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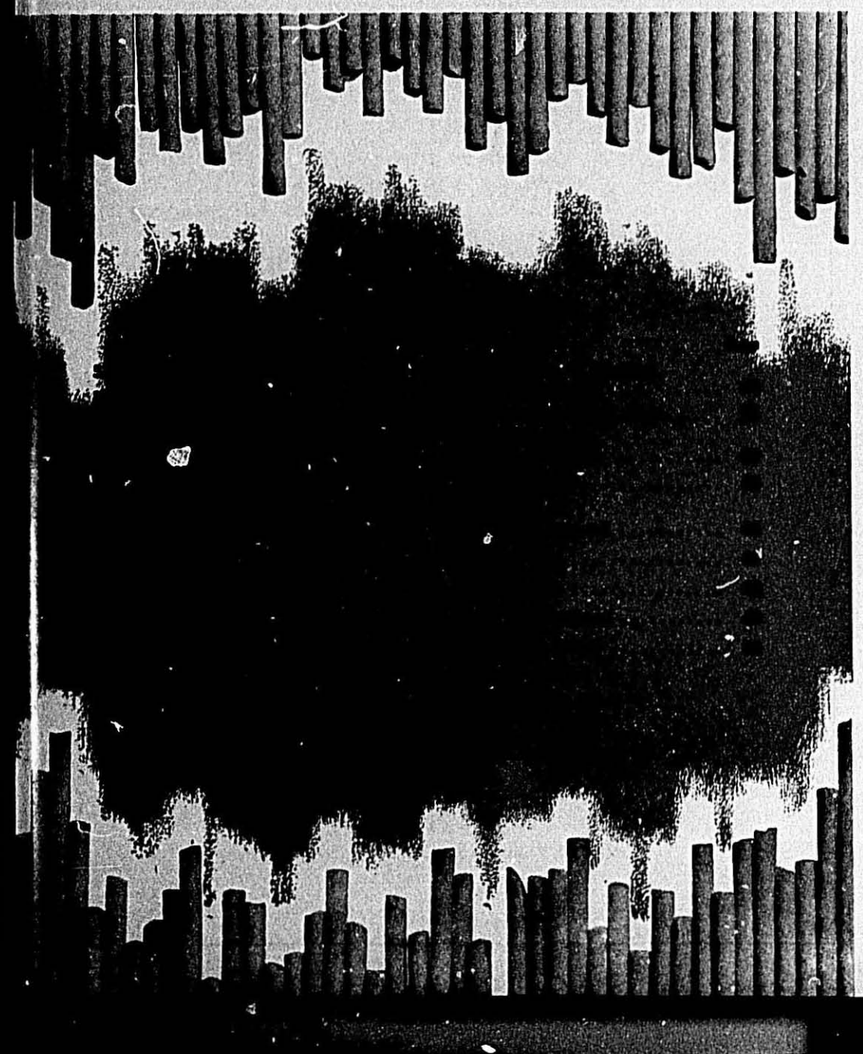


Official publication of the National Macaroni Manufacturers Association. Address all correspondence regarding advertising or editorial material to Robert M. Green, Editor, P.O. Box 336, Palatine, Illinois 60067.

The Macaroni Journal

53rd Anniversary Issue

M. J. Donna was hired in 1919 in the dual role of the Editor of the Macaroni Journal and Secretary of the National Macaroni Manufacturers Association. In his later years he wrote a column entitled, "Way Back When." Here he would glean bits of information and interest from days gone by. Examples:

50 Years Ago

• Leaders in the Macaroni Industry agreed that store cards, trade journals, advertising pamphlets, inserts and wrappers were three ways to advertise macaroni products cooperatively. The success of the fruit growers, rice millers and cereal food manufacturers convinced even the most skeptical that something like this had to be done.

40 Years Ago

• The United States Department of Agriculture reported that per capita consumption of macaroni products in 1929 was 3.75 pounds, 95 percent of which was made within the United States.

35 Years Ago

In an invitation from Philip R. Winebrenner, president of the National Macaroni Manufacturers Association, to industry members to attend a convention in Cleveland, he listed some of the problems that were bothering the macaroni business at that time. They included:

- A new Food and Drug bill;
- the unfavorable price trend;
- the Robinson-Patman Act;
- the distinct drift to lower quality;
- the unfair and unfavorable purchase contract now in use;
- the proposed NRA (National Recovery Administration);
- the aggressive plans of competing industries who hope to place their products on the dinner table where macaroni is now served;
- the increasing use of artificial color;
- the unrest of labor;
- and many more items equally disturbing.

Meeting the Challenge

Mr. Winebrenner then asked: "who is prepared to say whether or not our conditions will be aided or aggravated by:

- a new and enforceable set of standards;
- an enlarged executive personnel for the Association;
- a Trade Practice Conference under the auspices of the Federal Trade Commission;
- a well conceived and directed publicity campaign;
- more regional meetings;
- intelligent research of our products to be carried by one of the accepted institutions;
- compiling of statistics so that every manufacturer will know periodically how his sales compare with the industry as a whole;
- a consumer's survey to determine what the public thinks and wants;
- a more ambitious Association program requiring a larger budget.

"It is fitting for us to turn our eyes to the future in an attempt to visualize the needs which must be filled and the methods by which we will fulfill them. These problems are very real—these problems are still yours."

30 Years Ago

C. W. Jack Wolfe, President of the NMMA, told macaroni manufacturers that through mutual understanding, unselfish consideration and friendly conferences would come the industry progress so desired by progressive manufacturers.

10 Years Ago

Charles Hoskins, speaking at a plant operations forum, declared the principle trends of importance to the macaroni industry were:

1. The trend toward larger companies and fewer of them.
2. The trend toward more science and less art in the food industry.
3. The trend toward convenience foods.
4. The great interest in large food companies in the extrusion and drying processes as means of producing and preserving foods.

M. J. Donna

He warned: "If you want your company to profit from these trends rather than being buried by them, you should:

1. Resist absorption by the giants by keeping costs low and by using your ingenuity and know-how to sell your product at a profit.
2. Take advantage of scientific developments by keeping up with engineering and scientific knowledge in your field. Install money-saving or quality improving equipment and processes when they become available. Develop new or improved products.
3. Take advantage of the tremendous potential macaroni products have in the convenience food fields as an inexpensive source of food energy and bulk when used to extend more expensive foods.
4. Aggressively explore the possibilities of the extrusion and drying unit operations to see where the equipment you have installed in your plant can be used to produce a new or better food other than macaroni.

1972

Today when government regulations seem to be on the rise, consumerism is a force to cope with, and interest in nutrition is increasing, the food processor has his hands full in keeping up with what is going on. The purpose of the Macaroni Journal is to serve its readers with a clear and concise accounting of what is happening in the food field of particular interest to the manufacturers of pasta products.

Quarterly Durum Report

U.S. production of durum wheat in 1971 was estimated at 87.8 million bushels by the Crop Reporting Board in its Annual Summary. Acres harvested were 2.8 million, up 36 percent from 1970. Weather was favorable at planting time in most areas and due to excellent moisture conditions, the crop developed rapidly during June and early July. Rains in early September were followed by cool cloudy weather which delayed completion of harvest. This caused some sprouting and loss of quality. Yields per acre of 31.0 bushels this season equaled the high established in 1969 and was 6.9 bushels above a year earlier. In North Dakota, where 89 percent of the U.S. durum crop is grown, Leeds was the leading variety of durum grown. It accounted for 67.8 percent of the durum acreage in that State. Wells rated second with 29 percent of the acreage. On January 1 producers indicated they planned to seed 2.7 million acres to durum wheat in 1972. This would be 3 percent less than in 1971 but 31 percent above 1970.

Durum Exports

Approximately 50 million bushels of durum wheat have been registered for export through August 1, 1972. Exports of durum wheat during the second quarter (Oct.-Dec. 1971) totaled 8.8 million bushels compared with 8.2 million the same quarter last season. Exports during the July-Dec. 1971 period, at 13.4 million bushels, are about 7.7 million bushels below those for the same six-month period last year. The Syrian Arab Republic took 3.4 million bushels during Oct.-Dec. 1971, or about 38 percent of the total inspected for export. The Netherlands imported slightly more than 1 million bushels and France 1.2 million bushels during October-December. Dock strikes on the West Coast and later at Gulf and East Coast ports tended to hamper export activity during the first half of the 1971-72 crop season.

Durum Stocks

January 1, 1972 stocks of durum wheat in all U.S. positions totaled 115.4 million bushels, according to the Crop Reporting Service. This was up 26 percent from Jan. 1, 1971 but was only 4.5 million bushels more than on Jan. 1, 1970. Farm stocks were up 35 percent from a year ago and totaled 90.4 million bushels. Mills and elevators held 24.4 million bushels on Jan. 1, 1972 which was about the same as held in that position last year but was 21 percent larger than on Jan. 1, 1970. Disappearance during Oct.-December quarter was indicated at 13 million bushels, about the same as a year ago. CCC stocks of durum wheat Dec. 31, 1971 totaled 9.8 million bushels of which 7.5 million were hard amber and 1.5 million amber durum. CCC had extended loans on 309,000 bushels of durum wheat on Dec. 31, 1971.

Canadian Situation

Acreage of durum wheat in the Prairie Provinces in 1971 was cut 20 percent below from 1970, and average yields estimated at 24.6 bushels per acre, 7 percent below the 1970 yield. The November estimate of the crop was 60.5 million bushels compared with 80.9 million in 1970. Commercial disappearance of Canadian durum Aug. 1, 1971 through Jan. 19, 1972 amounted to 27.3 million bushels compared with 18.4 million bushels the same period the year before. The visible supply of Canadian durum on Jan. 19, 1972 amounted to 39.4 million bushels against 43.1 million bushels the same week last year.

DURUM ACREAGE HARVESTED

	1,000 Acres		Yield per Acre		Production 1,000 Bushels	
	1971	1970	1971	1970	1971	1970
North Dakota	2,400	1,752	32.5	25.0	78,000	43,800
South Dakota	140	105	30.0	20.0	4,200	2,100
Montana	160	124	23.0	25.5	3,680	3,162
Minnesota	40	27	38.5	30.0	1,540	810
California	10	10	40.0	65.0	400	650
United States	2,750	2,018	21.9	25.0	87,820	50,522

New President at A D M

Donald B. Walker was elected president of Archer Daniels Midland Co., effective March 1, it was announced by Lowell W. Andreas, the past president.

Mr. Andreas also announced the nomination of a new director of the company and the realignment of several key managerial responsibilities.

The new president, Mr. Walker, was executive vice-president of ADM. He joined the company in 1969 as a corporate vice-president and president of ADM Processing Co., a division of ADM comprising all of the company's soybean operations. Prior to joining ADM, he was corporate vice-president and director of purchasing for Ralston Purina Co.

Chairman of Management Committee

Upon his resignation as president, Mr. Andreas became chairman of the company's newly-formed management committee responsible for planning and controlling all major activities of the company and its various subsidiaries. He will be free of daily operating responsibilities in order to devote time to the new committee. He joined ADM in 1967 as executive vice-president and became president a year later. He also is a member of the ADM board of directors and also the executive and finance committees.

D. O. Andreas Chief Executive

Dwayne O. Andreas continues as chief executive and as a member of the board of directors and as chairman of the executive committee.

Albert M. Andreas of Miami, Fla., brother of Dwayne and Lowell Andreas, has been nominated to the company's board of directors. Although retired at the present time, he has been active in various agribusinesses for the past 30 years.

