily to farmers, agri-business companies and futures-market speculators, the reports now are major news in many government capitals and most U.S. households. For wrapped up in those latest projections are implications for future U.S. grain sales to Russia, food supplies for many poor nations, farmers' incomes and the price of meat, bread and other foods in U.S. supermarkets.

The report is produced by a dozen or so commodity experts, some from Washington and others from the Statistical Reporting Service (SRS), field offices, who make up the service's Crop Reporting Board. On the day a report is to be issued, those experts are locked in a room on the first floor of the Agriculture Department at 5

(Continued on page 16)



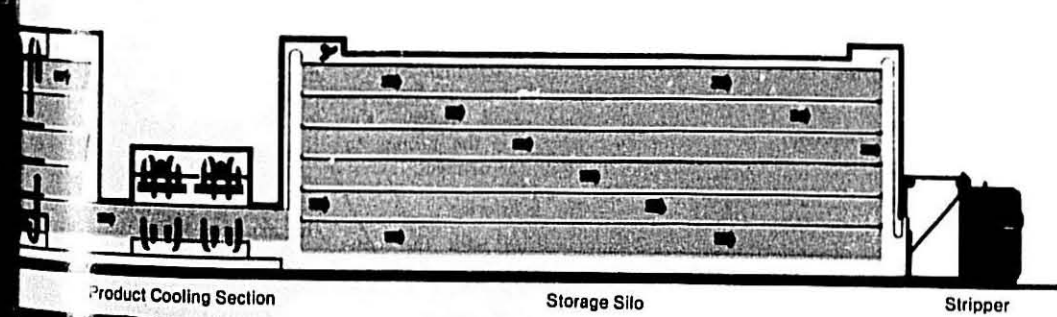
# ATR: The hotter, faster, cleaner dryer.



Automatic Extrusion Press with Spreader

Preliminary Dryer

Final Dryer



Product Cooling Section

Storage Silo

Stripper

Drastically reduces the time required in the production cycle.

Higher drying temperatures reduce plate counts to well below industry standards while enhancing product flavor and quality.

Electronic controls sequentially start and stop fans as the product moves by.

Pneumatic controls regulate relationship between time, temperature and relative humidity.

At the end of the final dryer, a power-driven cooling section reduces product temperature to a safe packaging point.

Braibanti ATR—newest in the long line of Braibanti pacesetter Pasta Dryers.

Braibanti, the world's foremost manufacturer of Pasta Equipment.



Plate Counts Slashed.



Side Panels Open for Easier Cleaning. Lock Tight to Conserve Energy.



Cooking Qualities Improved. Stickiness Eliminated.



Drying Time Chopped.

**Braibanti** corporation  
60 EAST 42ND STREET-SUITE 2040 • NEW YORK N. Y. 10017  
PHONE (212) 682.6407-682.6408 • TELEX 12-6797 BRANY

# Braibanti

OTT. ING. M., G. BRAIBANTI & C. S. p. A. 20122 Milano-Largo Toscanini 1

## Estimating The Crop

(Continued from page 13)

a.m. Seated around a U-shaped table, they review crop data received from two basic sources: questionnaires filled out by farmers and projections made by 44 field offices on the basis of on-site inspection of 20,000 carefully selected sample plots in 10,000 fields throughout farm country.

Given the awesome task of forecasting the total crop production of the world's most productive agricultural country, the reports have over the years proven to be "phenomenally accurate," says Thomas Hieronymus, agricultural economist at the University of Illinois. William Dobson, an agricultural economist at the University of Wisconsin, has studied, along with two colleagues, the decade-by-decade accuracy of the reports. Mr. Dobson found that from 1959 to 1968—the last 10-year period studied—the government's first production forecasts each year were on the average just 4.5% off from the final crop figures.

The nation's farmers (78,000 of them receive the forms), react in various ways to the government requests for help. Many farmers—about two-thirds, the SRS says—ignore them. Other fill out their survey cards assiduously and take great pride in doing so. (The SRS gives citations to long-term cooperators.) But some farmers lie, apparently because they believe false information will cause the reports to influence commodity markets in their favor.

### Conservative Tendency

There are problems even with those who answer honestly. "A farmer may look at his crop and say, 'I think it will make 80 bushels of corn to the acre,' but we don't know how good a judge he is," says Bruce M. Graham, chairman of the Crop Reporting Board.

Overreliance on farmers is much less a problem today than it has been, the SRS says. That's because the SRS in 1965 began sending its specially trained enumerators into key fields for first-hand observation of the crops. The enumerators actually measure and count plants to determine prob-

able yield. In addition, because of the increase in large, specialized farms, probability samples are now used to give a truer cross section of all farms, the SRS says. Aerial photography is being used increasingly, and the use of satellites is being explored. "We're taking the guessing out of our estimates," Mr. Graham says.

## Benefits of Market Uncertainty

Consumers should be made aware of the benefits of uncertainty in markets and the hazards of complete stability, William R. Goodale, International Grain Management Corp., New York, told the annual meeting of U.S. Durum Growers Association in Devils Lake.

In stressing the importance of communications with producers, Mr. Goodale said, "Uncertainty supports the whole marketing structure. It attracts risk capital to the grain economy. That is, uncertainty tends to encourage the speculator, the grain merchant, the foreign miller, the foreign government, all to invest more heavily in U.S. grains."

With complete stability, he said, foreign grain reserves and speculative activity would be minimal, placing the burden of supporting the grain economy almost completely upon the producing country, "and especially upon the farmer and the taxpayer," he added.

Mr. Goodale described producer holding as "more myth than reality" and called the use of grain sales as an instrument of foreign policy "the equivalent of taxing the farmer to support the State Department."

### No. 1 Priority

Communication with the consumer ought to be our Number One priority at this time Election time. Coupled with the symbol of "food" concern, should provide an opportunity for the industry, including the producer, to communicate with the consumer. But how do you get his attention? One suggestion is that every family in the United States be sent a one-pound bag of wheat with a note as follows:

Dear Consumer:

The enclosed pound of wheat is



William R. Goodale

perhaps one of the few things you can buy today for a nickel if you come to my farm. However, the money for postage, bags, and packing runs the cost up to 50¢.

If I have your attention now, let me ask you a question. To assure supply of this wheat in the long run, would you risk paying six or eight cents from time to time if we have heavy exports? or would you rather put me out of business at four cents?

Sincerely,

The Producer

### Basic Truth

There is a basic truth in such a proposition. Uncertainty not only makes higher prices, but also it underwrites much of the expense of our marketing system. To deny a producer the possibility of higher prices implies that you either take him for a fool or that you intend to deny the prospect of lower prices. Going further, if price stabilization is an euphemism for price ceilings without usable price floors, then neither the producer nor the consumer interest is served.

The major issue here today is the very survival of the U.S. grain marketing system. It can be maintained and improved while retaining its very efficient free market characteristics. It can be destroyed with ill-considered, redundant, and inconsistent constraints imposed by well-meaning but uninformed consumer-oriented functionaries. Change seems inevitable. Our challenge is to bring it about in the most constructive way.

# A SEECO BIN STORAGE SYSTEMS

## BIN STORAGE

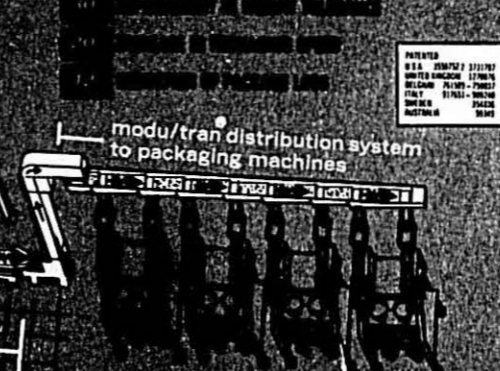
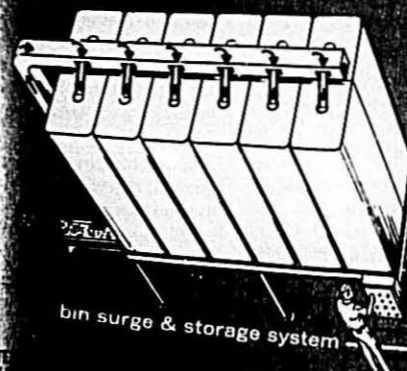
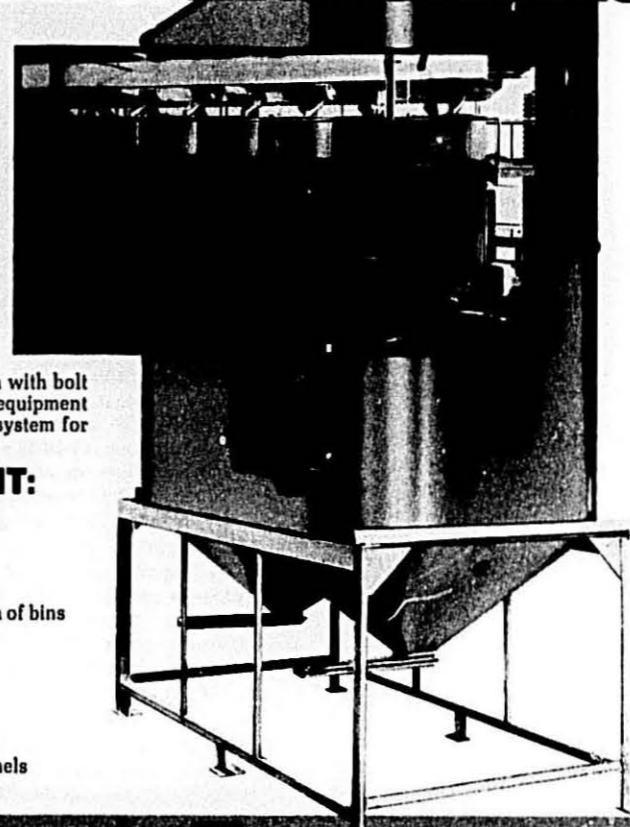
A full automatic bin storage system for free flowing materials—Product is conveyed from processing into the Aseeco Bin Storage System by means of conveyors. The operator can fill any bin by operating a selector switch at floor level. In a few hours, when the bin is full and a signal is actuated, the next bin can be selected manually or automatically.

Material is discharged from bins on demand from packaging or processing machines. Automatic discharge gates at bottom of bins control material flow into belt or Vibra-Conveyors.

Bins are available in sanitary construction with bolt or weld on support structures. Optional equipment provides for a complete automated storage system for surge storage or overnight storage.

## OPTIONAL EQUIPMENT:

- Bin Full Signal System
- Bin Empty Signal System
- Bin full light indicators
- Bin empty light indicators
- Lucite view ports on side and bottom of bins
- Y type multi discharge outlets
- Spiral lowerator chutes
- Multi-station infeed conveyors
- Under bin collector conveyors
- Pneumatic control panels
- Electrical Control and indication panels



services offered: Plant Engineering and Layout  
Electrical Engineering and Control Panels  
Erection and Start-up

Write for your nearest representative.  
ASECO 8857 W. Olympic Boulevard, Beverly Hills, Calif. 90211  
(213) 852-5760 TWX 910-480-2101



### Joseph C. Halow

Joseph C. Halow became executive director of the North American Export Grain Association Aug. 1, it was announced by Gilbert M. Vigier of Garnac Grain Co., president of NAEGA.

Mr. Halow for the last seven years has been the executive vice-president of Great Plains Wheat, Inc. Ken Kendrick, president of G.P.W., said the wheat foreign marketing organization "regretfully accepted Mr. Halow's resignation."

Affiliated with Great Plains Wheat the past 11 years, Mr. Halow was director of foreign operations prior to becoming executive vice-president. In the former post, he was directly responsible for overseas market development program in Latin America, Europe, Africa and the Middle East.

A native of Pennsylvania, Mr. Halow received a bachelor's degree from George Washington University where he was graduated Phi Beta Kappa. He is married and the father of three children.



Joseph C. Halow

### At G.T.A.

Richard Johansen has been named director of research for Farmers Union Grain Terminal Association, it was announced by B. J. Malusky, president. Mr. Johansen succeeds Robert Handschin, who has retired after heading research for the cooperative since 1943.

Mr. Johansen formerly was director of public relations for G.T.A., and to fill that vacancy Roger Olson has been named to the new post of director of communications, Mr. Malusky said.

Mr. Johansen joined G.T.A. in 1952 as a legislative analyst, and has directed public relations since 1963. He is a graduate of Macalester College at St. Paul, and holds a master's degree from the University of Minnesota.

Mr. Olson has been director of communications for the feed division of G.T.A. since 1971, and in his new position is responsible for advertising, member relations and public relations. He is a graduate of South Dakota State University.

### Skinner Engineer

Burton Freeman has been named to the newly created position of Director

of Engineering and Maintenance with Skinner Macaroni Company. In his new capacity Freeman will be coordinating all regular and preventive maintenance functions as well as supervising all plant engineering and equipment installation under the direction of C. Mickey Skinner, Executive Vice President.

Freeman in a 1972 graduate of New Mexico State University with a Bachelor of Science in Mechanical Engineering. Prior to joining Skinner, Freeman was the maintenance supervisor for the D. H. Food Company in Omaha.

A native of Anthony, Kansas, Freeman and his wife, April, reside in Springfield, Nebraska, with their three-year old daughter, Elizabeth.

### Grant Law Acquires Mrs. Grass, Inc.

Grant W. Law Enterprises, Inc., has acquired the Mrs. Grass Division of Hygrade Food Products Corp., for an undisclosed amount of cash.

The privately held company will be known as Mrs. Grass, Inc., at 725 South 25th Street, Bellwood, Ill. Grant W. Law assumes duties as President and Chief Executive Officer.

Law is the former corporate director of marketing for Hygrade. Before joining the company, he was director of product development with Miles Laboratories' Grocery Product Division, developing Morning Star Farms products. Prior to that, he was with Thomas J. Lipton, Inc., as director of product management on Pennsylvania Dutch Brand Noodles and Lipton Soup Mixes.

Mrs. Grass, founded in 1912 by Mr. & Mrs. I. J. Grass, is the number one selling noodle brand in the Chicago area. Building on that solid base, the company intends to expand the firm's position in the dry soup mix market. Mrs. Grass products have wide distribution throughout most of the United States.

### Heinz Pizza Plant

Heinz U.S.A., division of H. J. Heinz Company, has announced that it has signed a lease agreement with Gold Kist, Inc., Atlanta-based farmers cooperative, for a food processing plant in Lithonia, Georgia.

The facility will be operated by Heinz U.S.A. as a frozen pizza processing plant. The company has been engaged in the sale of frozen pizza to the food service industry since it introduced a frozen pizza for use in the school lunch program about three years ago. Heinz pizza is currently produced at the company's plant in Schaumburg, Illinois, near Chicago.

David Speakman, manager of the new Heinz U.S.A. facility, said processing equipment will be installed and testing within a few months and the production should get underway before the end of 1976.

The plant was previously used by Gold Kist for processing of frozen fried chicken.

### Name Change

Eastman Chemical Products, Inc., Kingsport, Tennessee, has announced that its DPI Division, which markets products to the food, pharmaceutical and agricultural industries, has been renamed the Health and Nutrition Division.

In announcing the change, L. F. Farman, director of marketing for the division, said the new name was selected because "it more accurately identifies the nature of the products marketed by the division to the pharmaceutical, food and agricultural industries, such as naturally derived vitamin E, food-grade antioxidants, sterols, distilled monoglycerides, cellulose acetate phthalate for enteric coating, oxidized cellulose and other products for grain preservation."

These products are manufactured by units of the Eastman Chemical Division of Eastman Kodak Company.

### California Living

Maxine Bartlett, Los Angeles Herald-Examiner staff writer, tells the story of Robert William in the May issue of California Living.

William first went to California from New York City in 1938 to play in a golf tournament. In 1941 he returned to Warner Bros., did agency work, real estate, operated a helicopter business, did press agent's stunts for such stars as Bette Davis, and finally decided he had to "get into something more malleable, permanent and tangible."

He set out looking for a business, and after looking at 43, none of which he liked, the agent showing them to him told him he wouldn't like any, because he wasn't a business man.

He was intent on becoming a business man, so he chose a tiny East Los Angeles macaroni factory with no automatic machinery, no salesmen, no truck, no jobbers; besides it was in the red.

That was just the challenge he needed. He attacked the business with the enthusiasm he would give to perfecting his golf swing, the competitiveness that had made him a tournament winner. Today, he owns a major company, has developed new products, and is using his press agent's skill for spaghetti, not stars.

### Rigatoni Roberto

One of his favorite quickie recipes Rigatoni Roberto.

Boil, drain and butter 8 ounces of rigatoni. Toss with seasoned salt; mix in 1/4-inch chunks of Italian sausage; garnish with chopped olives. Serve with a dash of Parmesan cheese.

### Cho Ramen

La Cho Food Products, Archbold, Ohio, is producing Ramen noodles in three varieties—beef, chicken and vegetable. Sold in 3-oz. cello wrap packages that include a packet of seasoning mix, the items sell for about 50¢. Ramen noodles will be supported with newspaper ad and point of sale materials featuring a consumer offer Buy Two, Get One Free. Spot TV planned in some markets.



Robert William

### Creamettes and Spam

The Creamette Company is teaming up with Hormel to offer homemakers three appetizing summer meal ideas. A joint full-color, full-page ad in July Family Circle will carry three easy recipes using Creamettes Macaroni and Creamettes Spaghetti with Hormel's Spam luncheon meat.

The featured recipe in the promotion is "Cool Summer Salad," using a 7-oz. box of Creamettes Macaroni and a 12-oz. can of Spam, along with cheese and peas as basic ingredients. Another recipe—for "Fruity Summer Salad"—also calls for Creamettes Macaroni and Spam, while a recipe for "Spaghetti Italiano" requires Creamettes Spaghetti and Spam.

The tie-in promotion helps emphasize statistics from the National Macaroni Institute indicating that "every dollar's worth of macaroni sold at retail generates \$8.41 in sales of related grocery items—meats, dairy products, condiments, fruits and vegetables."

### Ronco Salad Ad

Ronco Foods of Memphis will give homemakers just what they want this summer: a light, easy-to-fix, garden-fresh salad. A full-color, two-thirds-page ad in Southeastern regional editions of July Family Circle will feature a "super supper salad" made with cheese, vegetables and Ronco Macaroni.

Along with the recipe for the dish, the ad will show Ronco's 8- and 12-

ounce elbow macaroni packages—to boost shelf recognition in the store.

The same ad will appear in other family magazines, and will be supported by television commercials in Southeastern markets.

### Veg-All Salads

Veg-All Mixed Vegetables, described as the leader in the canned mixed vegetable market, will offer exciting new ideas for refreshing summer salads in a full-page, four-color ad in July Family Circle.

The ad will tell consumers that Veg-All can be used "in about every salad you can think of," including macaroni, egg, potato, tossed, aspic, grapefruit, chicken, tomato, seafood, meat, and others.

Readers will be told they can get free salad recipes by writing to the Larsen Co., Box 500, Green Bay, Wis. 54305.

### New Construction

Skinner Macaroni Company of Omaha has made a two-story addition of 8800 sq. ft. for expansion of processing plant, laboratory and office. Included is a new long goods line for lasagna, manicotti and large shells. Architect was Virgil Wamsat & Associates; general contractor, Timmons Contracting Co.; \$900,000 project completed September, 1975.

### Ragu's Foods

Ragu's Foods Inc. have built a 120,000 sq. ft. facility for spaghetti sauce products in Owensboro, Kentucky. Basic construction is prestressed concrete frame, roof and wall panels. Office area is brick masonry. Lockwood Greene Engineers, Inc. provided site search, architecture, engineering and construction management services. Completed in 1975.

### Bite-size Frozen Dumplings

Reames Foods, Inc. of Clive, Iowa have introduced a bite-size dumpling packaged in a 12-ounce tray for retail and four 3-lb. cartons for institutional use. Product is made of pasta dough cut approximately 1/2 inch square. Retail price about 65¢.

National Macaroni Week  
October 7-16, 1976



# Pasta Partners.



Peavey and pasta makers. Working together ... partners in profit. Milling of Semolina and Durum flour isn't a sideline with Peavey. We're more in the total people feeding process than most suppliers to the pasta industries ... from field to table. Peavey is a leading supplier in both quality products and production capacity for service to customers' total needs. We've been at it over 100 years. And we believe our future growth depends on helping our pasta manufacturers grow.

In fact, pasta is a way of life with many of our Peavey people. Everything we do has one objective: To bring you the finest Durum products. With rich golden color. The color of quality King Midas Semolina and Durum flour.

That's why we begin with the North Country's finest Durum wheat. And mill it in facilities designed specifically for the production of Semolina and Durum flour.

We make pasta in miniature press and dryer operations. And we check the pasta for color and constancy. We also work with our customers on new product innovations ... creative shapes ... with this miniature equipment. Confidentially, of course.



We even develop recipes using pasta. Like the dishes at the left. Recipes are available to you with no obligation. Just write to Peavey. Anything that helps make pasta more appealing to the housewife is good for the pasta makers. And good for Peavey.

Today, Peavey is the first supplier of Durum products with a total range of grades and granulations. To match your needs. Plus people who look upon themselves as your pasta partner.

## Peavey

Industrial Foods Group

### New Fibre-Saving Specifications Proposed For Corrugated Boxes

The Fibre Box Association has developed a plan for major revision of the specifications for corrugated shipping containers which would pave the way for metrication.

Details have been presented informally to the Uniform Classification Committee and the National Classification Board. These non-public agencies establish specifications for acceptable shipping containers on behalf of the railroads and truck lines respectively. Rule 41 of the Uniform Freight Classification (rail) and the comparable Item 222 of the National Motor Freight Classification are the major rules involved.

The Association's recommendations affect only the use of corrugated shipping containers. Members of the trade group produce almost 90 percent of the nation's corrugated boxes. Industry production of 194 billion square feet in 1975, valued at \$5.8 billion, was used to provide shipping containers for 95 percent of all packaged consumer goods as well as for industrial parts and products.

Objectives of the proposal, in addition to future metric conversion, are: to achieve greater internal consistency in the rules; to allow for better utilization of linerboard; and to provide a more logical series of grades of corrugated containerboard.

"Being in a position to convert to metric is an advantage," according to Thomas J. Muldoon, vice president of the Association, "but the many other advantages in making the rules more of a workable tool for modern package designers, both in box plants and in customers' plants, are even more important."

More than two years of study by the Fibre Box Association's Technical Committee went into the development of the suggestions, and at least two years of testing will now be required to establish their viability. Formal docketing as a proposed revision of rules, incorporating any modifications indicated by the test results, will follow.