Changes at Centennial

D. A. MacGregor, President of Centennial Mills, has announced a number of personnel changes.

"The acquisition of a Los Angeles milling facility, as well as the restructuring of Marketing and Bakery Mix activity for continued growth, has resulted in the promotion of several of our personnel to key positions."

Leonard F. Aichlmayr, Marketing Manager, has been named Vice President Marketing.

Julian Willard, Manager Honl Mix Division, has been appointed Manager of a new Bakery Mix Division. The division incorporates both the Hon and Western Brands mix companies Frank Honl and S. M. Duoos, founders of these mix companies, assume advisory duties in the newly forme Centennial Bakery Mix Division.

F. Don Hodge, Manager of Centennial's San Francisco Sales Office, ha been named Manager of our newly ac quired Los Angeles flour mill.

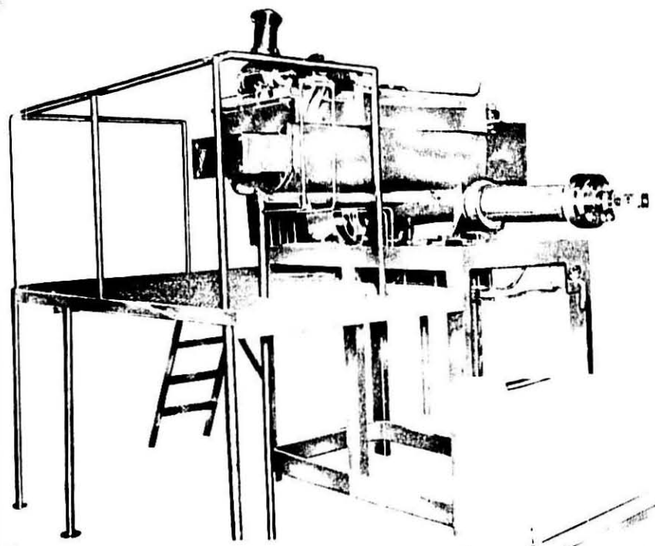
Joe Hope, Eastern Washington Sale Manager, moves to San Francisco a Manager of Centennial's Sales Offic

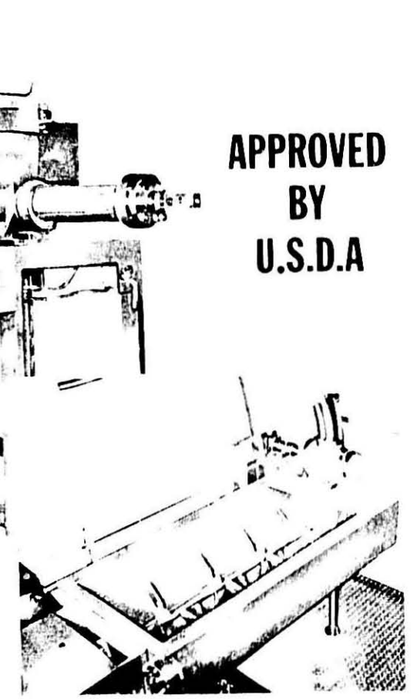
John Bowen, who has handled West ern Brands' sales, becomes Sales Man ager Eastern Washington to direct Bakers' flour and Bakery Mix Division sales in that area.

Don Andrews, Production Manager Western Brands, has been named Plant Manager Western Brands. Jack Duggan is Office Manager.

The Marketing and Bakery Mix Divisions are under the direction of T. Frank Rawlinson, Centennial's Executive Vice President.

ADM Milling Co.





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DURUM REPORT

From Langdon, North Dakota
Substation Supervisor Robert Nowatski

This report is a summary of station activities during the 1971 farming season.

The Langdon Branch Experiment Station continues to serve area farmers as a branch of the North Dakota Agricultural Experiment Station, North Dakota State University, Fargo.

Our research work here can be summarized into categories including cereal grain variety development through plant breeding nurseries; preliminary increase of newly developed grain lines and of potatoes; testing and evaluating of the newest selections along with the commonly grown varieties against certain check varieties; seed increase of breeder, foundation, and registered seed on a field scale; research work of farm cultural practices including herbicides, fertilizers, fungicides, and tillage; horticulture involving the general evaluation as to adaptation of annual flowers, woody ornamentals, and fruit trees, and the commonly grown garden vegetables.

Seasonal Data

The 1971 growing season was indeed one that favored maximum yields and production. Spring planting began two weeks ahead of the previous year, and favorable temperature and moisture hastened germination. Throughout the searon the right combination of temperatures and moisture allowed the crops to develop without serious build-up of disease although some diseases did threaten at certain times.

During the early portion of the growing season and extending to early July temperatures remained cool inducing maximum tiller development and retarding leaf rusts. During late June we experienced two weeks when the temperature fell below 50 degrees nearly every night. This cool weather no doubt slowed the development of rusts, but did allow leaf blights and septoria to spread. Then in mid July conditions changed as temperatures and moisture increaser during this time when the lush crops were most in need. Leaf rusts developed under these warm moist conditions, but much more slowly than in previous years allowing the crops to mature ahead of any serious threats. Only the most susceptible varieties developed rust sufficient to lower production.

Dry conditions during August hastened maturity of the barley nursery, and was somewhat injurious to flax. Flax requires an ample supply of moisture throughout the growing season for maximum yields.

Continuing into fall, harvest conditions began quite favorable and a high quality crop was obtained from those who could harvest early. Then in late September and throughout the first half of October persistant small rain showers and generally wet conditions made late combining difficult. Some sprout damage and a significant amount of discoloration and loss of test weight occurred.

Durum

Seventeen varieties and selections were tested in the 1971 durum variety trial. These included the named varieties of Leeds, Wells, Hercules, Rolette, and Wascana.

Leeds accounted for 67.8 per cent of the total state durum acreage in 1971. Wells occupied 29.8 percent of the acreage while Hercules was planted on about one percent of the total acres.

The variety Wells yielded significantly above both Leeds and Hercules this year, but on three year basis Hercules shows about a six percent advantage over Leeds and about a four percent advantage over Wells at this location. However, Hercules is less resistant to leaf diseases than is Leeds, and these diseases are potentially dangerous to Hercules in bad disease years.

Leeds continues to be more susceptible to soil borne disease organisms at emergence. Leeds has a weaker seedling due to a shorter coleoptile, and so this variety should be planted thicker, shallower, and possibly later to insure a warmer seedbed and more rapid germination.

The varieties Wells and Hercules tend to lose their amber color more readily than Leeds under moist harvest conditions.

New Variety

Rolette is a new durum variety developed by the North Dakota Experiment Station and named on December 1, 1971. The name Rolette was chosen to designate a northern area of the state where short growing seasons are common, and to therefore signify the earliness of maturity of this variety.

The initial increase of Rolette was made here at Langdon beginning with 25 pounds in the spring of 1970. Winter increases in Arizona during the 1970-71 winter followed by further increases here in state in 1971 resulted in nearly 15,000 bushels of this variety for 1972 planting.

Rolette has shown nearly a 13 percent yield advantage during the three year period of 1969-71 at this location over Leeds, and about a nine percent yield advantage over Leeds on a statewide basis. Wells outyielded Rolette at this location in 1971, but as the statistical figures show this difference was not significant.

Rolette is several inches shorter than Leeds and has stronger straw. The kernel size of Rolette is greater than Leeds and about equal to Hercules. Leaf disease reaction of Rolette is better than Wells though slightly below Leeds. Rolette has not shown the symptoms of weak seedlings associated with Leeds, although soil borne root rotting organisms can infect any variety under undue stress conditions. Earliness of maturity plus a moderate increase in yield appear to be the major advantages of Rolette over other varieties at this location.

Wascana

Wascana is a new variety that originated in Canada and was released in 1971. The variety has very large kernels, larger than all other varieties to date, but is more susceptible to leaf diseases than Leeds, Wells, and Rolette. Wascana, although no taller than Hercules, is very weak strawed and lodged nearly as much as Mindum at this location this year. More testing is required for this variety to determine its adaptation.

Recommended varieties of durum for this area based on varieties of acceptable quality include Leeds, Wells, Hercules, and Rolette for seed increase purposes. Leeds remains the standard of quality of which other varieties are compared.

Variety	1971 Yield	3 Year Average	Test Weight	Days To Head	Lodging Score	Leaf Rust	Stem Rust
Leeds	65.2	59.5	62.3	65	2	0	0
Wells	71.2	61.0	60.5	66	6	tMS	0
Hercules	64.9	63.1	62.7	63	2	5MS	0
Rolette	69.1	68.2	62.3	60	1	0	0
Wascana	70.0		61.3	66	7	tMS	0

How to Sell

He who has a thing to sell
And goes and whispers in a well,
Is not so apt to get the dollars
As he who climbs a tree and hollers.

Amber Milling

Amber Milling at Rush City, Minnesota, has completed a five-year improvement program that increased production by 1,000 hundredweight per day, and completely refurbished the exterior of the plant.

As one of the nation's veteran millers of semolina and durum wheat flours, Amber's products are well known in the trade.

Pneumatic System

The improved plant operates with a complete new pneumatic suction system, moving the product through Smico all-metal twin purifiers, sifters and rolls via metal spouting. A suction filter collection system draws off any dust produced in the milling operation.

With its increased efficiency, Amber's production capacity is now more than 4,000 hundredweight per day.

One of the last major equipment improvements was the 1971 installation of a new unloading pit for both trucks and railroad hopper cars. The new equipment is housed in an 80 by 28 foot addition to the previously enclosed loading and unloading area.

This area, which gives complete protection from weather, is 240 feet long and 40 feet wide. The entire ground area between and around trackage is blacktopped.

"Cleanliness and sanitation are a snap," manager Eugene Kuhn says. "We never had much trouble unless one of the incoming boxcars was leaking a little grain. Now we don't have any at all because everything can be slicked up in a few minutes with our new mobile vacuum cleaner."

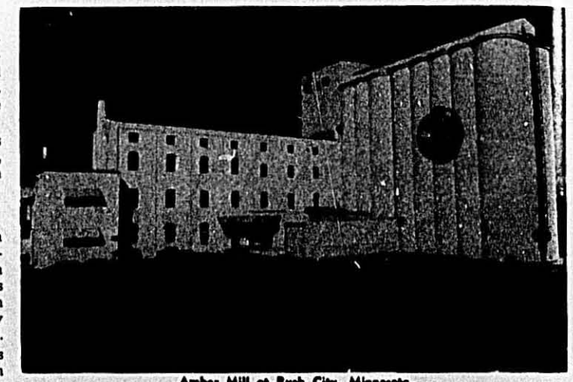
New automatic loading-out scale equipment also has been installed at Amber Mill. Then, last summer, a large metal building weighing 16 tons was partially constructed on the ground and hoisted by a huge crane 80 feet to the top of the headhouse. Measuring 35 by 35 by 38 feet, the building houses a new automatic scale for incoming wheat, plus new dust collecting, filtering and other equipment.

Some Bagging

Almost all of Amber Mill's semolina and flour shipments are made in bulk, although some bagging is still done. The loading system is not only under cover for weather protection but completely sealed all the way from the mill to the bulk airslide tanker rail cars.

Amber Mill has a leased fleet of 75 airslide rail cars, each carrying more than 100,000 pounds. They deliver semolina and durum flours all over the United States.

During 1970 the last vestiges of older



Amber Mill at Rush City, Minnesota.

equipment and furnishings inside the mill were removed and replaced. All grain is carried through the complicated milling process via metal tubing under pneumatic pressure or gravity flow.

The final big job was renovating of the mill's exterior surfaces.

During the summer every surface was cleaned, repaired, sandblasted and painted with waterproof cement paint. The colorful Amber Mill emblem was then painted on the newly surfaced white of the tall concrete tanks.