"The proposal is being announced at this time because of the massive impact it will have on all carriers and

**TABLE 1  
LINERBOARD**

Present (lbs. per MSF)	Proposed (lbs. per MSF)	Metric Equivalent (g. per sq. m.)
26	26	125
33	33	160
38	41	200
42	61	300
69	82	400
90	92	450

**TABLE 2  
GRADES OF COMBINED BOARD**

Present		Proposed		Metric Equivalent	
Burst Strength (lbs. per sq. in.)	Weight of Facings (lbs. per M sq. ft.)	Burst Strength (lbs. per sq. in.)	Weight of Facings (lbs. per M sq. ft.)	Burst Strength (kilopascals)	Weight of Facings (g. per sq. m.)
<b>SINGLE-WALL GRADES</b>					
125	52	125	51	850	250
		160	66	1100	320
175	75				
200	84	200	82	1400	400
		250	122	1700	600
275	138				
		320	164	2200	800
350	180				
		370	184	2550	900
<b>DOUBLE-WALL GRADES</b>					
200	92				
		225	91	1550	465
275	110	275	107	1900	525
		320	123	2200	600
350	126				
		360	163	2450	800
		440	205	3000	1000
500	222				
		520	246	3550	1200
		575	276	3950	1350
600	270				

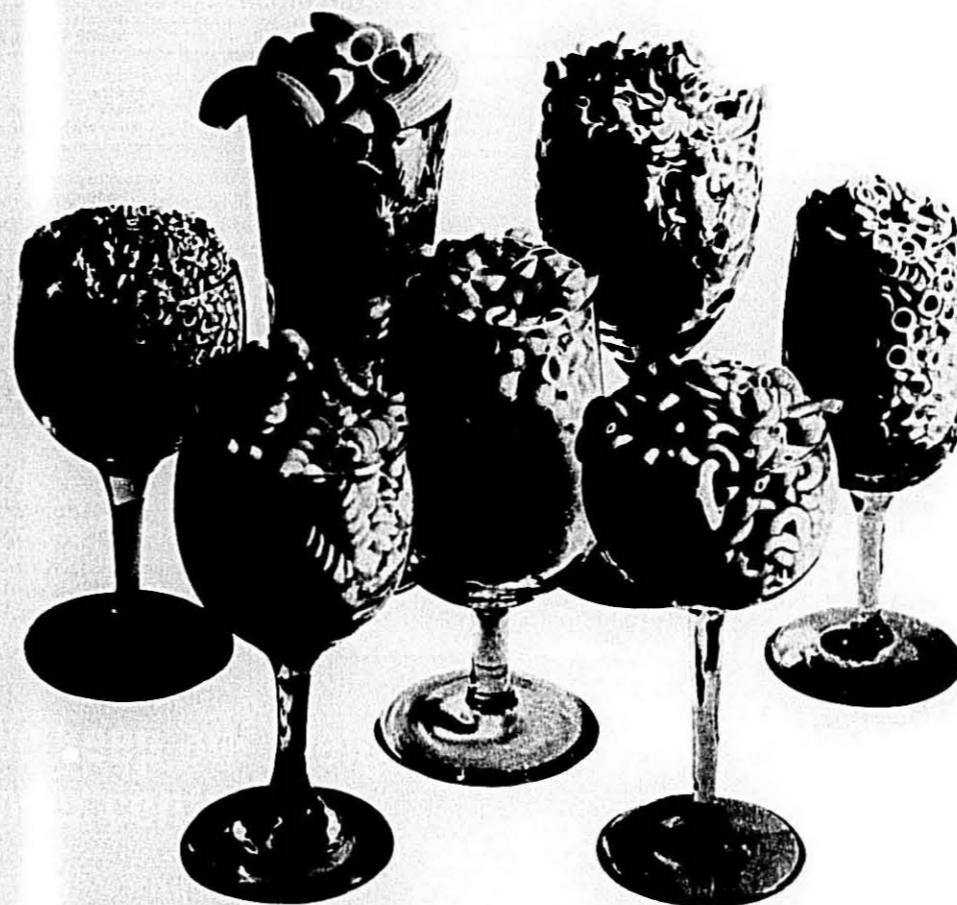
shippers," Muldoon said, "and because we want to work closely with all concerned. As details of the tests are developed, we will contact box users, carriers, the classification agencies and other interested groups to seek their advice and cooperation in field tests."

The basic changes being recommended affect: the minimum combined weight of facings (sheets of linerboard) used in manufacturing corrugated board, the bursting

strength of the board, the maximum gross weight which can be carried in and maximum size of, boxes made from board at each level of bursting strength, and the method of determining bursting strength compliance.

New basic weights of linerboard will be required to produce boxes meeting the recommended specifications. All of the new weights being proposed except the highest are standard use in Europe, and all con-

(Continued on page 22)  
THE MACARONI JOURNAL



## Vintage Pasta

For pasta products worthy of distinction, you need perfect ingredients...ADM pasta-perfect ingredients.

We select only the finest Durum. Then quality mill it into golden Semolina and clean, consistent pasta flour.

Want people to treasure your pasta products?...be very particular about your ingredients. ADM is.



### ADM MILLING CO.

4880 W. 108th St., Shawnee Mission, Kansas 66211  
Phone 913-381-7400

(Continued from page 22)

vert easily to metric expression. The number of basic weights, six, would remain unchanged.

The more even spacing of weights will permit greater flexibility in combining the facings for corrugated board to produce various levels of bursting strength.

For single-wall corrugated board (a sandwich consisting of a fluted sheet of corrugating medium and two facings of linerboard), the rules now specify five levels of bursting strength, expressed as Mullen grade. The proposal calls for six levels, all of which will convert readily to metric units.

For double-wall corrugated board, the number of grades would be increased from the present five to seven.

"What we are in effect proposing," Muldoon said, "is that by establishing more evenly spaced grades, many of the items now packed in a given grade can be safely carried in a slightly lower grade, with the remainder upgraded."

"This is a long-term proposal having long-term implications to our overall industry," according to Muldoon. "However, by providing a better structured series of single-wall and double-wall grades of board, we believe it will better fit the needs of industry and the needs of the carriers, and will utilize the natural resources of our country—our forests—far more effectively."

### Precision Package Weight

The first Total Package Weight Control System for Vertical Form, Fill, Seal packaging machinery is now being offered by Hayssen Manufacturing Co., Sheboygan, Wisconsin. The system eliminates both underweight and overweight packages by combining the proven technology of the Hayssen Digitron Electronic Scale System with a unique solid state memory/product feed/recycle system.

Package underweights are eliminated by the Digitron system through the automatic checkweighing of each scale bucket, and re-filling (when necessary) to target weight before the product is released. If a scale bucket is over-filled beyond the pre-set weight limit a special electronic memory system insures that the product is gently routed back into the

TABLE 3  
GROSS WEIGHT

Present		Proposed		Metric Equivalent	
Mullen Grade (lbs. per sq. in.)	Max. Gross Weight (pounds)	Mullen Grade (lbs. per sq. in.)	Max. Gross Weight (pounds)	Mullen Grade (kilopascals)	Max. Gross Weight (kilograms)
SINGLE-WALL BOXES					
125	20	125	22	850	10
		160	44	1100	20
175	40				
200	65	200	66	1400	30
		250	88	1700	40
275	90				
350	120	320	110	2200	50
		370	132	2550	60
DOUBLE-WALL BOXES					
200	65				
		225	77	1550	35
275	90	275	90	1900	40
		320	110	2200	50
350	120				
		360	121	2450	55
		440	143	3000	65
500	140				
		520	165	3550	75
600	160	575	187	3950	85

TABLE 4  
MAXIMUM UNITED DIMENSIONS

Present		Proposed		Metric Equivalent	
Mullen Grade (lbs. per sq. in.)	Maximum Dimensions (inches)	Mullen Grade (lbs. per sq. in.)	Maximum Dimensions (inches)	Mullen Grade (kilopascals)	Maximum Dimensions (centimeters)
SINGLE-WALL BOXES					
125	40	125	40	850	100
		160	55	1100	140
175	60				
200	75	200	70	1400	180
		250	83	1700	210
275	90				
		320	93	2200	235
350	100				
		370	120	2550	300
DOUBLE-WALL BOXES					
200	75				
		225	83	1550	210
275	90	275	98	1900	250
		320	110	2200	280
350	100				
		360	130	2450	330
		440	150	3000	380
500	110				
		520	180	3550	460
		575	200	3950	510
600	120				

original product feed before it is packaged. The system insures that package giveaway is minimized without the costly and inefficient manual handling of the product, or the recycling of already packaged product.

Weight control is instantaneously adjusted with extreme accuracy by setting allowable overweight limits on digital thumbwheel switches. This system can be adjusted to give virtually no underweights and no overweights for precise weight control.

Hayssen Manufacturing Company, Bemis Company subsidiary, has made automatic packaging machinery and systems for over 60 years. Headquarters and main plant are in Sheboygan, Wisconsin.

### Checkweigher

A custom designed intermittent motion checkweigher designed specifically for use with the Bartelt IM Carrier is available from the Hi-Speed

Checkweigher Company, Inc. of Ithaca, New York. The unit is called the Model IM74 Checkweigher. The speed of the unit is matched to the Bartelt dryer belts running at 30 cartons per minute.

Features of the Model IM74 Checkweigher include:

- static intermittent motion checkweighing for superior accuracy.
- compact size (20 1/4"); custom dimensioning available.
- cast aluminum weight cell enclosure, heated and thermostatically enclosed, for maximum mechanical and electrical stability as well as environmental protection.

One of the primary purposes of the IM74 Checkweigher is to detect missing pouches in cartons. The attached photograph illustrates the package flow. The cartons are received from the discharge of the Bartelt dryer belts where they push onto the infeed table and continue to advance until they hit a contact switch. This causes the crossfeed cylinder to retract which

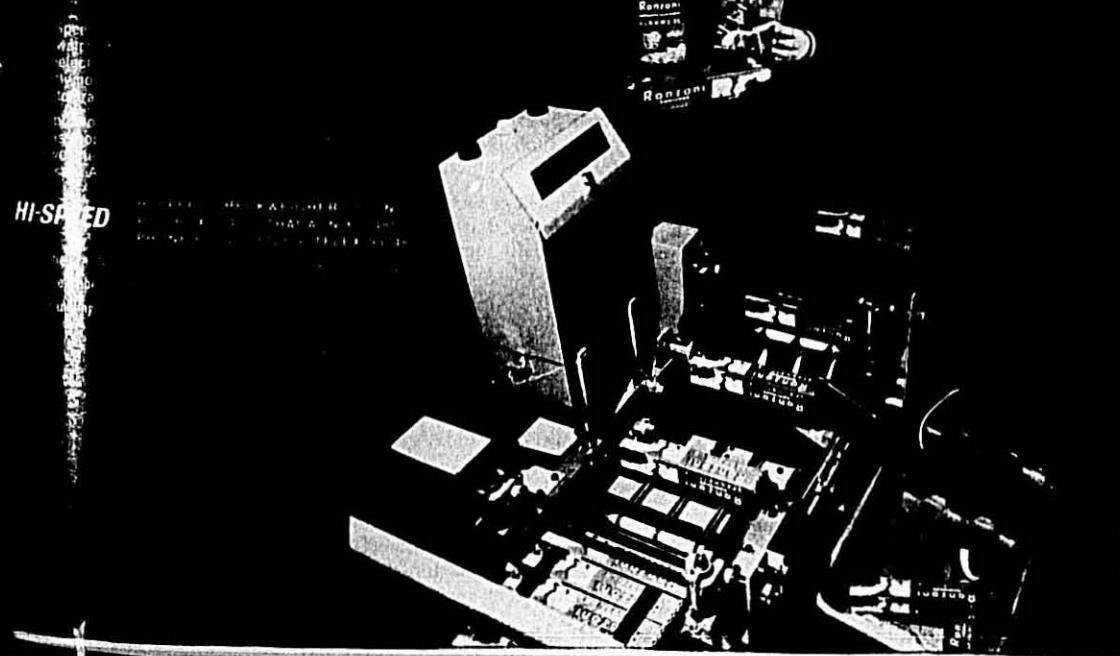
moves the carton to the right and on to the scale platform. The package is checkweighed and correct weight packages are discharged in the direction shown, while reject cartons remain on the scale until the next loading cycle. When this occurs, the reject carton is pushed off to the right by the incoming carton. Standard on all Model IM74 Checkweighers is the sophisticated HE70 Control, designed and manufactured by Hi-Speed.

Several hundred HE70 Controls are in operation all over the world, in a wide variety of checkweighing operations. The HE70 is an all solid-state control utilizing modular construction and plug-in printed circuit boards for long life, high reliability and low maintenance. Optional accessories and features for the HE70 Control include counters, a remote Read-Hold Meter, automatic calibration, digital displays and set point adjustments, computer interface, and floating set points.

Complete information on the IM74 Checkweigher is contained in Application Sheet 145A and Bulletin 70-12.

We keep our weight under control"

Alfred C. Ronzoni



## Food In The Future

From the Wall Street Journal

The U.S. and Canada today produce about 80% of all the world's export grain. By 2000, some agricultural experts say, they may be the only two countries in the world that produce more grain than they consume. And they may well decide, in OPEC fashion, who gets how much and at what price. Grain is the key foodstuff. Directly or indirectly (after being fed to animals) it accounts for 70% of what the world eats.

Two developments since 1966 have affected all projections about food. One is the energy crisis. The other is the weather. The experts and seers consulted by the Wall Street Journal in 1966 implicitly assumed that cheap energy and favorable weather were here to stay.

It now appears that they were not.

There was a major nondevelopment, too. Though Americans have done their share, the world as a whole has made little progress in reducing the rate of population growth. By 2000, the present world population of 3.9 billion will have grown to nearly 7 billion. Before 2050, it will double to 14 billion.

That means, according to studies by the United Nations and others, that food production will have to grow by an average of 3.6% to 4% a year if all those people are to be fed. These growth rates are impossibly high, many analysts believe. They say the world will be hard-pressed to match its recent food-growth rate of less than 3% a year, a rate that still leaves anywhere from 500 million to 1.5 billion people underfed.