Amber Mill is a division of Farmers Union Grain Terminal Association, regional grain marketing and processing cooperative headquartered in St. Paul, Minnesota.

Report from the Crop Quality Council

Vance V. Goodfellow, Executive Vice President of the Crop Quality Council, Minneapolis, reports durum production and research progress.

A bumper crop of durum was harvested in the Upper Midwest in 1971. The average U.S. peracre yield of 31.9 bushels equaled 1969 in the all time record yields. High yield, plus a 36% increase in harvested acres produced a total durum crop of 87.8 million bushels. Durum carryover supplies of 54 million bushels makes a total supply estimated at 141.8 million bushels available for domestic use and export.

In North Dakota, where nearly 90% of the U.S. durum wheat is grown, 1972 growing conditions have been described as the best in history. Ideal harvest weather also contributed to producing a durum crop of highest grain quality.

Leading Durum Varieties

Leeds durum, released by the North Dakota experiment station in 1966, was the major variety seeded in the Upper Midwest states. In North Dakota it occupied nearly 70% of the acreage or 1,671,000 acres. This is the fourth consecutive year Leeds has dominated the durum variety picture, indicating its wide acceptance by growers. The production of Leeds marked an important research step in durum improvement. Its larger kernel size and superior color for pasta products, along with excellent rust resistance, have insured high quality production. Wells durum continued in second place in North Dakota, but represents slightly more than 50% of the Montana acreage.

Durum Research Dividends

Although matching durum production to utilization is often conflicting, the dependability of production is vital to producers, processors and macaroni manufacturers. The line between abundance and scarcity is a narrow one. Current oversupplies of durum now would meet domestic needs for only about two seasons should disaster hit the producing area. This has happened, as demonstrated by rust attacks and drought. Well-remembered are the stem rust attacks in the 1950's, when in 1953 North Dakota produced only three bushels per acre.

Current U.S. durum varieties are the best in the world, as a result of concentrated research efforts to incorporate disease resistance, high quality and yielding ability. Constant attention is being given to providing different sources of rust resistance, better plant type, stiffer straw and seedling vigor

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Crop Quality Council — Pasta Is Beautiful —

(Continued from page 10)

to assure even better durums in the future.

Some Recent Accomplishments

After more than seven years since Congress appropriated $500,000 for a national Cereal Rust Laboratory at the University of Minnesota, the funds were made available and construction started in 1971. Completion of the new facility, slated for April, 1972, will greatly expand rust research efforts for durum and other cereal grains.

Expansion of the winter seed increase nursery continues each year. Durum lines in the 1972 nursery total 6,000. Since the rust years development of new durums like Langdon, Lakota, Wells and Leeds has been speeded through this program. Rust testing of experimental durums in Puerto Rico also continues, contributing to durum improvement.

The new durum variety, Rolette, released by North Dakota State University in December, 1971, was grown and increased in Mexico for a number of years. This new variety's major contributions are early maturity, shorter stiffer straw and rust resistance. Tests have shown it to be about 10% higher in yield than Leeds. Quality is considered satisfactory; however, color is slightly below Leeds, but generally equal to Wells.

Durum wheat improvement was emphasized at the annual Crop Production Conference, sponsored by the Crop Quality Council in November. Dr. James Quick, North Dakota State University durum breeder, reviewed the subject before 250 participants.

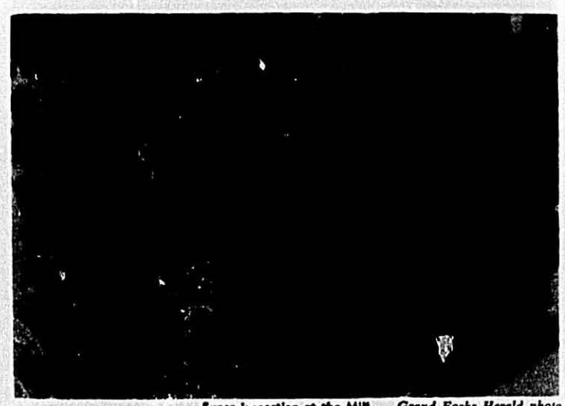
50 Years Continuous Service

1972 is the 50th anniversary of the Crop Quality Council which began in 1922 as the Rust Prevention Association. It was organized by business leaders who recognized the importance of encouraging research efforts in the fight to control wheat rust. During this half century more progress has been made in improving the production of food crops through research than in all past recorded history. The work of the Council has played a significant part in this progress and was made possible through long-time support of the National Macaroni Manufacturers Association and other industry groups.

North Dakota Mill

There are three significant dates in the fifty-year history of the North Dakota Mill and Elevator, Grand Forks, N.D.

One such day was October 31, 1922 when the original North Dakota Mill was dedicated.



Super inspection at the Mill. *Grand Forks Herald photo*

Another such day was July 28, 1970 when the eight-story flour mill structure was gutted by fire.

And the third such significant day was January 31, 1972 when the North Dakota Mill was rededicated, and like the legendary Phoenix, it rose in youthful freshness from its own ashes.

The year and one-half of rebuilding has resulted in the creation of one of the most modern facilities in the nation, according to Sam Kuhl, general manager of the North Dakota Mill, and a veteran of 31 years in the milling profession.

The new mill is smoother, faster, cleaner, quieter—has a greater capacity and is almost free of pollution. Kuhl estimates that the new equipment increases the mill's capacity by nearly 25 percent, from 8,000 hundredweight per day to 10,000 hundredweight, combining the capacity of both the spring wheat and durum mills.

Major innovations in the new North Dakota Mill include:

- A pneumatic system to lift grain and flour in sealed aluminum tubes.
- Filtering devices aimed at elimination of dust and chaff from air inside the mill.
- Reclaimer for removing solids from the durum wash water.
- Blending system which systematically mixes grain before it enters the milling process, insuring a consistent blend of durum.
- Air makeup system to provide correct amount of air, with proper humidity and temperature for all stages of the milling process.
- Sprinkler and fire-protection system.
- Extensive electrical change, with all outside wiring in underground conduits.
- Painting and color-coding of all surfaces within the mill.
- All new equipment within the mill.
- Double walls, double doors and soundproofing, to lower the noise pollution level from machinery.

Kuhl, and Ben Hennessy, assistant general manager, paid tribute to mill employees, who helped with gigantic cleanup of the burned-out mill structure, and who were essential workers in the reconstruction period.

One of the key men in the reconstruction was Fred Schumacher, a milling engineer from Minneapolis, who was born and raised in a prominent milling family in Europe.

The North Dakota Mill is actually two mills, operating simultaneously side by side. One is for the milling of hard spring wheat for baking flour while the other grinds durum wheat into semolina, for use in the making of macaroni products.

Sam Kuhl

Pasta Is Beautiful

"Pasta is beautiful. And we don't say that just because we produce durum products," said Sal Maritato, vice president for durum products in the industrial foods division of International Multifoods.

Quality control is an important aspect of Multifoods' product improvement and development program. Maritato and Robert J. Bruning, quality control manager, check the mini-milling operation at Multifoods' research laboratory.

"We actually grind durum wheat (left) and produce macaroni (right) before the wheat goes into full-scale grinding," said Maritato.

"Wheat flour products including pasta have been under a lot a criticism in the last couple of years. There's a common misconception that breads and cereal products are just empty calories, that they just make people fat," he said.

"We at Multifoods see this not as a problem, but rather an opportunity. It's a chance for all members of the macaroni industry to unite in telling our story and to build strong consumer confidence in our industry and the products we offer.

"No food is fattening," added Maritato, "not even pasta. Whether someone gains or loses weight depends on the calories he consumes as related to his caloric needs.

"A cup of cooked macaroni, an ample serving, contains approximately 175 calories—less than an average serving of many meats.

"People who exclude certain foods such as cereal grain products from their diets are missing valuable nutrients. The breads and cereal group, like other food groups, contribute significantly to the total diet and should not be ignored or eliminated.

"Also important to the consumer is the fact that macaroni products are not only among the most economical foods on the market but also the most versatile. They can be part of any menu from soup to dessert."

"In addition to telling the story of pasta, Multifoods will be working to build consumer confidence by taking a closer look at its own operations," said Maritato. "We will continue to work for improvements in existing products and to carefully research ideas for new products."

Product Improvement

Maritato noted that the quality of the wheat used is an important aspect of Multifoods' capabilities for product improvement. We see more uniformity, better quality and improved disease resistance in the recently developed varieties of durum, he added.

Production techniques are also key factors in product improvement. Multifoods has a policy of continual modernization of production facilities. That means new milling equipment as well as constant attention to sanitation and to the safety of employes.

Bruning and Beverly Williams, sanitation analyst, take a quality check on Multifoods' new Duregg.

"At our research laboratory we have a mini-milling operation. We actually grind durum wheat and produce macaroni before the wheat goes into full-scale grinding. This enables us to check the performance of our products so that we can be sure of the quality we offer our customers," said Maritato.

In addition each mill is served by a well-equipped laboratory and staffed with skilled technicians. Thus, there are dual quality control checks on all products.

New Products

"Duregg is a good example of the type of new product development Multifoods will be pursuing and emphasizing in coming years. We are most concerned with researching product ideas that will make our customers' work easier and assure them consistently high quality macaroni," said Maritato.

Multifoods' Duregg, a mixture of durum flour and egg solids eliminates sanitation problems and mechanical difficulties involved in mixing flour and egg solids. The manufacturer just adds water to Duregg and blends to make noodle mix.

In addition to improving efficiency, Duregg guarantees consistent high quality that meets government specifications of at least 5.5 percent egg solids in every batch of noodle mix. Flour and eggs are carefully blended for even

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(Continued from page 14)

listribution of egg solids.

Duregg, introduced to the industry in December 1971, has already created nuch interest among macaroni manufacturers.

Service

"We're firm believers in personalized service at International Multifoods," Maritato said.

"Our sales people are encouraged to develop a close working relationship with customers. We want every customer to think of his Multifoods salesman not just as a salesman but as a friend—someone he feels free to call on whenever he has a problem or needs assistance.

"Because our staff has a great diversity of experience, we are able to provide a wide variety of services.

"We have developed a sales structure that we feel best serves the entire U.S. Sales offices in New York, Chicago and Minneapolis headquarters plus brokers in the South and on the West Coast enable us to service customers quickly and efficiently."

Multifoods' principal durum mill is in Baldwinsville, N.Y., strategically located near the large macaroni market in the East. Three Multifoods mills in Minnesota produce semolina and durum flour.

The Future

Maritato noted that in a recent appearance before the New York Society of Security Analysts, William G. Phillips, president and chairman of the board at Multifoods, identified the durum area as an attractive growth segment of the industrial foods division.

"We'll be placing strong emphasis on expanding markets for better service, extending and improving our line of durum products, and maintaining high quality standards in all phases of our milling operation," said Maritato.

President W. G. Phillips Reports

International Multifoods' sales of consumer products in the United States will increase 45 percent to $40 million this year, President William G. Phillips recently told New York security analysts.

The Minneapolis-based diversified foods company also announced plans either to substantially increase capacity or build second plants in the next year for its Kretschmer Wheat Germ and Kaukauna Klub specialty cheese products.

Sales of commodity-priced bulk bakery flour in the U.S., once a company mainstay, will fall to a record low of 12 percent of consolidated sales this year, and the company, which has closed five flour mills in the last four years, might close another one or two this year, Phillips said.

He also confirmed earlier estimates of earnings in the $2.50 to $2.60 range for the fiscal year which ended Feb. 29, compared with $2.41 in fiscal 1971, and predicted sales would climb from $434 million to about $455 million.

Phillips said that a period of "restructuring, redirecting and reorienting" the company has been successfully completed.

Consumer Products

Kretschmer and Kaukauna were identified as two leading examples of the fast-growing consumer products area. Kretschmer sales have been compounding at an annual rate of approximately 20 percent since 1968, and Kaukauna sales will be up approximately 25 percent over the $8 million when it was acquired by Multifoods a year ago.

Phillips stressed that growth in the food area would be in identifiable small segments such as the specialty cheese market it entered with Kaukauna and the frozen food market in Canada which it entered with the Stouffer line.

He also said that the company was exploring further growth in the away-from-home eating area which it entered in the past two years with the acquisition of Mister Donut, Sveden House and King Foods.

Multifoods' new direction in Industrial Foods will concentrate on high growth areas such as durum products, bakery mixes and branded bakery flour sold through jobbers to specialty bakers.

Bulk bakery flour in the United States, which constituted 18 percent of the company's 1968 consolidated sales, is, according to Phillips, a commodity-priced business characterized by overcapacity, extremely low margins and an almost complete lack of brand loyalty.

Attractive Durum

A very attractive segment is durum products which are sold primarily in bulk to macaroni manufacturers. Unlike bakery flour, the macaroni industry is in a balanced supply-demand position. It is a compact industry with only a few suppliers. It has consistently maintained high quality standards. And, in accordance with the trend toward ethnic foods, we anticipated that industry sales of pasta products in this country would grow at an average of 7 to 8 percent annually.

In the Agricultural Products area, Multifoods announced plans to build formula feed geographical markets, particularly in the United States, in accordance with predicted increases in red meat consumption; to improve poultry processing margins; to accelerate our growth in the animal health area, and to try to minimize low swings in egg prices.

Away from Home Eating

In the Away-From-Home eating area, King Foods has increased sales from $23 million to about $29 million since the acquisition two years ago. Sveden House and Mister Donut operations, which showed a combined loss in excess of $700,000 last year, will both be profitable this year, Phillips said.

King's plans call for utilizing the capacity at its new Norfolk, Va., plant with strong emphasis on pre-cooked entrees. Sveden House plans to open 10 to 12 new restaurants next year, half franchised and half company owned. Mister Donut plans to open an additional 50 units next year, most of them by existing franchises. Four additional Mister Donut stores are under construction now in Japan and should be open by the end of March.

Multifoods, an 80-year-old company, was known until 1970 as International Milling Co. The appearance was the firm's first before the New York Society of Security Analysts. Multifoods' stock was listed on the New York Stock Exchange on Aug. 31, 1971.

Prospective Plantings

Farmers in North Dakota intend to plant 3 percent fewer acres in 1972, of the eight crops surveyed Jan. 1 according to the North Dakota Crop & Livestock Reporting Service. The intended planted acreage of corn, hard red spring wheat and flax will be less while oat and barley seedings are expected to be more than a year ago. The intended acreage of soybeans and durum wheat is unchanged from 1971.

Durum wheat acreage last year was 2,464,000 acres, 36 percent above 1970 acreage. Total plantings on a national basis is expected to be 2,700,000 acres, 3 percent less than 1971 but 31 percent more than 1970.

No Limit

The production and improvement of goods and services is in the nature of the case endless. Thus there will never come a time when new and better things in all fields will not be created . . . there does not seem to be any limit to human inventiveness.

—CHARLES MALIK

Report of the Director of Research

by James J. Winston

The past few months have created challenges to the Food Industry as well as our own particular segment which followed the pattern of changing times. The Food & Drug Administration has been motivated to intensify their regulatory efforts to parallel changes in their interpretation of guide lines particularly in the field of Nutrition, Pesticide Residues, Compliance With Packaging Regulations, Sanitation Codes, and Quality Assurance.

James J. Winston

Nutrition

Recently the Food & Drug Administration issued its guidelines on frozen dinners where the requirements are that the nutritive values should be declared on the label for the consumer evaluation. Analyses of these products should declare the approximate values such as Carbohydrates, Fat, Protein, Vitamins, Minerals, and Calories. Emphasis is placed on a necessity for a 100 calorie portion to provide a minimum of 4.6 grams of Protein. In many instances, a 100 calorie portion will be equivalent to approximately 1-2 oz. of food which will therefore necessitate that the product be fortified with either meat or cheese or high protein additive to yield the necessary amount of protein per 100 calorie portion. According to current trends, it is very likely that guidelines will be issued for different food products with the passing of time.

Pesticide Residues

During the fall of 1971, the Food & Drug Administration sent inspectors to food packaging plants including our industry for the purpose of analyzing both the carton and the enclosed product for evidence of PCB or Polychlorinated Bi Phenyls. This is an ingredient which has been used for the past 40 years as a thickener and plasticizer especially in printing inks and in carbons. The origin of this pesticide stems from re-cycled paper and the so-called carbonless copying paper. Many food products were studied such as spaghetti, noodles, potato chips, breakfast cereals, and crackers. Amazingly enough, some of the findings of the FDA showed that the levels of PCB ranged from 1 to 433 Parts Per Million. Fortunately, our products showed a low level of PCB in the finished products indicating a very slight degree of seepage from the corrugated container into the product. The Government immediately instituted a zero tolerance for PCB in re-cycled paper thereby eliminating the source of contamination.

PCB, as you probably are aware of, is chemically related to DDT. There were, however, repercussions in this testing program since this type of examination is characterized by the use of Gas Chromatography which covers a wide spectrum. Unfortunately, Chlordane showed up in an egg noodle product to the chagrin and embarrassment of a manufacturer. When the FDA alerted this manufacturer to the findings, steps were taken to monitor all the ingredients of the egg noodles, namely, the flour, eggs and water. This work has been completed and the source of contamination was found in the eggs. This matter is still under consideration by the FDA. It is recommended that manufacturers continue to get warrantees from their egg suppliers to insure that the product is free from pesticides as well as from Salmonella Bacteria.

Survey of Macaroni Products for Slack-Fill and Net Weight

Several months ago, Mr. John Gomilla, Chief of the Fair Packaging and Labeling Branch of the FDA discussed the findings of the Department in a recent survey made of different types of foods. In regard to our products, the results of this survey show that Vermicelli and Spaghetti average a slack fill of 29%; also 38% of the macaroni products tested was short weight. You will recall that our slack-fill figures were defined in 1946 and were based on a compilation of data that we submitted to the FDA; at that time, tentatively, these figures were agreed upon—Short Cut Products such as free-flowing, namely Elbow Macaroni should have maximum slack fill of 20%; Long Macaroni—a maximum slack fill of 25%; Long Spaghetti—a maximum slack fill of 30%.

The regulatory officials at that time and again in 1971, trust that with the passing of time, the technological expertise in packaging will increase the fill of the container to yield a fuller package to satisfy the consumer. It now appears that firmer regulations for slack fill are on the agenda in the near future.

Sanitation

Management should continue to review periodically and re-evaluate its sanitation program to insure compliance with the sanitary regulations both as to pests and bacteria. Recently, a manufacturer became involved with the FDA due to a high incidence of insects found in a plant especially in certain critical areas which can contaminate the product. This matter is now of a serious nature and there is a strong possibility of prosecution. It is rather disconcerting to realize that this source of trouble could have been averted. Management must make certain that men in a sanitation crew stay with their jobs and not be reassigned to production or shipping in order to fulfill heavy production schedules. Each company should have a trained man assigned to sanitation to insure compliance with good commercial practice and good housekeeping principles.

A review of my bulletin #408 make reference to "Recommended Bacteriological Guidelines." This data results from a study of many examinations over the past three years and can serve as a guide to check your plant practices. I am glad to report that there has been no incidence of Salmonella contamination during the past few months due to the added vigilance and precautions taken by our manufacturers. This is commendable. Many manufacturers have installed chillers to maintain the temperature of the egg-water mix to 40°F; and other manufacturers are utilizing dry egg solids feed to eliminate the possibility of bacteria proliferation. However, efforts should be made to control the Aerobic Plate Count or the Standard Plate Count and Coagulase-Staphylococcus types of bac-

(Continued on page 20)

Research Report —

(Continued from page 18)

teria. A source of heavy bacteria contamination can be found in the use of regrinds which have been improperly handled and stored. Macaroni products for grinding should be stored in clean drums or polyethylene bags to preclude any contamination by either dust, flying insects, or the carelessness of workers. All drums should be kept covered at all times.

Protein-Fortified Enriched Macaroni

Bob Green has kept you cognizant with the developments pertaining to our determination to prevent the promulgation of a Federal Standard of Identity to permit the use of different types of raw materials with protein adjuncts in order to yield a high protein product with a high protein efficiency ratio. As a result of our investigations, we have developed a macaroni product consisting of 68% Durum and 32% Soya Flour which fulfills the requirements of the National School Program as per specifications FNS Notice 218. I have followed this further with my bulletin #412 referring to the labeling of this type of product. This product has a protein content of 25% and a PER of 97% of that of Casein. I understand that some manufacturers have started to manufactue this type of product. It must be remembered that this product should be qualified with the words "Wheat and Soya Macaroni" when sold to the consumer trade.

Macaroni-Noodle-Pasta Products

I am glad to inform the directors that I have had a book published at my own expense entitled "Macaroni, Noodles, Pasta Products" which contains information pertaining to the following: History of the Macaroni Industry; discussion of Durum Wheat; Strains and Grades; the Milling Process of Wheat into Semolina and Flour; the Macaroni-Noodle Manufacturing Processes; Die Making and Composition; Eggs Composition and Sanitation; Sanitation Pertaining to Macaroni-Noodle Products; Quality Assurance Program and Analyses, and the Nutritive Values of Macaroni-Noodle Products.

This book is dedicated to the pioneers of the Macaroni Industry of the United States and their worthy successors. The hard work and enthusiasm of these men created an appealing product that is now a staple in the American household. Macaroni Products today are utilized as a component in many recipes from simple dishes to gourmet specialties.

Kraft Promotion

"Traditional Lenten Favorites from the Kraft Kitchens" is the theme for a recipe promotion featuring Kraft Macaroni and Cheese Dinner in a variety of dishes with tuna and salmon.

Kraft Macaroni and Cheese Dinner in the familiar blue box enjoys great popularity during Lent when it can be used with other Lenten favorites, such as tuna and salmon, were tested by the Kraft Kitchens and incorporated into a padded recipe folder for use on food store related-item displays. Many merchandising opportunities for related foods are presented in the recipes—including soup, canned vegetables, mushrooms, salad dressing, eggs, cottage cheese, condiments, and a variety of fresh produce items.

Full-color, point-of-sale display material for the "Traditional Lenten Favorites" promotion includes a pole-mounted banner, shelf-talker, and the recipe pads. The material was made available to grocers through Kraft salesmen.

Advertising support for the promotion included full-color, full-page ads in Family Circle, Better Homes & Gardens, True Story, Woman's Day, and TV Guide. Television commercials on Kraft's NBC network television special for Bob Hope, February 20, backed the program.

Tuna Drive

With a full-color page ad in March Family Circle, Chicken of the Sea began a magazine schedule for the "tuna with the Mermaid's touch' 'that will be part of the biggest multi-media advertising program in tuna history.

In all media, Chicken of the Sea Tuna advertising will reach 90% of all regular tuna users 18 to 49 years old—an average of nine times during the key consumption and promotional periods —25 weeks out of 52. For the rest of the year it will achieve 80% reach with this target audience an average of seven times.

Italian Dinner Kit

Lawry's Foods is offering an Italian Dinner Kit for $3.99 plus three Lawry's Spaghetti Sauce Mix packages.