### High Cost of Energy

The high cost of petroleum threatens the efficiency of America as a food-producing machine. David Pimentel, a food scientist at Cornell University, estimates that the 240% increase in U.S. corn yields between 1946 and 1970 was accompanied by a 310% increase in the energy used to produce that corn.

That increase was at the farming level. Other links in the food production chain, from the tractor factory to the food processor to the supermarket, consume perhaps four times as much

energy as the nation's farms. John Steinhart, food and energy analyst at the University of Wisconsin, says that the U.S. food system now uses about 10 calories of fuel for every calorie of food consumed. Higher fuel costs, then, at the very least, mean higher food prices, and one study suggests that a tripling of fuel costs ultimately doubles food prices.

At some point, too, no increase in the price of food will increase its supply. "Modern agriculture . . . is an energy consumer of a magnitude that raises profound doubts as to its ability . . . to prevent wholesale starvation," a special report on food by the National Science Foundation said in 1975.

### Weather Worse

At the same time, the weather has taken sharp turn for the worse, perhaps as part of a long-term cycle. Some weather experts believe that the U.S. farm belt is in the early stage of a long drought. Some think temperatures in the northern temperate zones are cooling, and that the trend will produce frequent frosts and shorter growing seasons. And some suspect that monsoon rain failures in Asia are increasing. Only one such failure occurred in the 1960's. So far in the 1970's, there have been two.

Even if the current weather is "normal", experts say, Mother Nature was unusually bountiful during the 1960's when there were no major weather-caused crop failures in the world. Weather historians quote the odds against such a decade at 10,000 to 1. "Each good year now just increases the probability of bad ones in the future", a weatherman says.

It is a statement of fact, rather than a prediction, to say that food is going to cost substantially more in the year 2000. Only 10 years ago, U.S. food prices were rising less than 3% a year, and the Wall Street Journal was able to talk of "quite possible cheaper" food in 2000. Now food economists think that the family spending \$50 a week for food today may be spending \$150 a week (in today's dollars) in the year 2000.

Americans will eat less food, probably, and certainly less of some kinds of food. Marbled, grain-fed beef, a mainstay of many diets for generations, apparently is becoming a luxury.

### Meat Consumption Will Drop

The steer is an inefficient converter of grain to meat, and Kenneth Monfort, co-chairman of Monfort of Colorado, Inc., the country's largest feedlot operator, says beef consumption "will drop dramatically".

Research into meat substitutes will become more urgent. "If we can develop a palatable substitute for meat," says Jean Mayer, professor of nutrition at Harvard and newly-named president of Tufts University, "we'll have made a great advance in the fight against hunger".

Soybean-based meat "analogs" are on the market, though some people think their taste leaves a bit to be desired. At the moment, the question is academic because analogs cost more than the real thing. Toward the year 2000, as they become relatively cheap, some analysts think that perhaps half the "fresh meat" in a typical supermarket will consist of soybean, wheat gluten or some other nonmeat protein.

### Larger Farm Machines

Mr. R. E. Baumheckel, product research manager at International Harvester Co., foresees "larger and far more sophisticated" farm machines and almost every farmer will use his rowed computer time to plan planting, capital-equipment purchases and other strategic activities.

At the same time, a worsening of the energy crisis might return old farming technology and production arrangements to favor. Farmers might, for example, use less chemical fertilizer and pesticide, more animal manure and natural pesticides. Farmers might resume crop rotation to preserve soil nutrients. They might buy smaller, less energy-consuming gear, and farms might become smaller; with energy a scarce commodity, biggers wouldn't necessarily create economies of scale. Agriculture might become more labor-intensive, and some people even see a return to draft animals for certain farm work.

### Bucket Elevators

A new bulletin containing complete information on bucket elevators is designed and manufactured by Meyer Machine Company, P.O. Box 394, San Antonio, Texas 78201, is available for the asking.

## PUSH PASTA

Invest 1 3/4c per cwt. monthly in pasta production promotion, consumer education, and trade advertising to keep sales up.

Constant promotion of macaroni, spaghetti, and egg noodles by the National Macaroni Institute, keeps these products in the consumer's view.

Recipes and photographs go to food editors of every type of media.

Educational materials and recipe leaflets are distributed to consumers, teachers and students.

Films and film strips are distributed for general use and special television showings.

TV Kits are periodically prepared for program producers.

Cooperation with related item advertisers and publicists is sought and obtained.

Special projects include press parties, materials for Consumer Specialists, background for editorial writers.

Do your Share—support the effort.

NATIONAL  
MACARONI INSTITUTE  
P.O. Box 336, Palatine, Illinois 60067

## JACOBS-WINSTON LABORATORIES, Inc.

EST. 1920

Consulting and Analytical Chemists, specializing in all matters involving the examination, production and labeling of Macaroni, Noodle and Egg Products.

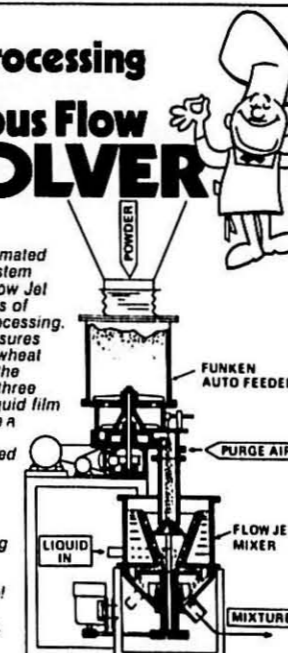
- 1—Vitamins and Minerals Enrichment Assays.
- 2—Egg Solids and Color Score in Eggs and Noodles.
- 3—Semolina and Flour Analysis.
- 4—Micro-analysis for extraneous matter.
- 5—Sanitary Plant Surveys.
- 6—Pesticides Analysis.
- 7—Bacteriological Tests for Salmonella, etc.
- 8—Nutritional Analysis

James J. Winston, Director  
156 Chambers Street  
New York, N.Y. 10007

## Noodle processing WITH Continuous Flow DISSOLVER

This continuous, automated noodle processing system using Model MW-F Flow Jet Mixer upsells 100 years of mechanical noodle processing. The Flow Jet Mixer insures that every particle of wheat flour is moistened to the proper viscosity. The three phases - flour film, liquid film & induced air - produce a tasty noodle that far exceeds hand processed noodles.

The remarkable Continuous Flow Dissolver is ideal for moistening and mixing all pasta products: noodles, spaghetti, macaroni. Bon giorno! Give us a call for complete information.



S. HOWES CO., INC., 2053 Miller St., Silver Creek, N.Y. 14136  
Telephone 716-934-2611; TWX 510 246-6935  
Manufacturers of processing equipment since 1856.  
Licensed by Funken Co., Ltd.

## PANIC IN THE PANTRY

A book everyone should read about food facts, fads and fallacies.

You're at a meeting in a too-small room, and after an hour of pro and con with a dozen others over a tough problem, you're not too comfortable. Ventilation is poor, and the room is heavy with the smoke from dozens of cigarettes. Tempers are beginning to flare; the meeting seems to be going in circles.

Then somebody gets up and opens windows. Fresh air flows through the room, the smoke swirls away. Suddenly your eyes see clearly again. Your perspective improves markedly.

### Scientific Facts

You get the identical feeling after reading the book "Panic in the Pantry" by Dr. Elizabeth M. Whelan, Sc.D., and Dr. Frederick J. Stare, M.D., published by Athenium, New York, N.Y. Unlike the health-scare books, current and otherwise, which claim that Americans are being addled by additives, clobbered with chemicals or short-changed on calories, "Panic in the Pantry" stays calmly with the scientific facts as it examines food additives and human health. The book points the finger at unsupported conclusions, wherever they have originated, and like a good mother, warns of the dangers of accepting dietary advice from strangers.

It is probably true that the health-scare books would attract little attention anyway if many people did not feel genuine concern about the foods they've been eating and feeding their families. There is concern over not only additives, but also pesticide levels, cyclamates (an additive), chemicals, calories (or lack of calories), sugar, cancer, DDT, PCB. Sitting down at the family table for a good wholesome meal is not always quite the pleasant, relaxed occasion it used to be.

The co-authors, highly respected professional nutritionists, do not take lightly the growing popularity of so-called "natural" foods. But they are disturbed at some of the claims made for the new foods and some of the new diets being recommended today. They point out that a history of eating and food facts will reveal that past

panics have targeted on virtually every one of the staple foods of the present—milk, fruit, vegetables, coffee, meats, flour and others.

### Food Faddists

History will also show that after a food faddist had alarmed the population of the day, in many cases his own chain of special "health food" stores would suddenly spring up. Whatever was sold had miraculous properties and would not only clean out the system, discarding the residues of years of bad eating habits, but would also impart new energies and vigor.

The authors of "Panic in the Pantry" are suggesting that we ought not discard all the accumulated nutritional and medical information of the last two centuries at the drop of a book cover. They are concerned. They ask readers to weigh such faddists and their statements carefully, to check their credentials.

In the not-so-distant past, one such faddist moved from a soda fountain into real estate on the way to becoming a health expert. While still in real estate, he ran into trouble with the law for using the mails to defraud and for writing bad checks. He decided to try something new. He obtained an Honorary Doctor of Medicine degree from an unaccredited university (which closed its doors a year later) and was on his way.

He announced that about 90 percent of the people in this country had intestinal worms—and they were two to 20 feet long. In fact, just about everyone was in poor health because of the diet, which encouraged such worms to grow. But wait! Help was available! Special foods (available nearby, always) would save the day.

For years, the man created quite a stir, and his foods sold well. Then one night, following a lecture, reporters caught him eating a restaurant meal comprised of fried fish, white bread and beer—all "deadly" foods in his lectures—and his bubble burst.

### Life Spans

Throughout the 200-year history of America, its people have survived many food panics of one kind or another. The simple truth is that food additives, and particularly those that have appeared in the last decade, have undergone and survived rigid testing procedures that many so-called "na-

tural" foods or ingredients could not pass.

The authors take strong exception to the Delaney clause and feel that it should be stricken from the law.

After reading the book, it seemed worthwhile to check the records on the average lifespan in the United States to learn how the population is doing, additives and all. Here are the U.S. government figures:

Years of Life Expected at Birth (Average, male and female)	
1974	72.0
1973	71.3
1972	71.1
1971	71.1
1970	70.8
1965	70.2
1960	69.7
1950	68.2
1940	62.9
1930	59.7
1920	54.1
1910	47.3

Colonial times—Mid to late 30's

It would seem that we're not doing so badly after all.

### Food of Our Fathers

In spite of the celebrated Thanksgiving Day feasts of Colonial New England, and the bountiful table set by Virginia plantation owners like George Washington and Thomas Jefferson, the food supply of early America was more often beset by problems of "inadequate yields, seasonal availability of produce, nutritional preservation techniques, constant labor, continual attention to safety and danger of contamination." According to a new booklet called "Food of Our Fathers," produced by the Institute of Food Technologists:

The Pilgrims found many foods they had never seen before when they landed in the new land, including (as every schoolboy knows), sweet potatoes, pumpkins, squash, peas, sunflower seeds and cranberries. They also found unfamiliar new ways of cooking, such as roasting meat on spits and slow baking in rock-heated pits for baked beans and clams.

As colonists settled in other parts of the country, and as settlers pushed back the frontier, other new foods were discovered, such as tomatoes, peppers, okra, crayfish, catfish and salmon. These foods were quickly

adopted by the new Americans, and adapted to their diets. Creole recipes for example, and corn found use everywhere in hundreds of recipes for main dishes, breads and desserts.

The early settlers weren't accustomed to eating much meat in their homelands, according to the IFT booklet, yet it formed a large part of the diet in early America, where game was abundant. Many frontiersmen lived almost exclusively on meat they would kill as they went, or carried along dried as pemmican or jerky. Frontier wives even processed calves' foot jelly into an early version of bouillon cubes called "portable soup."

### Booklet Released by IFT

The booklet, prepared for release in conjunction with IFT's Annual Meeting in Anaheim, Calif., picks up the theme of the meeting, "Food: America's Bountiful Heritage," and the role of food technology in adding to that abundance, because—in spite of the many new varieties of food—the diet of our forefathers was very limited and would have seemed boring by our standards. Climate played a major role in the availability of fresh fruits and vegetables, and life for the housewife was very much oriented around preservation techniques to help provide variety.