The kit includes a red-and-white checkered cotton tablecloth (3' x 6'), six matching cloth napkins, a cloth apron and a hostess cookbook with recipes for everything from Chicken Marengo to Shrimp Risotto. Plus six plastic bibs.

And another bib is available free at the supermarket just for buying the Spaghetti Sauce Mix. The bib—along with the mail-in coupon for the rest of the kit—appear in special displays.

Buying Preferences

A U.S. Department of Agriculture survey shows four out of ten American housewives using macaroni products and all macaroni products served more often as a main dish rather than a side dish. Macaroni and egg noodles were served more as side dishes than spaghetti. The majority of homemakers said macaroni products were inexpensive but fattening. More than half considered all macaroni products to be about the same color and three out of ten felt they were high in food value, an exciting food, or a necessary food. A majority of those who had used a macaroni product the week before reported using the particular product at least once a week (macaroni 62 percent, spaghetti 61 percent and egg noodles 56 percent.)

New Ad Agency

Charles B. Foll, vice president and account supervisor with McCann-Erickson Inc., became president and operating director of a new Bay Area advertising agency March 1.

Known as Continental Advertising and Marketing Associates Inc., the agency will build initially around the Golden Grain Macaroni Co. account that moves, along with Ghirardelli Chocolate Co. and Seattle's Mission Macaroni Co., from McCann-Erickson to CAMA.

Foll emphasized the agency is staffed by advertising and marketing specialists, and he said CAMA will be actively soliciting new accounts.

Foll and McCann-Erickson, during the past 14 years, were instrumental in the advertising development of Golden Grain's Rice-A-Roni, Noodle-Roni and other nationally successful products.

IRON INVESTIGATION IN MACARONI PRODUCTS

by James J. Winston, Jacobs-Winston Laboratories

As a result of some of my previous experiments on raising the Iron level from 13 mg. per lb. to 30 mg. per lb., it was decided to continue with this experimentation using a lower level of Iron fortification.

At a level of 30 mg. of Iron per lb., the results of our investigation show that macaroni products in storage will develop a metallic taste and also show a certain degree of rancidity due to the action of the Iron on the fat component.

The above investigation deals with increasing the level of Iron to 20-25 mg. per lb. The importance of the Iron compound is pertinent due to different degrees of assimilation of Iron derived from different compounds. The preferred Iron compound today is Ferrous Sulfate, although for the past 25 years Sodium Iron Pyrophosphate has been the main Iron compound used.

Manufacture

Spaghetti and noodle products on a pilot basis were manufactured in our laboratory using the Iron compounds as follows:

Sample A—Control Spaghetti 100% Semolina (unenriched).

Sample B—Spaghetti—a level of 20 mg. of Iron per lb. derived from Ferrous Sulfate.

Sample C—Spaghetti—a level of 25 mg. of Iron per lb. derived from Ferrous Sulfate.

Sample D—Spaghetti—a level of 20 mg. of Iron per lb. derived from Sodium Iron Pyrophosphate.

Sample E—Spaghetti—a level of 25 mg. of Iron per lb. derived from Sodium Iron Pyrophosphate.

Sample F—Control Egg Noodle (unenriched).

Sample G—Egg Noodle—a level of 20 mg. or Iron per lb. derived from Ferrous Sulfate.

Sample H—Egg Noodle—a level of 20 mg. of Iron per lb. derived from Sodium Iron Pyrophosphate.

Sample I—Egg Noodle—a level of 25 mg. of Iron per lb. derived from Ferrous Sulphate.

Sample J—Egg Noodle—a level of 25 mg. of Iron per lb. derived from Sodium Iron Pyrophosphate.

The above products were processed in a normal manner and produced good cohesive doughs with good color appeal.

Accelerated Stability Tests

A sub-division of each of the above 10 products was placed in a stability oven at a temperature of 100°F. at a relative humidity of 50% in order to determine shelf life. The products were periodically withdrawn from this stability oven and subjected to organoleptic analysis by a panel of three in order to determine the keeping quality as evidenced by change in odor and taste.

At the accelerated temperature of 100°F. the shelf life is evaluated as follows:

One week at 100°F. is equivalent to 1 month of storage at room temperature.

This study was continued for a period of 10 weeks which, in our opinion, is equivalent to a normal storage period of 10 months.

PRODUCT	TIME—IN WEEKS	TASTE	APPEARANCE
Sample A	9 weeks	Normal	Normal
Sample B	"	"	"
Sample C	"	Slightly metallic	"
Sample D	"	Normal	"
Sample E	"	Slightly metallic	"
Sample F	"	Normal	"
Sample G	"	"	"
Sample H	"	"	"
Sample I	"	Slightly metallic	"
Sample J	"	"	"
Sample A	10 weeks	Normal	Normal
Sample B	"	"	"
Sample C	"	Slightly metallic	"
Sample D	"	Normal	"
Sample E	"	Slightly metallic	"
Sample F	"	Normal	"
Sample G	"	"	"
Sample H	"	"	"
Sample I	"	Slightly metallic & slight acidity	"
Sample J	"	Slightly metallic & slight acidity	"

Cooking Tests

The above ten products were subjected to cooking tests at different intervals and the cooked products were evaluated by our panel with emphasis placed on appearance and taste.

Cooking tests were made on these products initially followed by cooking tests evaluation. All samples had normal taste and appearance in tests after 4, 6 and 8 weeks. Tabulated below are results after 9 and 10 weeks.

Summary of Results

The results of this investigation show that the use of a higher level of Iron either derived from Ferrous Sulfate or Sodium Iron Pyrophosphate produces a macaroni-noodle product that has a shelf life of at least 8 months.

At a level of 25 mg. of Iron, there is evidence of a slightly metallic taste at the equivalent of 9 months in storage. This is evident in macaroni-noodle products made from the two types of Iron compounds.

After a storage life equivalent to 10 months, the panel study shows that at the 25 mg. level the slightly metallic taste persists, and in the egg noodle products there is evidence of a slight degree of rancidity due to the increase of the acidity of the product. It is to be noted that there is no evidence of any degree of rancidity in any of the above macaroni products.

Celebrity Cookbook

A syndicated column, "Celebrity Cookbook," by Johna Blinn recently carried this lead paragraph: "I can't cook a lot of things well, but what I cook, I cook very well," sizzling singer Barbara McNair said. "My specialties are things like spaghetti, pot roast, collard greens, all those good things that boil up in big pots that go round and round!"

She is big on holiday dinners, reports Miss Blinn. "I always have greens to go with the turkey, but I am more likely to have macaroni & cheese. I have to fix mashed potatoes too, which sounds wierd with macaroni, but some people prefer them.

Her spaghetti, a one-pot production, is a favorite when she entertains at her home in Las Vegas. "I don't make the sauce separately. First I brown the meatballs and set them aside, saute the vegetables till they've done their thing and then throw in the meatballs and cook it all together until they get all gushied up. That's good!"

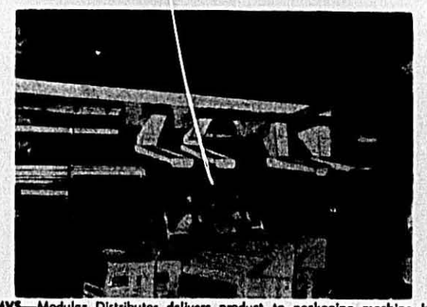
Distribution of Materials to Multiple Packaging Stations

By Peter V. Kenford, General Sales Manager, Aseeco Corporation

As complete automation approaches realization, systems concept gains ever increasing importance. Processing can produce veritable mountains of product in short order, and packaging can very effectively pack off this product. However, there exists the ever prevalent problem indigous to most processing and packing plants of matching the production output to meet the capability of the packaging line.

Delivery of materials to the packaging equipment has a direct bearing on the consistency of the net weights and the efficiency of the packaging machinery output. Lack of material on the demand of the packaging machinery causes poor weights which result in product give-away and profit losses, or under weights which lead to customer dissatisfaction, not to mention starvation which lowers the pack-off efficiency.

Heretofore, this problem of correlating input to output has been partially overcome by the use of recirculating feed systems, binning off, or throttling down the output of processing. All of these methods actually lead to increases in the inefficiency of the entire operation by the requirement for additional operating personnel, product degradation, the absence of the desired feature of first-in/first-out of product and reduced production.



MODEL MVS—Modular Distributor delivers product to packaging machine hoppers on demand. Recirculation or over flow of product into barrels is eliminated, saving floor space and labor. Accumaveyor surge storage is in background.

Storage of Surge

The Aseeco Corporation's specialized experience in automated bulk materials handling has resulted in many innovative firsts which have received considerable acclaim. Among these is the patented Aseeco concept of automated bulk storage coupled with modular distribution of product to multiple use points. This system incorporates two distinct and separate functions. The first is the storage of surge between processing and packaging and the second is the withdrawal from storage on a first-in/first-out basis at the demand of the packaging machines without the introduction of product recirculation.

For free-flowing non-fragile products, the surge storage can be in the form of bins, but for products that are prone to bridge, are very friable and very degradable bins cannot be utilized. For the latter, Aseeco uses their proprietary Accumaveyor which is essentially an en masse storage belt conveyor of a very wide width, e.g., up to 7' wide with high sides and a length to suit the conditions of production.

A delivery system equipped with a tracer loads the Accumaveyor starting at the discharge end and working back towards the tail. The tracer senses the trailing edge of the material burden, thereby ensuring uniform loading. Upon the requirement of material for packaging the Accumaveyor belt inches forward very slowly discharging its contents at a controlled rate.

Vibrating Distribution

The modular vibrating distribution system is the second function of the systems concept. It is unique in that it has the capability of serving any number of packaging machines instantly on demand without the danger of starvation or the utilization of recirculation.

Essentially it is comprised of individual vibrating modules (one for each packaging machine) each with its own drive and the modules are arranged in series. The modules are so emplaced that they are capable of feeding each other. Each module is equipped with an automatically operated bottom discharge gate which is located at the infeed of that respective module and is directly above the packaging machine infeed hopper. A product level sensing device is utilized above each discharge gate. The modular system is interlocked back to the surge storage area by electrical circuitry.

In Operation

In operation, the following occurs: a packaging machine calls for product. Immediately the automatic gate at the module concerned opens allowing product to flow into the packaging machine hopper. At the same instant that the gate opens, all of the preceding modules start to feed product from the surge storage area. When the packaging machine is satisfied, the gate automatically closes but the preceding modules continue feeding product until its level reaches a present point and actuates the level sensing device above the gate. This then shuts down the line. This sequence has completed one cycle and the system is charged and ready to cycle again.

The closing down of any number of packaging machines in the line for film changes, etc. does not affect the overall operation or efficiency of the distribution system. The gate in the module located above the shut down packaging machine is simply set to the non-operative position and material is transported over the non-operative packaging machine to the next unit in line that is operative.

No Product Degradation

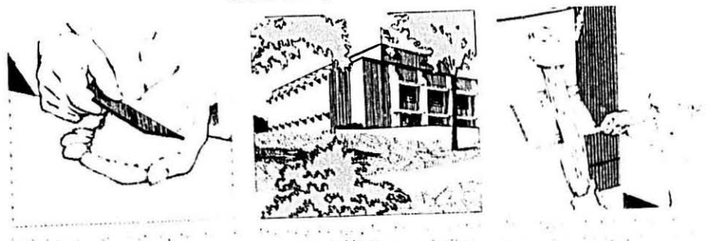
A very important feature of this system is the elimination of product degradation. Unlike a recirculating system, when there is no demand for product, the product is sitting in a static condition in either the bulk storage area or in the modular distribution system. It only moves when there is demand, keeping attrition to a minimum.

In summation, this system can and will deliver product instantly on demand at any number of stations without the possibility of starvation, on a first-in/first-out basis without recirculation. It will also operate with the same efficiency on a line where diverse size packages are being filled, e.g., ½ oz., 2 oz., 8 oz., etc. The demand of each individual packaging machine may vary yet they can all be fed from one common product flow.

(Continued on page 28)

the Pure, Golden Color of Quality

King Midas Semolina and Durum Flour
Where Quality Pasta Products Begin



PEAVEY COMPANY
Flour Mills

Distribution of Materials —

(Continued from page 24)

How It Works

Processed product is conveyed to a Surge Storage Unit. (Hopper or Belt type) and is conveyed out on demand to the Modular Distribution Vibrators. After the entire line of vibrators is filled with product, the vibrators stop and all product from processing is then automatically held in the Surge Storage unit until demanded by the Modular Vibrators.

Product level sensing devices, in the receiving hopper, demand product from their respective Modular Vibrator overhead and are supplied instantly through the automatic gates.

As the level of product above each gate drops below a set point, it is refilled by the vibrator ahead once again ready to supply on demand.

Packaging Show

"Packaging in the Age of Controls: Increasing Creativity and Increasing Productivity" will be the theme of the American Management Association's 41st National Packaging Conference.

The conference is held annually to coincide with the A.M.A. National Packaging Exposition, one of the country's largest annual industrial expositions and the largest to be held in New York during 1972.

About 30,000 executives attended the events in 1971, when they were held in Chicago, and an even greater turnout is expected in New York. More than 400 companies will exhibit thousands of products including packaging machinery and equipment, materials and supplies, containers and services. Approximately 4,000 executives, engineers, consultants and sales people will be on hand to answer questions of visitors on the exhibit floor.

At New York Coliseum

The show will take place at the New York Coliseum, where it will occupy all available booth space on the four floors, from April 17 through 20. The conference will be in the Americana Hotel, April 17 through 19.

Conference sessions will take place Monday morning—with the afternoon free for inspecting exhibits—and on both morning and afternoon on Tuesday and Wednesday.

There will be three concurrent sessions on the first day: "The Packaging Man's Responsibility in Controlling Waste," "Smart Shopping for Packaging Designs" and "More Productivity from the Packaging Machinery Line."

Second day topics are "How Packaging Materials Are Adjusting to Meet Changing Conditions," "Unmanaged Packaging—What is it Costing You?" and "Labelling Regulations Keep Evolving—How to Live with Them."

On the last day, there are: "Design Testing—Is it Valid? Is it Worthwhile?" "Are We Delivering What We Produce? The Transportation Crisis," "So You're Changing Your Packaging —How To Do it Most Economically" and "The Changing Consumer—and the Impact on Packaging."

Another highlight will be the Wednesday luncheon speaker who will devote his talk to a discussion of what the Government is doing about packaging for poisoning prevention.

Many Machines

Scores of different types of machines will be demonstrated under simulated factory conditions. Some of these include aerosol loading and handling, ampul handling, bale sealing, bottle cleaning, bundling and bundle tieing capping, case handling, coating, coding numbering, imprinting, perforating and cup filling and capping.

For bags there will be machines for filling, closing, sealing, tieing, opening sewing, bag-making and stapling. For boxes, there will be lidding machines and others for box-making, folding set-up and corrugated, quadstaying and window-applying. For cartons, there will be cartoners, carrier-cartoners, and carton handling.

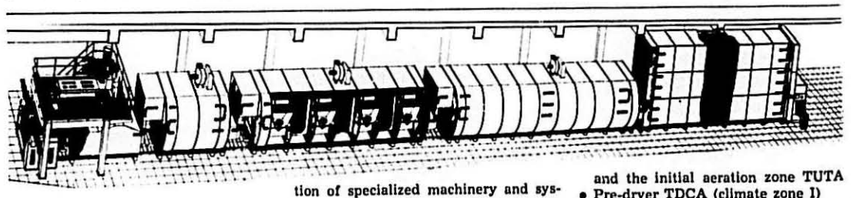
Scores of others include static eliminators, stencil makers, shrink packaging, label gumming and transferring, film extruding, foam molding, among others.

Advance Rapid Registration Cards which eliminate waiting on line at the show may be obtained from Clapp & Poliak, Inc., 245 Park Avenue, New York, New York. Conference information is obtainable from the American Management Association, 135 West 50 Street, New York, New York 10020.

PMMI Pack Expo

The 1972 PMMI Pack Expo promises to set a new record for size and number of exhibitors, based on exhibit space contracts signed by less than half of the eligible exhibitors, according to Robert Coughlin, vice president, Pneumatic Scale Corp., Quincy, Massachusetts, and PMMI Show Committee chairman.

The 1972 show, produced by the Packaging Machinery Manufacturers Institute for the display of packaging and converting machinery and materials, will be held at Chicago's McCormick Place October 30-November 2.



Fully Automatic Systems for The Production of Macaroni

Buhler Brothers, Ltd. of Uzwil, Switzerland have been constructing machinery and systems for the manufacture of macaroni since 1903. Buhler machines of varying output capacities exist in innumerable plants to produce long, short and rolled goods. Worldwide experience over the past 69 years facilitated the planning and construction of specialized machinery and systems with a fully automated production process which meets the high demands of today's production of macaroni products. The largest macaroni manufacturing line in operation since 1970, has a maximum output capacity of 15,400 lbs. per hour (7000 kg/h).

Pictured above is a typical continuous Buhler long goods line.

- Press TPAD with feeder TCDA.
- Beneath the press:
  spreader TSS with distributing tube and the initial aeration zone TUTA
- Pre-dryer TDCA (climate zone I)
- 1st final dryer TDCA (climate zone II)
- 2nd final dryer TDCA (climate zone III)
- Storage unit TAG with 7 levels for a filling time of 16 hours and a packaging time of 8 hours.
- At the extreme right the automatic stripper and cutter TST with discharge shaker for immediate transport to packer installed on the floor below.

National Macaroni Institute Plans and Progress

Theodore R. Sills

Elinor Ehrman

Ted Sills: The reports you have heard this morning on the Washington scene gave you a pretty good idea of what is happening. There is no questioning the fact that 1971 will be the year that the macaroni industry went to Washington to fight the battle of the standards and there is no question that in 1972 there will be a continuation of the battle. Chairman Al Ravarino, on occasion, called us and was very sad about the fact that a particular newspaper story that he was reading gave the play to General Foods, seeming to favor their stand. We tried to explain to Al how these things happen, and I would like to briefly explain them to you.

Battle Phases

Our battle so far has fallen into three parts: Phase I began when the macaroni industry became aware of the threat to the Standards Identity and decided to fight back. The publicity then was favorable to the macaroni industry. In Phase II General Foods answered the stories that had been appearing and in that answer donned the cloak of piety and consumer interest. Phase III sees the macaroni industry punching back and exposing the more or less sanctimonious public image that General Foods was trying to project. So you have three different phases of stories and this is almost the duplicate of any type of big story that is running. There will be a Phase IV too, so don't be alarmed when you see an occasional story that seems to favor General Foods. This is the way these things always go.

The Great American Wheat Food

So proceeding onward and without taking issue with the development of new low cost, high protein foods designed within the industry perhaps to fight malnutrition among the poor, we believe that the macaroni industry in its consumer releases for 1972 must herald the fact that macaroni is the great American wheat food. This is what we are going to push and push hard. The thrust of our copy will be the nutritional aspects of macaroni, the texture and identity, the quality of al dente provided by the wheat content and all the way through our posture will be a positive one where we will talk about the industry's efforts to improve the quality of the product, the good taste of the product, and the nutrition of the product. Both the food page and the editorial side will be covered. Because our theme is going to be "Macaroni, the great American wheat food," we hope that all of you will consider this and do the same thing in your advertising and promotional efforts. If and when the General Foods threat is gone, there will be additional threats to the makeup of macaroni. So consequently if you value your product as a great wheat food with the inherent qualities for which people have always bought it, you have got to do a constant, positive selling job on why the product is great and what makes it great.

Elinor Ehrman: Meanwhile, back at the publicity works we have had perhaps the best year ever for consumer publicity on macaroni products. This report will be brief because we are only going to talk about one part of our program—and that is going to be on the consumer magazine results we have had.

Two radio and television releases went to 1,611 stations.

81 companies and organizations gave 157 uses of cooperative publicity and/or advertising.

Twenty placements in cookbooks, calendars and special publications.

Two trade releases went to 292 publications.

Three Television Program Kits received 345 showings.

Four releases and a press kit was prepared for the New York Press Luncheon.

306,000 recipe leaflets were distributed as a result of advertising in home economics magazine, Forecast.

Two mailings of merchandising messages were sent to the grocery trade.

Magazine Features

American Home in July ran a two-page color story, "Pasta Al Pesto," featuring recipes of the famous chef Jacque Jaffrey.

Redbook had a double-page spread in color which included cooking directions for spaghetti as well as five more pages with sauces for spaghetti products.

A pasta article in the September issue of Family Circle ran four pages and included recipes for linguine, rotelli, lasagna and spaghetti.

The September issue of Woman's Day had the work of our friend Glenna McGinnis in "Bravissimo Pasta Salads." The two page article had a table of substitutions for basic shapes and cooking directions.

In a fall issue of Family Circle, the cover showed "Carefree Pasta Jewelry" modeled by Mary Tyler Moore. We worked long hours with the editors on this feature gathering various shapes and supplies. The story was illustrated with twelve color photographs with numerous black-and-white "how-to" drawings.

Work Basket is a specialized magazine which reaches people involved

(Continued on page 32)

National Macaroni Institute — Box Score, 1971

Medium	Placements	Circulation
Consumer magazines—		
Women's, Youth, Romance, Shelter, Farm, Negro, Spanish, Special Interest	210	565,188,771
Newspaper Syndicate and Wire Service Placements	118	766,388,239
Daily and Weekly Newspaper releases	22	572,000,000
Sunday Supplements	16	75,784,352
Color pages	94	34,894,239
Negro and Labor press releases	2	33,000,000

NMI Report —

(Continued from page 30)

with needlework. They ran a six page article entitled "Pasta" in the January issue. Included were 18 recipes.

A wonderful item appeared in Seventeen—a full color double page spread with "how-to-do-it" instructions running down the page for Ham & Eggs Spaghetti (Spaghetti Carbonara) in the October issue.

Ingenue has "Macaroni is a Message, Eight Ways to Manipulate a Hot Medium," October issue.

Bon Appetit, Sept./Oct. issue, devoted a full page of color to Polpettine con Spaghetti and gave recipes in a story on Italian food on another two pages.

Gourmet used the title "Pasta Perfect" for a feature in the July issue.

Clipper magazine, distributed by Pan-American Airlines to their 1,254,000 circulation, featured pasta in their February issue with the title "The Fine Art of Using Your Noodle."

Daring Romances asked "What's the Fairest Fare of All?" as the title of a six-page article which ran a total of 23 recipes in the April issue.

Good Housekeeping's Cooking for Fun book came out about Christmas time and included recipes and suggestions for parties. The article on pasta was illustrated with various shapes. It has some 500,000 readers.

California Farmer featured "Pasta in Every Pot" on three pages with six illustrated recipes.

There were many other magazine breaks where macaroni was a part of the theme. An example was a story on shortcut easy cooking as in Good Housekeeping and Cosmopolitan. Chatelaine in Canada featured pasta in a story on leftovers. Budget stories were popular this year and macaroni products had frequent mention, as in McCall's and the Farm Journal. Camping stories using macaroni recipes were popular. While the use of pasta in Italian cookery remains a great ethnic theme.