Nutrition, of course, was an unknown science, and many of the processes used virtually destroyed vital nutrients and led to deficiency diseases. Typical winter diets of cornbread, molasses, beans and salt "fat back" led regularly to pellagra. Scurvy was common in the winter and the frontier, since vitamin C was frequently lacking, and preserved fruits and vegetables such as dried sauerkraut had little vitamin content to relieve the diseases.

The 24-page booklet, available on request, describes the various food preservation processes in common use, including drying, salting, pickling and canning, as well as dry storage in root cellars. It also describes the somewhat primitive method to which early American housewives used chemicals in preserving their foodstuffs, in their continuing efforts to supply a varied, nutritious diet.

The Institute of Food Technologists is a professional scientific society devoted to the discovery and applica-

tion of new and existing knowledge to improve the world's food supply.

### The Bran Boom

Most of the recent reports on bran say it is ideal for getting fiber into the daily diet because it is inexpensive, readily available and easily amenable to many everyday recipes.

Cereal companies, which generally report increased sales of bran cereals, obviously have read the reviews. "New scientific observations suggest that food fiber may play an even greater role in our diet than previously believed," says the copy on a box of Kellogg's All-Bran. "You probably know that bran is one of the richest sources of food fiber available," reads a carton of Post 40% Bran Flakes.

However, there's a difference between the bran found on grocery store shelves and that in health food stores. Health food bran sales consist mainly of unprocessed "miller's" bran, often packaged and distributed right off the boxcar as it arrives from the mill. This unprocessed bran is reported to be showing a greater increase in sales than bran-based cereals, which often are cooked, ground, further processed and contain preservatives.

### "Save Your Life Diet"

Dr. David Reuben discloses almost everything we always wanted to know about bran, including recipes, in his book "The Save Your Life Diet," which has sold 200,000 copies in less than a year.

Calling the various bran research accounts "the most exciting medical story of the 1970s," Dr. Rueben suggests that as little as two to six teaspoons of unprocessed bran daily will provide protection from certain types of cancer, hemorrhoids and other "dread diseases of civilization."

Such claims worry some health experts, including Dr. David Kritchevsky, who has studied the effects of dietary fiber at the Wistar Institute in Philadelphia. "Many people carry these popular oversimplifications to the point of danger," Dr. Kritchevsky warns.

### Iron Problem?

Recent laboratory experiments indicate that iron enrichment of foods

might enhance the ability of bacteria in the body to cause disease, an Ohio microbiologist said.

The researcher said that as a result of the experiments, he believes iron shouldn't be added routinely to foods, such as bread.

While iron is an essential nutrient, there's a limit to how much the body can absorb, Ivan Kochan, professor of microbiology at Miami University in Oxford, Ohio, said at a meeting here of the American Chemical Society. Any excess iron taken in passes through the gastrointestinal tract where it becomes exposed to potentially harmful bacteria.

Bacteria, and other parasites, need iron to multiply, Mr. Kochan explained to reporters. Bacteria such as Escherichia coli, the most common organism in the intestines, send out tiny growths called siderophores to grab up available iron, he said. If these bacteria begin to proliferate they can lead to an intestinal inflammation called colitis.

### Starve Parasites

Mr. Kochan said recent studies in several laboratories showed that animal tissues normally possess an ability to starve parasites by limiting their supply of iron. He said his own experiments in recent years show that bacteria normally can't multiply in animal blood because there isn't sufficient iron available to the bacteria.

On the other hand, Mr. Kochan said, bacteria that normally are unable to cause infection in animals can cause disease and death in iron-treated animals because the extra iron promotes the growth of the bacteria.

The iron routinely added to many foods becomes available to the bacteria, the researcher said. While persons with iron-deficiency anemia, which afflicts many children as well as adults, may need an iron-rich diet, the average person doesn't, he said.

With the iron enrichment of foods "we aren't only oversupplying ourselves with iron but we're oversupplying all the parasites we have," Mr. Kochan said. All food sources of iron don't provide potential nutrition to harmful bacteria, however. Mother's milk, for instance, contains iron as well as iron-binding proteins that make the iron unavailable to bacteria. Cow's milk, on the other hand, contains very little iron-binding protein.



### Whey Fortified Macaroni?

High protein macaroni products equal in nutritional value to casein, the major protein of milk and cheese, have been developed through the addition of high quality whey protein by scientists at the Agricultural Research Service's Eastern Regional Research Center, Philadelphia.

The new products, which were made public in the April issue of Agricultural Research magazine, appear similar to the high protein bread products currently being test marketed by ITT Continental Baking Co. The new macaroni products developed by the A.R.S. scientists have a protein content of 20% and a protein efficiency ratio (PER) value of 2.5. Under new nutrition labeling regulations, a protein content of about 20% and a PER value of at least 2.5 is needed for "high protein" labeling.

The research on the new product was carried out by Howard I. Sinnammon, Edwin F. Schoppet and Curtis Panzer, food engineers at the A.R.S. Eastern Regional Research Center in Philadelphia.

Common macaroni has a protein content of about 13%. The new products call for sufficient whey protein to be incorporated into the finished product to bring the total protein content up to 20%—the standard established by the National School Lunch Program.

Results from animal feeding tests designed to quantify nutritive value (protein efficiency ratio or PER) indicate that the added whey protein substantially improved the food value of the macaroni.

Agricultural Research points out that PER is a widely used index of protein nutritive value and is defined as the grams of weight gain per gram of protein eaten by weanling rats. Common macaroni gave a corrected PER value of 0.80, while the whey protein-enriched macaroni had a corrected PER value of 2.5, not significantly different from the standard casein. The whey alone, which is in the form of a heat-coagulated insoluble protein, had a PER value ranging from 2.8 to 3.1.

"The plain and protein-enriched macaroni products were also subjected to comparative flavor and texture tests," Agricultural Research

points out. "The trained taste panel detected a difference in the texture, but the difference was not enough to render the protein-enriched product unacceptable. Similarly, the panel also detected differences in flavor, but both the flavor and texture differences became insignificant when tomato or cheese sauces were added to the test samples. As a matter of comparison, the taste panel consistently preferred the whey protein-enriched macaroni samples over samples enriched to 20% protein now commercially available at retail."

The process for enriching the macaroni with the whey protein is termed "uncomplicated, requiring no change or modification in the commercial macaroni production process."

The scientists at the A.R.S. laboratory in Philadelphia point out that the key to this new fortified food product is heat-coagulated protein obtained from cottage cheese whey. Whey is the aqueous product remaining after removal of casein and fat from milk in the process of making cottage cheese. Cottage cheese whey contains more lactic acid than the "sweet whey" from Cheddar, Swiss and such Italian cheeses as Provolone and Mozzarella.

### Whey processing previewed

While whey generally contains about one-half the total milk solids and is rich in amino acids, vitamins, lactose and highly nutritious soluble protein, it is still 93 to 94% water. "The food industry has become increasingly interested in utilizing whey proteins in various foods," the article points out. "Several methods useful for concentrating and fractionating whey proteins have been developed, such as reverse osmosis, polyphosphate precipitation, gel filtration, ultrafiltration and heat coagulation. The article terms heat coagulation the simplest and most economical and adds it produces a water-insoluble whey protein product needed in the intended application."

The process of heat coagulation involves holding the whey at a high enough temperature and for a sufficient length of time for the proteins to become insoluble and form a curd or clot. Up to 60% of the whey proteins can be coagulated in this manner. In experiments designed to determine optimum conditions for heat

coagulation, the A.R.S. engineers achieved the best results by adjusting the whey to pH 6.0, heating it to 250°F, and holding at that temperature for up to eight minutes. However, the calcium salts of whey are insoluble above pH 5.8; therefore, this particular process results in a product having a high (20 to 25%) ash content.

For applications where high ash content might be undesirable, the whey slurry containing coagulated protein can be acidified with acetic acid to pH 4.6. This serves to redissolve the calcium salts before final separation of the insoluble protein. This step reduced the ash content of the dried protein product to less than 5%.

Related tests show that spray drying of whey is preferable because it yields a powdered product directly. Other methods, such as freeze-drying, drum-drying and cross-circulation drying yield a hard, caked product that must be ground before use.

The A.R.S. engineers tested several high-protein fractions containing varying amounts of soluble whey proteins; however, processing difficulties precluded their use. In contrast, the engineers encountered no processing difficulties with the insoluble, heat-coagulated protein; analyses showed that it retained its amino acid balance throughout the manufacturing, drying and cooking of the macaroni.

### A Consumer Cry for Help

Woman's Day food editor Jean Voltz told the American Home magazine that "Women in our frugal group brag about being thrifty." This is significant to the food industry. In a view, the marketing systems were founded on the concepts of abundance, affluence, and unlimited appetites. But 10 years from now, the American table may have new labels—moderation."

However, Voltz also pointed out that this "new" consumer isn't comfortable with her new attitude. "She feels inadequate at the job of making her family happy with dandy little casserole dishes. She's crying for help—appealing to us (the editors) and to you (the food industry) to give her the foods she can afford and her family will like. Her first concern still is, 'Will they eat it?'"

CON  
Ravi  
MACH

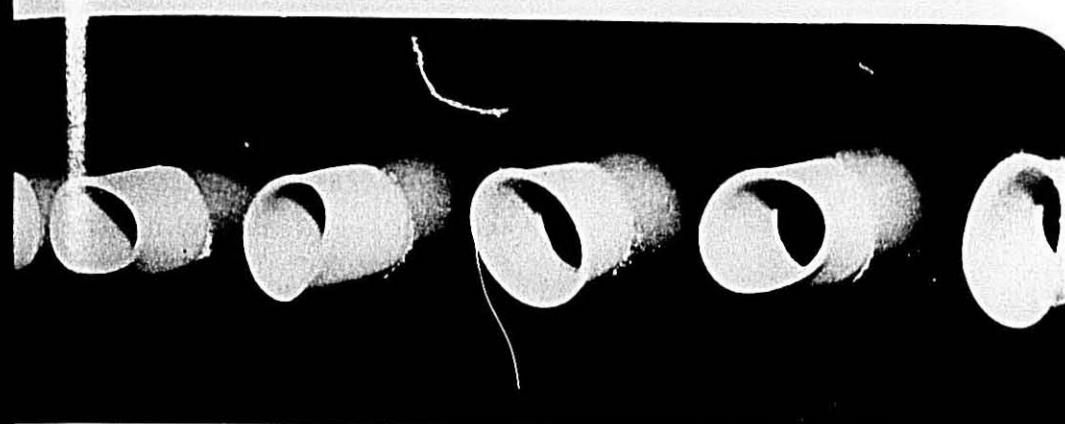
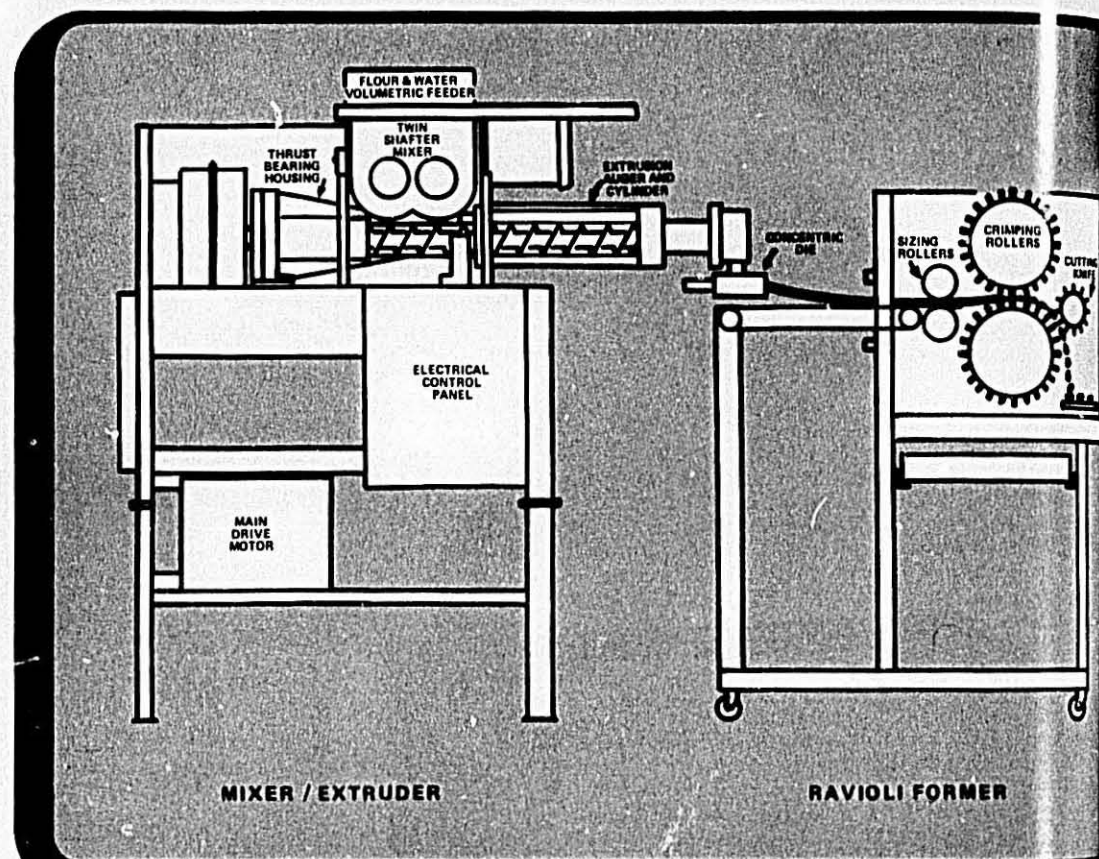
PRODUCE  
FILLED RAVIOLI  
and  
CHINESE  
EGG ROLLS!