Good Start

We have already started off 1972 with three outstanding breaks:

Good Housekeeping for February has a half dozen pages in color and six more in black-and-white with the story "Spaghetti, Macaroni and Noodles, New Ways With Them."

Family Weekly, January 9 issue, ran a three-page story "What Every Cook Should Know About Pasta—a Complete Guide to Spaghetti, Macaroni and Other Delights plus a few great recipes with which to use your newfound knowledge."

Woman's Day, February issue—Glenna McGinnis has a little booklet in the center section with 32 recipes all featuring pasta products.

If these three breaks alone were totalled up for value of advertising space alone it would be over $500,000—so we are off to a flying start.

What Every Cook Should Know About Pasta

Marilyn Hansen recently wrote in the Family Weekly Cookbook: "Have you ever really stopped to look at the vast selection of spaghetti, macaroni and egg noodles in your supermarket? Imaginative manufacturers have taken semolina or durum wheat flour, mixed it with proper amounts of water, kneaded, shaped and dried the dough, producing all the gender of spaghetti. Macaroni is made with a hole in it; for egg noodles, they've added eggs.

Casserole Freezing Guide

To freeze: line casserole or baking dish with heavy-duty aluminum foil. Assemble casserole as recipe directs. Bring foil up over casserole to seal, folding double down center of casserole and at ends. Seal with freezer tape; label. Freeze right in casserole. When frozen, remove casserole and replace frozen food package in freezer for storing.

To serve: unwrap foil, place frozen food in original casserole, let stand 3-5 hours at room temperature to partially thaw. Bake covered at same oven temperature but ½-1 hour longer than original recipe indicates, or until center of casserole is bubbling.

Budget Tips

Read grocery store advertisements regularly; take advantage of special sales to buy in quantity items used frequently. Macaroni products are always low-priced and always good buys.

PASTA USE GUIDE

VARIETY	USE
Elbow macaroni, shells, corkscrew (spirelle), bows and other shapes of same size	Casseroles Salads Soups and Stews
Spaghetti: various sizes, fusilli (twisted spaghetti), linguine (flat spaghetti)	With sauces: meat, poultry, vegetable, fish or seafood. Simple side dishes: with butter or oil, herbs or grated cheese.
Egg noodles: fine, medium or wide	Casseroles With sauces Simple side dishes Soups Desserts
Pastina and other very small shapes	Soups Children's meals

HOW MUCH TO COOK?

Spaghetti and macaroni are approximately double in volume after cooking while egg noodles remain about the same. Eight ounces of uncooked pasta will usually provide about 4 servings.

PRODUCT	COOKED	DRY
Spaghetti	5 cups	8 ounces
Elbow macaroni	4½ cups	2 cups (8 ounces)
Egg noodles	4 cups	8 ounces (about 4 cups)

How To Cook:
Basic Directions for 4 Servings

1. In a large (6-8 qt.) kettle, heat 3 qts. water to rapid boil.

2. Add 1 tablespoon salt.

3. Gradually add 2 cups (8 ozs.) macaroni or 8 ounces spaghetti or 8 ounces egg noodles (about 4 cups). Be sure water continues to boil. The rapid and continuous boiling helps to keep the pasta moving about so it will cook quickly and evenly.

4. Cook, uncovered, stirring occasionally until tender. Stirring helps to keep the pasta moving in the boiling water so that all of it will be cooked at the same time.

5. Test for doneness by tasting one piece. Ideally, it should be tender, yet firm. Cooking time will vary with size and thickness of pasta used. Very small pasta may cook in 2 minutes, some large shapes may require 15 minutes; average time is 8 to 10 minutes. Cook a little shorter time if the pasta will be used in a casserole and receive further cooking.

6. Immediately drain the pasta in a colander. Serve as quickly as possible or mix with other ingredients in a recipe. Do not rinse unless it is macaroni to be used in a cold salad. If so, rinse with cold water and drain again.

WATCH FOR THE BOOMERANG IN POLLUTION CONTROL

by
ARCH N. BOOTH
Executive Vice President
Chamber of Commerce
of the United States

Earth, the environmentalists have reminded us, is a "spaceship" in which everything must ultimately be recycled, in one way or another.

So it is. And nowhere is it more important to keep that fact in mind than in the front lines of the war on pollution.

The environmentalists demand, quite properly, that we consider carefully the long and short-range environmental effects of everything we are doing, and everything we plan to do. But for some reason, many of them fail to understand that such careful consideration is equally imperative in the case of pollution-fighting efforts. Consequently, we seem to be acting in haste with insufficient time to repent at leisure.

The specific examples are already numerous:

- Campaigns to delay construction of nuclear power plants will result in the construction of more fossil fuel plants, which are much less "clean," environmentally, than the nuclear plants.
- Severe restrictions on the use of leaded gasoline in Japan resulted in an increase in hydrocarbons in the air, which worsened photochemical smog.
- Pressure against phosphate-containing detergents brought on several substitutes far more dangerous than the phosphates.
- Hasty abandonment of DDT has contributed to a resurgence of malaria in some parts of the world.

And so on.

Now we are confronted with a bill, S. 2770, designed to eliminate the discharge of *all* pollutants into our waterways by 1985. At first glance that goal sounds praiseworthy. But what about the costs? What about the *environmental* costs?

We cannot "eliminate" pollutants any more than we can eliminate any other form of matter or energy.

So the real decision with respect to many pollutants is *not* how to "get rid" of them, but rather, where to put them. And that brings us back to the clean water bill.

If none of the substances now being exhausted into the water may continue to be so disposed, something else will have to be done with them. What? Recycling seems an ideal solution. However, not all things can be recycled, given the present state of our technological development. And sometimes, even recycling can cause problems.

It is quite possible that, given the alternative methods of disposal, less damage would be done to the total environment by permitting *some* discharges into *some* waterways.

Take thermal discharges, normally associated with nuclear power plants. If the plant is located on a relatively small lake, bay or river, an increase in the water temperature might be sufficiently damaging to enough aquatic life over a large enough area to make the environmental cost of the plant prohibitive.

Under other conditions, such thermal discharges can enrich the aquatic life, fostering biological activity and fish growth. Heat does not linger in the biosphere. And pollution is relative.

The environmental cost of a particular practice must be carefully weighed against the social cost of abruptly halting it, and the environmental consequences of the available alternatives.

Last summer, 30 distinguished scientists from 14 countries met in Stockholm to discuss the results of their study of man's effect on climate. Some of their conclusions are helpful in re-establishing a proper sense of perspective:

1. Man is not injecting enough carbon dioxide into the atmosphere to melt the polar icecaps. The North Pole's icecap is not melting, and the Antarctic's is actually growing. Even if the world's entire fossil fuel reserves were burned, and the air's carbon dioxide content doubled, the rise in temperature—assuming everything else were equal—would be no more than an acceptable two degrees Centigrade.
2. It is true that man-made pollutants are entering the atmosphere in increasing quantities, but no amount of such pollutants can compare remotely to such natural forces as erupting volcanoes for effect on the climate.
3. Man's injection of heat into the global atmosphere is negligible from every point of view.

Nature, it seems, is tougher than we give her credit for.

2610

Microwaves at Golden Grain

"WE'LL be putting in our second microwave oven soon and stepping up the size of our press."

Vincent DeDomenico, Secretary-Treasurer of Golden Grain Macaroni Company in San Leandro, California explains.

"A year ago last May at Barilla, in Parma, Italy I saw the biggest macaroni plant in the world. They have tremendous drying ovens 300 feet long.

"These are so big because when they need more production they just use existing know-how and make bigger equipment. That's how they wound up with such huge ovens and space requirements. Fantastic!

"But, risky, too! One point in that big line breaks down and everything stops!

"I saw that size is not the answer. The only answer is small, compact units. But I didn't know how to work [illegible] that time, you see, I didn't know much about microwaves.

"Then when I got back here, I heard that Lipton was drying soup noodles with microwave. This would be what we wanted."

Golden Grain then contacted Microdry Corporation, the manufacturer of the microwave dryers and took a truckload of various kinds of wet pasta to Microdry's service center in nearby San Ramon. They ran them through microwave ovens, guessing a bit at techniques for each different pasta. Results were mixed.

As he told of it, Mr. DeDomenico gave one of his quick warm smiles before saying:

This conventional dryer is about 80 feet long and 18 feet high. It's work was taken over by a microwave oven 23 feet long and 7 feet high that can turn out twice as much pasta.

"Some products came out lousy. In appearance, I mean. Blistered. White. No housewife would buy them.

"But then **some** came out good. And we felt that if some came out good all could, if we worked at it."

Golden Grain bought a production size, 915 megahertz, 60 KW microwave unit, capable of drying 3000 lbs./hr. of macaroni products. This was the only change required in the production line. Then with Microdry engineers they perfected techniques for drying 80% of their products. This took about a month.

At this writing Golden Grain has been in production with microwaves for about six months. Mr. DeDomenico says, "We're through learning how to handle microwaves on those products." It's routine and they're now so busy using their microwave oven to produce noodles and macaroni they can't spare it to work out techniques for the rest of their products. When they get their second oven Vince feels this probably can be done. The only problems left are with the largest pasta.

Golden Grain Pioneers the Field

Lipton had found how to use microwaves on one type of pasta. At Golden Grain they found it works well on many types—with one difference. They did not want the slight puffing that halves the home cooking time of Lipton noodles. Golden Grain insists on products that look exactly as they have looked for years, with a golden or amber color. And they got this with no change in flavor or cooking qualities.

"The trickiest part is how to use microwaves without changing product appearance and cooking qualities," Vince says.

They succeeded by combining the new microwave drying with a controlled steam cooling process. The latter controls cooking quality because it carries off moisture that migrates to the surface from the microwaves' interior drying. Also, too much microwave heat will put white spots on it and puff it.

At this point Microdry solved the major problem with the idea for a controlled cooling section.

Made of stainless steel, it fits under the microwave tunnel. From the oven, the product drops and passes through this chamber where hot humid air is circulated. The concept proved to be a very important part of the technique, yet it is easy to do since critical control is not required.

Front view of the microwave oven.

Any pasta will check if not handled properly. With conventional drying methods it may check, of course, because all the drying is from the outside of the product. This traps moisture inside; then, as the inside moisture migrates to the outside of the product, it expands the outer surface and cracks.

But with microwaves, pasta can check from a different cause. It dries ten or fifteen times faster in the tunnel and the temperature goes quite high. The pasta becomes warmer on the inside than on the outside. A lot of heat is stored deep in the product and for some time continues to dry out the small amounts of residual moisture. If exposed to air right away this product will check.

So instead it is taken through the controlled cooling chamber (patent pending) in which humidity is kept high to prevent overdrying of the outside surface.

If this cooling technique is not used with microwaves the drying would require extremely precise control so as not to build up too much stored heat.

"Taste? I Think It's Better"

When asked if there was a difference in the flavor with the new method, Mr. DeDomenico replied:

"We all agreed it tastes at least as good. It's slightly cooked, you know. The heat can rise to 212°F. and there's some gelatinizing action even though the macaroni is in the oven only ten minutes. I think it tastes better than before."

By the old method temperatures ran between 110° and 140° Fahrenheit. Microwaves raise it to between 180° and 240°F.

An astonishing result, as at Lipton's, is that the bacterial count almost disappears. Weevil infestations also were stopped—even eggs are killed.

(Continued on page 38)

Microwaves —

(Continued from page 36)

The time difference is dramatic, too. With the old oven it took five to six hours to dry egg noodles and eight to ten hours for macaroni products. With microwaves this is all cut to 30 minutes.

Almost as dramatic is the savings in space. The old oven, soon to be torn out, is eighty feet long. The microwave oven is only twenty-two feet long.