RAVIOLI FORMER

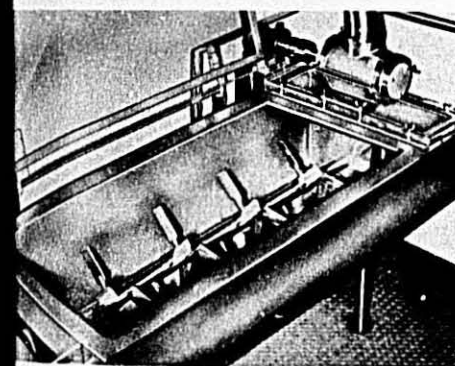
MACHINE CORP.

1-800-9880, 386-1799  
312-362-1031

# Demaco's Continuous Motion Ravioli Machine-



DOUGH BEING EXTRUDED FROM SIX-ORIFICE CONCENTRIC DIE.



## U.S.D.A. APPROVED

The U.S.D.A. Consumer and Marketing Service Consumer Protection Programs, Equipment Group has approved all of the equipment in the DEMACO Continuous Motion Ravioli Machine.

The DEMACO Mixer (shown on the left) has all welded and ground smooth stainless steel construction which eliminates any cracks or crevices which could harbor bacteria.

Mixer paddles are welded to the shafts with joints ground smooth as above, to eliminate any probable trouble spots. Bearings and the gear box are located well away from the product zone.

Dry powdered raw material and liquid are continuously fed into a two shaft continuous mixer to form dough which drops into an extrusion screw that extrudes multiple tubes of smooth dough through a die plate.

Meat and other filling material is pumped into the inside of this tube as it is formed by means of a suitable continuous flow pump.

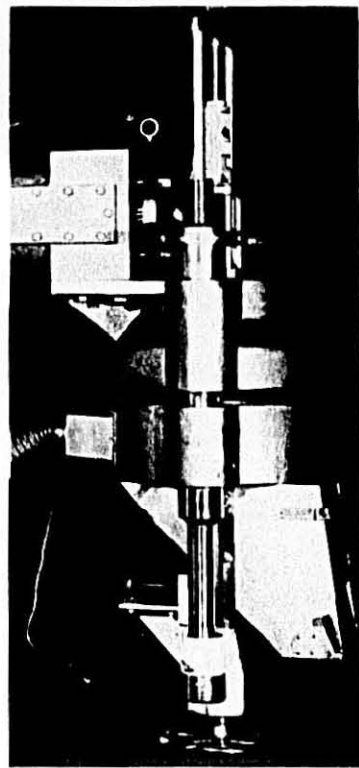
In the ravioli former this tube is flattened by

rollers and then passes between two rotary crimping rolls to form pockets and is then cut at the crimp to make pillows with meat or cheese filling enclosed in a dough envelope. If the product is ravioli, fins are extended at the sides of the tube so that there is a continuous fin around the complete pillow. For Chinese egg rolls, the pillow remains round in cross section and does not have fins at the edges.

500 lbs. per hour consisting of approximately 50% dough envelope and 50% filling;  
1,000 lbs. per hour;  
2,000 lbs. per hour.

OVERHEAD VIEW OF SIX TUBES OF DOUGH ENTERING RAVIOLI FORMER.

Call or write for factory-trained field representative to assist you in planning without obligation.



Demaco's dependable Short Cut attachment may be used in line of the Ravioli Former.

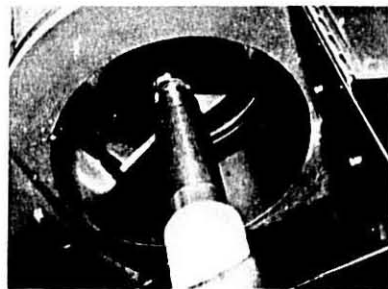
Mounted on a portable stand, this attachment can be hooked up to the Demaco Mixer - Extruder in a matter of minutes.

Using a round die (15½" outside diameter) and a rotary knife, this attachment will produce most standard small macaroni products such as elbows, ziti, ditali, "O's" or any other product depending upon the skill of the die maker. The only limitation of the existing rotary cutting knife would be products less than 1/64" thick or greater than 4" long. Extruded noodles are also made with this attachment.

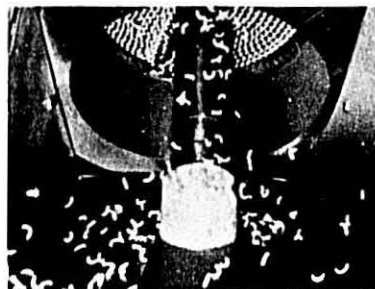
You can also make lasagna with this attachment in 4" lengths.

Special cutting device modifications are available for lengths beyond 4".

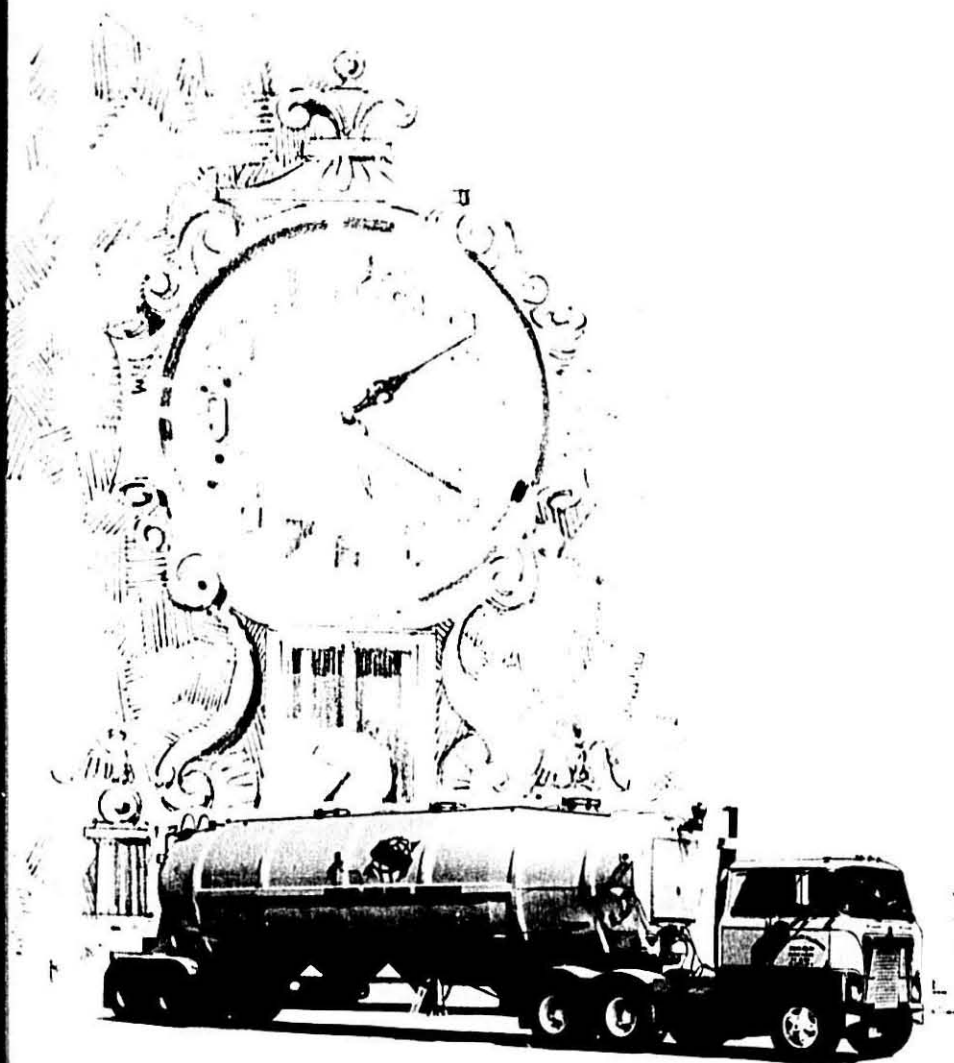
Mostaccioli is another product that can be made by adding a special detachable cutting device and knife for achieving the bias cut of this product.



ROTARY KNIFE



ROTARY KNIFE WITH PRODUCT



## Super Semolina Service!

For your delivery. That's how fast you can get freshly-milled No. 2 Semolina from Seaboard's new Albany mill to your plant in the New York / New Jersey or Boston Metro Area.

Operating its own fleet of bulk trucks, Seaboard has complete control of loading and unloading schedules. And load-cell scaling gives you super-accurate weights.

Check us out!

*Seaboard . . . the modern milling people.*



Seaboard Allied Milling Corporation • P. O. Box 19148, Kansas City, Mo. • (816) 561-9200

### Production Begins at Seaboard's Albany Mill

Seaboard Allied Milling Corp. has commenced operations at the 6,000-cwt daily capacity hard wheat bakers' flour unit of its new milling complex at Albany, N.Y. Start-up of the 4,000-cwt durum plant is scheduled for mid-July.

The Albany mill, the fifth new flour mill to be built by Seaboard in the U.S. in the past 14 years, will primarily produce bakers' flour for the New England and New York state market. Shipment from the new plant will mainly be by bulk truck and rail car. The market served thus will be different from that handled by Seaboard's mill at Buffalo, N.Y., which mainly makes flours for the eastern jobbing trade, as well as serving bulk flour needs of bakers in the Buffalo-western New York state area. The Buffalo mill also has a rye milling unit.

Seaboard's Albany mill complex, besides the two flour milling units, has 350,000 bus of wheat storage capacity. The milling complex is located on a site adjoining the Albany grain elevator of Cargill, Inc., and an overhead conveyor connects the mill with the Cargill elevator.

The mill is the fifth new flour mill built by Seaboard in the U.S. in the past 14 years. In February, 1975, Seaboard opened its new mill at Port Allen, La., with capacity of 5,000 cwts of hard wheat bakers' flour and 1,000 cwts of semolina. That opening marked Seaboard's entry into durum milling.

#### Movement to consuming areas

Construction of the Albany mill marks latest extension in a program begun by Seaboard in 1963, shifting its flour milling capacity from being largely concentrated in hard wheat growing areas of the central Plains to southern and eastern consuming centers. First step in that program was opening of a new mill in Chattanooga, Tenn., in 1963. That plant has a capacity of 7,800 cwts. The second new mill built by Seaboard is the plant in Jacksonville, Fla., which began operations in 1965 and now has daily capacity of 5,500 cwts. The third new mill built by the company is at Culpeper, Va. It began production in 1970 with daily

capacity of 7,000 cwts, and now produces 12,000 cwts of flour per day. The fourth is the Port Allen plant.

Other Seaboard mills in the U.S. include two mills in Topeka, Kas., with a combined capacity of 13,800 cwts, the Kansas City mill of 11,900 cwts, Buffalo, N.Y., with 10,500 cwts and Cleveland, Tenn., at 2,700. The Buffalo mill also has capacity for 1,000 cwts of rye. With completion of the Albany flour mill, Seaboard's flour milling capacity in the U.S. is about 80,000 cwts per day.

Seaboard also has flour mills in five countries in South America and Africa with a combined capacity of 13,600 cwts.

### Wheat Pooling Program

A pool marketing program for wheat and corn has been approved by the board of directors of Farmers Union Grain Terminal Association, it was announced by B. J. Malusky, president of the Upper Midwest cooperative.

Mr. Malusky said that the sign-up period for the program would begin mid-June at GTA line and affiliated elevators, and would continue until July 1.

According to Mr. Malusky, the program is designed to reduce price risks for the producer by assuring an average annual price for at least part of his production.

"The plan allows member farmers to commit not less than 1,000 nor more than 5,000 bus of four grains—corn, spring wheat, durum and Montana winter wheat—from the 1976 crop," he said. "Committed grain will provide GTA with a dependable supply of known volume that can be marketed in competition for domestic and international grain sales.

Mr. Malusky said that participating producers will receive advance payments of \$2.50 per bu of spring wheat and durum and \$1.75 a bu for corn. All payments are less freight to Minneapolis and Duluth except for Montana points, where farmers will receive \$2.00 a bu for winter and spring wheat, less freight to the West coast.

The advance payment will be made within 30 days after the grain is delivered to the elevator, and a final settlement will be made after comple-

tion of delivery and marketing, Mr. Malusky said.

Inauguration of the program by GTA is a response to requests from many members of the cooperative, Mr. Malusky pointed out. Delegates attending GTA's annual meeting held December passed a resolution calling for a grain commitment plan, and studies have since been under way by GTA staff members and representative producers.

### To Grain Exchange Board

At the June meeting of the Minneapolis Grain Exchange Board of Directors Mr. Lewis A. Remele, Group Vice President of Agriculture for the Peavey Company, and Mr. S. L. Matthies, Director of Grain Operations for General Mills, Inc., were elected to serve on the Minneapolis Grain Exchange Board of Directors. They were elected to fill the unexpired terms of Mr. M. M. Beeson and Mr. Edmund P. Karam, Jr.

Mr. Remele was first elected a member of the Minneapolis Grain Exchange in 1950. He will be representing Milling Interests on the Board of Directors. Mr. Remele will also serve on the Directors Membership Committee.

Mr. S. L. Matthies has been a member of the Minneapolis Grain Exchange since 1958. He will be representing Terminal Elevator Interests on the Board of Directors. His duties as a member of the Board of Directors will include chairmanship of the Changes in Rules Committee, as well as serving on the Directors Membership Committee.

The terms of office for both Remele and Mr. Matthies will expire in October, 1976.

### From IM Annual Report

"Durum volume in the U.S. was higher but dollar sales and margins both declined. Some manufacturers used increased wheat blends in their products to place relatively more expensive durum products. In Canada, durum sales, volume and margins all were lower."

### U.S. Durum Show

October 18-20 at Langdon, N.D. Make reservations with R. Nowatzki, P.O. Box 310.

### Sticky Egg Problem

Turning ton of liquid egg yolk powder into 900 pounds of dry yolk powder every hour of every production day provided a sticky problem for Seymour Foods Company headquartered in Topeka, Kansas.

Originally the yolk powder traveled in a spray dryer through a sifter and was collected, weighed and dumped into a batch blender by two men who were responsible for weighing the "charge," blending, packing and reweighing into finished product containers. By adding the vibrating discharger and a weigh cell application to the blender it enabled the product to be discharged from the blender to the blender. batch weighed and discharged from blender into final packages. During the actual blending and packaging cycle the sifter is shut and powder allowed to accumulate in the vibrating bin discharger which releases in desired flow rate as needed.

The tacky consistency of the dried egg yolks makes the material unusually difficult to handle since it adheres to every contact surface and tends to form a cohesive bond itself.

The engineers at Seymour Foods were well aware of these inherent problems. When they learned about the problem solving capabilities of the Vibranetics' Bin Discharger, Louisville, Kentucky, they investigated the possibilities.

Working with the Topeka company, the engineers and field representatives analyzed the production requirements and recommended installation of a 5 ft. x 5 ft. bin—5 ft. high by 3 ft. diameter—fabricated of 304 stainless steel—to be suspended through the floor above the sifter.

Attached to the bottom of the cylindrical bin is the Vibranetics BD-3 (3 ft. x 3 ft.) Vibrating Bin Discharger, capacity of 40 cu. ft. The discharger has side walls, also of 304 stainless steel, sloping downward from top opening to a bottom outlet of 6 in. diameter.

#### Vibranetics' Options

Utilizing one of Vibranetics' many options, the engineers installed a "food grade" neoprene flexible connection and special inlet skirt to the Vibrating Bin Discharger to the static bin. This connection, se-



Vibrating Bin Discharger at Seymour Foods, Topeka, Kansas, moves sticky, dry egg yolk powder from storage bin to blender without interruption.

cured with stainless steel drawbands, assures purity of the end product while the necessary flexibility for effective vibration isolation of the bin itself.

Vibranetics' patented suspension system of 90° opposed heavy duty cast steel hanger arms with solid rubber bushings on both ends holds the Vibrating Bin Discharger firmly in position beneath the bin. Each arm—in this case, three arms are mounted at 120° intervals around the circumference—has a tensile strength of over 200,000 pounds.

Although drive force capabilities of up to 40,000 pounds are available, this unit at Seymour Foods require only a 1000-pound drive force which is supplied efficiently by a single, totally enclosed ¾ H.P., non-ventilated electric motor.

"This Vibranetics installation has not only saved us man-hours," points out Mr. Bill Wallace, "but that low horse power electric drive really is an energy miser."

Vibration amplitude can be adjusted by changing the easily accessible eccentric weights mounted on both ends of the double-extended drive shaft, thus "tuning" the Vibrating Bin Discharger to the specific requirements of each production job.

Teaming up shear and mass inertia forces with a unique high-intensity horizontal motion transmitted to the

outlet, the Vibranetics Vibrating Bin Discharger induces immediate and continuous free flow of even wet, sticky or tacky materials as proven again by this Seymour Foods job. Now the egg yolks flow without pause or surge from the discharger into the sifter and from there into the blender.

"We haven't experienced any downtime since the Vibranetics installation," says Mr. Wallace.

### Egg Mix

The Department of Agriculture purchased 576,000 lbs. of egg mix to be distributed for use by needy families and in supplemental food programs. The purchase, made at a cost of \$685,000, required about 29,000 cases of shell eggs.

### New Type Noodle Cutter

A new type of noodle cutter, said to offer several improvements over current models, has been added to Microdry's growing line of pasta equipment and proven by two trouble-free years in production at Golden Grain in San Leandro. This is said to be the first noodle cutter with automatic speed control. Solid state electronics automatically adjusts cutter speed to mixer speed.

Since speed control is not done electrically nor mechanically, but by sensing dough speed from the press, the new cutter is simpler, with fewer moving parts than others. It also is about one-quarter smaller.

At Golden Grain it eliminates one man because no one has to watch; a man just starts it and leaves for other work.

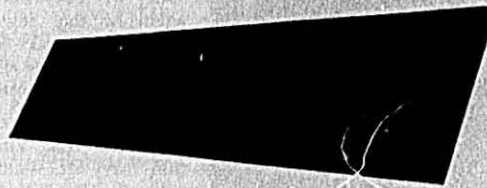
Die changes are positive, state Microdry engineers, with no gear slippage. Golden Grain tests showed die changes took only five minutes, compared to fifteen minutes for other types of cutters.

For simplest, lowest cost maintenance, all parts are off-the-shelf; there is no need to wait for, nor pay higher prices for proprietary parts. Nor are there any cast-iron parts; all are of steel for long life.

Price is \$60,800.

For more information write Microdry Corporation, 3111 Postoria Way, San Ramon, California 94583.

FOOD PROCESSING & HANDLING EQUIPMENT



Company

P.O. Box 1  
LIBERTYVILLE, ILLINOIS 618  
Area Code (312) 302-1031  
TWX 910-684-3278  
Hoskins Liby

Dear Sir:

Hoskins Company proudly represents to the Macaroni Industry the SEMCO pneumatic flour handling systems.

SEMCO features fixed or portable unloading from hopper car or truck.

SEMCO completes the system through storage to mixer and extruder.

SEMCO offers a pressure system, a vacuum system, or a combination of both.

SEMCO produces mixing, scaling, and blending components as well as complete systems.

SEMCO provides design, manufacture, installation, and start-up of your flour handling system.

SEMCO assures you of dust free and efficient systems which are in constant use by macaroni manufacturers throughout North America and overseas.

Call Hoskins Company -- specialists in the Macaroni Industry -- for complete evaluation of your requirements. We will be pleased to visit your plant at your convenience.

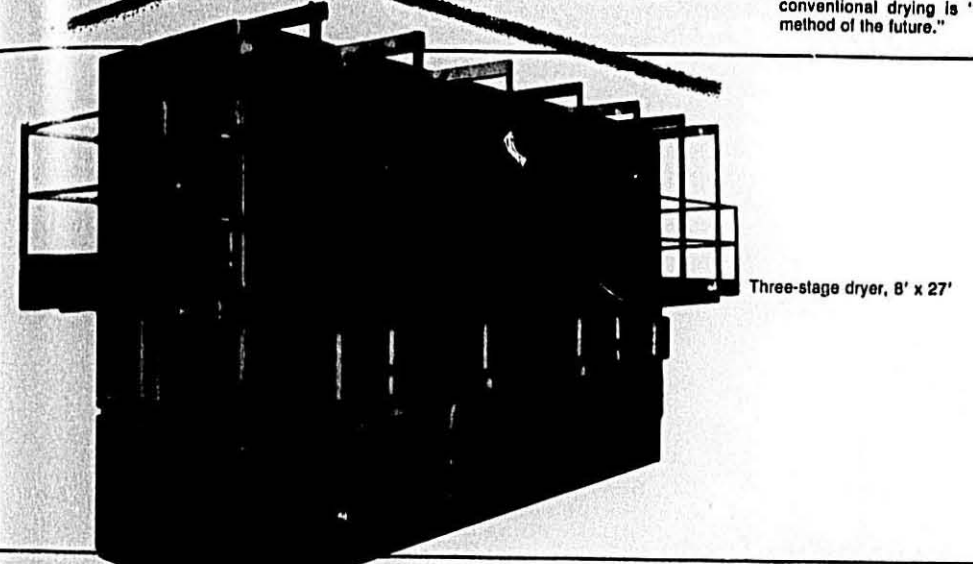
Yours very truly,

HOSKINS COMPANY

*Albert B. Green*  
Albert B. Green

THE DRYER OF THE FUTURE

In a 1973 survey of the entire pasta industry by an independent research firm, 87% of respondents stated that a combination of microwave and conventional drying is "the method of the future."



Three-stage dryer, 8' x 27'

TODAY'S DRYER

The pioneering is over! The microwave dryer is standard 24 hour/7 day equipment for any size macaroni or noodle plant

up to 4 times the production in the same feet of floor space (a bargain in itself with construction costs in the \$20 sq. ft. range).

reduces installation up to 99.99%. Kills: bacteria, Salmonella, E. Coli, molds, yeast, weavils and eggs.

most easily sanitized dryer. Hose it down or steam it clean.

makes a more appealing product; no blanching.

energy savings reported: 52% less BTU's, 6% less KW's.

lowest downtime. "We keep an accurate record of all downtime and express it as a percentage of time down to time scheduled. Microdry leads the list at less than 2%" — Plt. Mgr., leading mid-west operation.

all future equipment will be Microdry" — Tech. Dir., large pasta plant.



Compared with conventional dryer

Units in these lbs./hr. Capacities: 1500, 2500, 3,000 and 4,000.

Operating today at: Golden Grain, San Leandro (2 units); Golden Grain, Chicago (2 units); D'Amico, Chicago; Catelli, Montreal; Gooch, Lincoln; O. B., Ft. Worth; Lipton, Toronto (2 units); Gilster Mary Lee, Chester, Ill.

Completely fabricated and assembled in our plant. All stainless steel construction. Complete microwave and process control instrumentation systems with the unit — no extras to buy. Personnel generally can learn operation in one day. Continuing consultation privileges with Microdry.



MICRODRY CORPORATION

3111 Fosteria Way, San Ramon, CA 94583  
415/837-9106



Microdry Dishwasher by Microdry. More compact; 2000 lbs. water nozzle pressures.

**INDEX TO  
ADVERTISERS**

A D M Milling Co. ....	23
Amber Milling Co. ....	9
Asecco Corporation .....	17
Braibanti Corp. ....	14-15
Buhler-Mieg, Inc. ....	11
DeFrancisci Machine Corporation .....	31-34
Diamond Packaged Products Div. ....	41
Fibreboard Corporation .....	2
Hoskins Co. ....	38
Hi-Speed Checkweigher .....	25
Howes Co. ....	27
International Nutifoods Corp. ....	42
Jacobs-Winston Laboratories .....	27
Maldari & Sons, D., Inc. ....	4
National Macaroni Institute .....	27
Microdry Corporation .....	39
North Dakota Mill .....	7
Peavey Co. Flour Mill .....	20-21
Seaboard Allied Milling Corp. ....	35
Wright Machinery Co. ....	5

**CLASSIFIED  
ADVERTISING RATES**

Want Ads ..... \$1.00 per line  
Minimum \$3.00

Display Advertising .... Rates on Application

**FOR SALE**—Hydraulic Tote Bin Dumper, 2,500 lb. capacity. Class 2-GPG explosion proof motor and controls. Excellent condition. Call or write A. G. DeFelice, U.S. Macaroni Co., East 601 Pacific, Spokane, Wash. 99202, (509) 747-2085.

**WANTED**—Working foreman, modern west coast macaroni plant. Macaroni manufacturing experience required. Send resume to P.O. Box 336, Peatline, Illinois 60067.

**FOR SALE**—83 page book on Macaroni, Noodles, Pasta Products by James J. Winston, \$8.00 postpaid if check is sent with order. P.O. Box 336, Peatline, Ill. 60067.

**Campbell Sets Tonnage Goals**

In its current long-range planning, Campbell Soup Company has set an internal goal of an annual 8% increase in product tonnage, Company officials stated.

Speaking at a luncheon meeting of the Consumer Analysts Group of New York, Campbell Senior Vice President E. Marshall Nuckols, Jr., and Richard J. Censits, Vice President-Finance, said that achieving this goal is likely to require a dollar sales increase of more than 10% each year. "At that rate our dollar sales could double in less than eight years," Mr. Nuckols said.



A die for this special shape to celebrate the Bicentennial year was made by Landucci & Lotti, of Pistoia, Italy, for an Italian pasta manufacturer.

Campbell recently announced for the first three quarters of this fiscal year an earnings gain of almost 19% on a sales increase of 8.8%. The Company improved its net cash position from \$27 million borrowed two years ago to a positive net cash position of \$90 million at its recent third-quarter end, a swing of \$117 million, the officials said.

Reporting that Campbell has also placed a great deal of emphasis on new product development, Mr. Nuckols stated that "approximately 55% of our growth in the United States over the past ten years has come from new products." A total of more than 90 national new product introductions were carried out by the Company in the United States during fiscal years 1971 through 1975, but today the Company is on the threshold of an even more pronounced era of new product development, it was reported.

Campbell also projected that its capital expenditures will be approximately \$62 million in the current fiscal year. "The majority of our capital expenditures have been directed toward product improvements. During fiscal 1973 through 1975 and the first nine months of fiscal 1976, the productivity of our canned food plants improved 32% and our frozen food plants improved 23%—an average annual overall improvement of about 8%," Mr. Censits said.

**Pepperidge Farm**

The Company's Pepperidge Farm subsidiary plans the acquisition of a 28,000-square-foot plant building at

Reading, Pennsylvania, and the acquisition of 67 acres of land in preparation for construction of a biscuit plant and bakery at Willoughby, Ohio, between Cleveland and Toledo. The Reading Plant will package diva chocolates and Pepperidge Farm candies currently packaged at Pepperidge Farm's Downingtown, Pennsylvania, plant, freeing some space for additional equipment which will increase the efficiency of candy manufacturing there.

**Restaurant Division**

Campbell also reported that its Restaurant Division reached an agreement this week for the proposed acquisition of seven of the dozen food service operations in its Clark's restaurant group located in Washington and New York. "The operations we plan to acquire, five of which are located in the New York area, are table-service and fee shop style units acquired in the past few years which no longer fit in with the long-range development plans for the Restaurant Division," Mr. Censits reported.

The officials also emphasized that whatever price trends may develop for ingredients, containers and supplies, the Company is better prepared to react quickly with the necessary price changes. Newly-developed computer models permit the Company to forecast production costs with a high degree of accuracy for four months in advance. This permits the Company to see trends developing early enough to change price as the changes occur.

The officials said one of the new phases of the Company's marketing activities aimed at developing the ability to compute accurately the incremental sales that result from particular advertising campaigns or new marketing efforts.

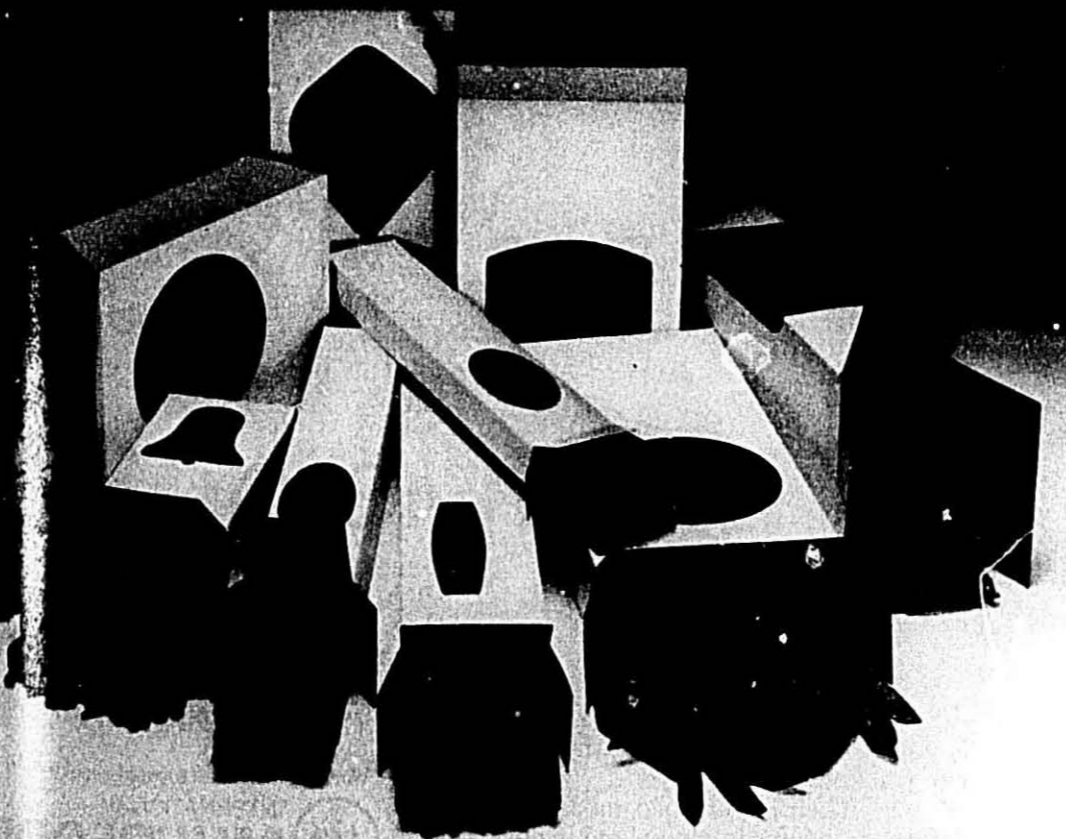
**Sales Call Cost: \$71.27**

The average cost of an industrial sales call in 1975 hit a record high of \$71.27 according to a survey by McGraw-Hill. This was more than double the cost of a sales call in 1965, when the average was \$35.55. The survey showed that companies with a sales force of fewer than 10 persons spent far more per call than those with larger sales forces.

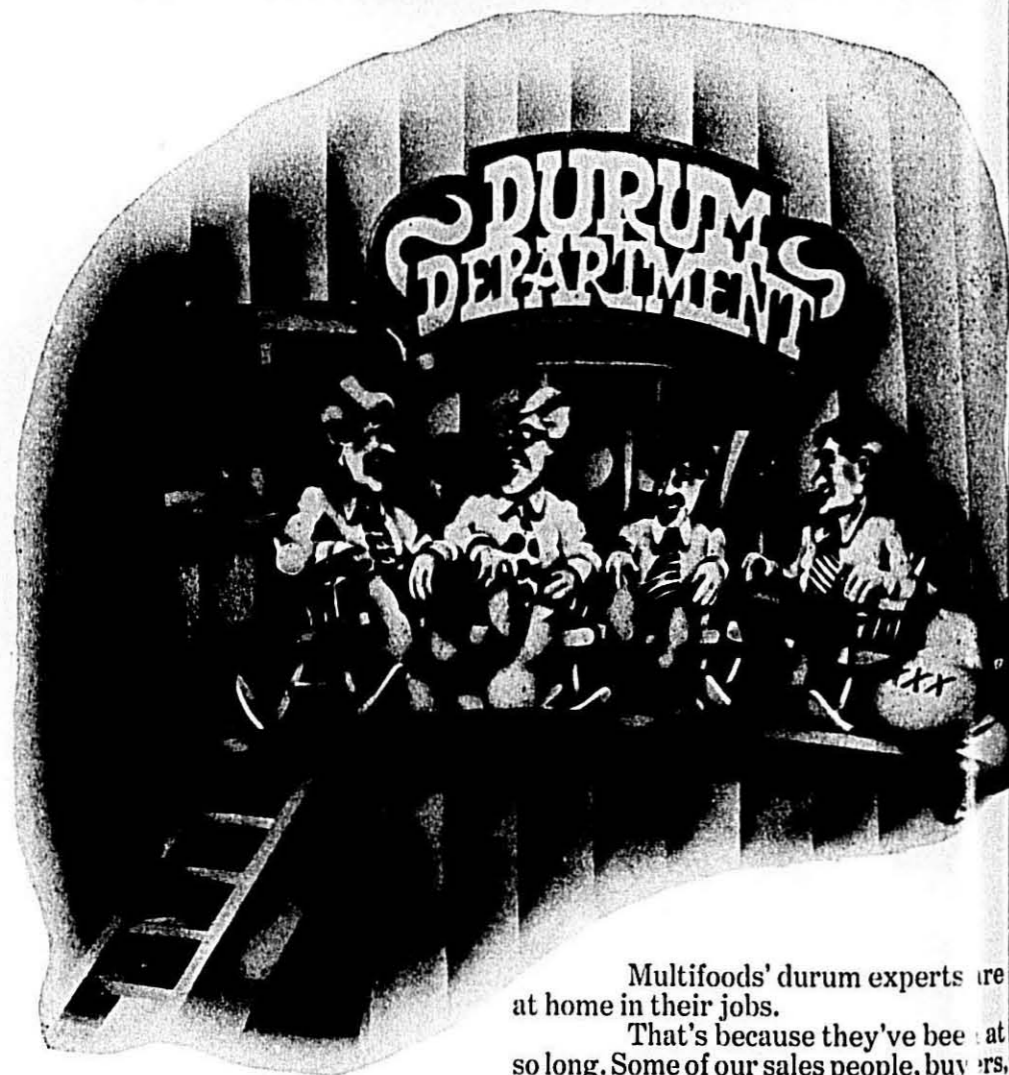
**We've been going together for nearly 50 years.**



Diamond International Corporation  
Packaging Products Division



# Old folks at home



Multifoods' durum experts are at home in their jobs.

That's because they've been at so long. Some of our sales people, buyers, millers and technical people have made their business for 20, 25, even 35 years.

These people are "old folks" in their jobs, even though they're not old in years. They know their business like you know yours.

Their experience makes for fewer defects... in your business and in ours.

Order your durum products from the old folks at home. Call us at 612/340-3583.

"Working with you toward zero defects."



INTERNATIONAL  
Multifoods Building • Minneapolis, Minnesota 554