And that brings another important benefit, stressed by Vincent DeDomenico.

With the new ovens they have room for much more production without plant expansion. This eliminates construction headaches and costs that could involve purchase of more land for expansion. It's easily explained.

In the first place each microwave oven can produce twice as much product as the old steam heated ones. To that, add the fact that microwave ovens are so small that when Golden Grain has to expand they will have plenty of room for many microwave ovens when they tear down their old dryers.

Operating Costs

It takes two men all day long to clean Golden Grain's old style dryers. Now one man steam cleans the microwave oven in one hour. "That's a sixteen to one reduction," Vince points out. "It puts the oven in production much quicker and gives us two shifts more production per week with no more labor cost."

The cost of running the microwave dryer is favorable considering the cost per pound of product dried. A comparison was made between a 1500 pound per hour conventional line and the 3000 pound per hour microwave oven and the following costs were determined.

Cost Comparison

Cost Center	Conventional	Microwave
Utilities	$2.69	$2.02
Sanitation	.60	.04
Maintenance	1.12	.10
Power Tubes	—	1.25
Space	.26	.08
	$4.67	$3.49

"Changeover from one product to another is quick," Vince continued. "It used to take several hours. Now we clear the belt in ten minutes and change dies."

Operation is simple, too. There is far less chance for anything to go wrong then there is with all the conveyors in the old wood and fibreglas dryers.

"Capital Costs Compare Very Favorably . . .

. . . It's a stand-off pound per pound and dollar per dollar. You could buy the old type equipment for a little less money but you get less production from it. And the life of the microwave oven should be much longer."

Fortunately a lot of Golden Grain's equipment was getting old and they were getting rid of it already on a programmed basis so there was practically no sacrifice of equipment.

Summing up, Mr. DeDomenico counted these points off on his fingers:

"One—sanitation labor, much less. Two—maintenance, much less. Three—service, no problem. Four—less downtime. Five—takes less space and we can grow easier."

He switched to the other hand. "Six—much less time, which of course can mean a leap in production. And seven—no infestation . . . microbiological count is way, way down."

Western Packaging Exposition

For the first time since 1968, the Western Packaging Exposition, now in its 24th year, will return to Los Angeles this year, it has been announced by Clapp & Poliak, Inc., the New York exposition management firm which produces this biennial event.

The show will take place in the ultra-modern Los Angeles Convention-Exhibition Center, July 10 through 12. More than 10,000 visitors from 14 western states are expected, according to Clapp & Poliak.

Companies and agricultural enterprises operating in these states budget approximately five billion dollars each year for packaging machinery, equipment, supplies, materials, services and containers.

Exhibiting companies will demonstrate more than 120 different basic types of such machinery and supplies and these will be exhibited in hundreds upon hundreds of variations.

Exhibits will concentrate on demonstrating for visitors a wide variety of products to cut the rapidly rising unit costs of packaging, to increase production efficiency in packaging and to add to the sales appeal of various packages.

Considerable emphasis will be placed on compliance with Federal and local packaging regulations which are increasing in number and complexity.

Bemis at Packaging Show

Bemis Co., Inc., will display new product and machinery items from several subsidiaries at the National Packaging Exposition at the New York Coliseum on April 17-20. Sixteen Bemis subsidiary companies will join the Bemis Packaging Division and the Bemis-Hayssen Machinery Group in four exhibits at the exposition.

Lots of Tomatoes

For California growers of tomatoes for processing, 1971 was a year that marked the production of the second largest crop in history . . . close to four million tons.

Perhaps more significantly, it was a year in which the California product continued to gain ground relative to both domestic and foreign competition.

"The fact that tomato growers in eastern states had a disastrous year with heavy rains and hurricanes at the peak of their relatively short production season has had the effect of increasing the dependence of major canners on California," Robert Holt, Manager of the California Tomato Growers Association, told the Council of California Growers.

Holt said all the leading processors continued to enlarge their production facilities in California, with Heinz more than doubling production capacity in recent years. He noted that one canner closed a larger facility in up-state New York . . . that the trend is increasingly towards concentration of production facilities in California while eastern plants are converted for storage and distribution purposes.

"The key to the increasing dependence of major canners on California tomato production is dependability," Holt explained. "Here we have the land, the water, the climate . . . and the technology . . . to produce the consistent volume processors require."

Holt noted an encouraging sign for tomato growers; per capita consumption is exceeding population growth.

"New products are making the difference. Processed tomatoes are a major ingredient in operations like pizza parlors . . . and in Mexican foods," Holt said.

Holt believes devaluation will help the U.S. tomato industry in the competition with pastes and purees from the Mediterranean area.

"And Mexican imports thus far have had little effect on canning tomatoes," Holt added.

Holt reported that California growers received an average of about $28.00 per ton for canning tomatoes in 1971. He said growers were generally agreed that a $30.00 price would be needed this year to off-set increased costs.

Holt looks for 1972 production of 4.2 million tons.

Del Coronado in Southern California

THE National Macaroni Manufacturers Association holds its 68th Annual Meeting July 16-20 at Del Coronado, Coronado, California.

Famous Resort

Charming, resplendent Hotel Del Coronado, has reigned as monarch of Western resort hotels for three quarters of a century—yet this majestic establishment has never been more alluring than it is today. As a haven for relaxation and wonderfully varied resort activities, it has no peer.

The hotel epitomizes the grand manner in a superb garden setting, surrounded by stately trees and framed between the sparkling Pacific and Glorietta Bay.

There is a picturesque boathouse belonging to the hotel on Glorietta Bay, just a stroll across Orange Avenue. It is the headquarters for sailing, water skiing, or deep sea fishing by charter boat.

On the north side of Glorietta Bay is a sporty municipal golf course.

Beach and Tennis Club

On the hotel grounds are the complete facilities of the Hotel Del Coronado Beach and Tennis Club with a heated salt water turquoise pool, cabana circle with poolside sunning terraces, championship tennis courts, and acres of white sand and beach. A children's wading pool and supervised playground are centers for the energetic activities of the younger set.

Crown Room

The Crown Room is the hotel's majestic dining room. An architectural masterpiece that remains magnificent and structurally unchanged since 1888, it is the expression of the hotel's traditional grand manner. Distinctive American and Continental cuisine is prepared with pride and care—served with flair and a flourish.

The Victorian Lounge is a rich-hued showcase for the grandeur of turn-of-the-century decor and a popular gathering place for guests.

Other meeting spots include the Casino Lounge on the terrace level, the Luau Room featuring Cantonese cuisine and beverages with Polynesian personality, and the Ocean View Room off the Ocean Terrace. This latter room is an indoor-outdoor lounge where the pleasing prospect of the blue Pacific, Point Loma and the tumbling surf blends with cocktail enjoyment. Dancing is an evening feature in this delightful room.

Greater San Diego

Coronado is a part of the Greater San Diego complex, an area that boasts of ideal weather, many attractions of natural beauty, and a most varied resort center. Without leaving San Diego County, you can sample the romance of an old Spanish mission trail, the delights of mountain resorts and mining towns, the wonders of the desert. Not too far away is the fantasy world of Disneyland, and a short distance down the freeway is Tijuana in Old Mexico. Tijuana has a beautiful modern Caliente Racecourse offering the thrills of thoroughbred racing every Saturday and Sunday. Bullfights are held on Sundays. There is also the Caliente Greyhound Club, jai-alai, and the fascinating curio shops of colorful Tijuana.

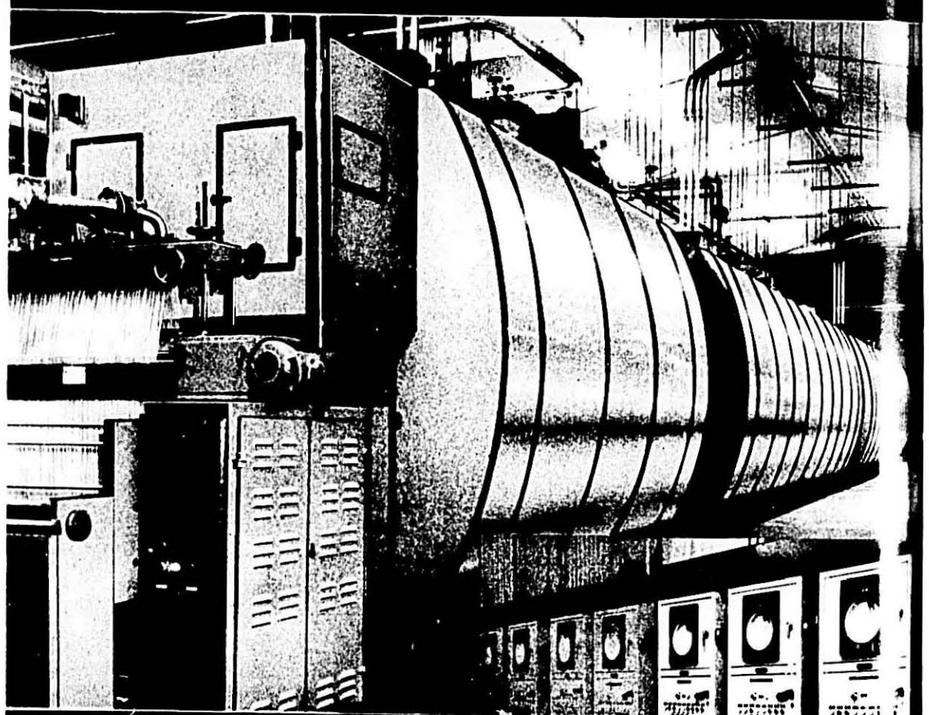
San Diego itself offers the world-famous San Diego Zoo and Balboa Park, with unique exhibits and striking scenic delights. Mission Bay Aquatic Park is a ranking mecca for small boats and sailing craft. Sightseeing points of interest include Cabrillo National Monument at the tip of Point Loma, the promontory that shelters San Diego Bay from the Pacific. This is where Juan Rodriguez Cabrillo marked his discovery of the California coast in 1542.

Up the coast a little way is La Jolla, with its winding streets and stairstep topography, dotted with lovely homes, gardens, quaint and chic shops and apartments.

Tours of Navy ships at the Broadway Pier in downtown San Diego are available on most week-ends. You can also visit the Marine Corps Recruit Depot on Friday afternoons for a colorful regimental recruit parade. San Diego Harbor excursions offer views of our mighty Navy.

Come, Enjoy It!

RELIABLE.



NEW BUHLER LONG GOODS DRYERS
are built to give performance you can rely on!

Operation of entire dryer line shown above is controlled from one location

Completely re-designed

with features that make them

THE MOST RELIABLE IN THE INDUSTRY!

New Conveying system never stops.

Product moves slowly and continuously from spreader to accumulator. No starts and stops. Simplified design means greater reliability since there is less wear than conventional "stop and go" dryers.

Product is consistently excellent

because drying action is always steady. You can count on the product to come out with appealing color and texture. Uniform and straight every time. Ideal for handling with automatic weighing, transporting and packaging machines.

Climate zones are positively separated.

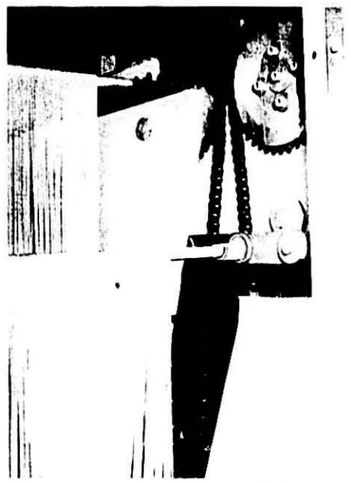
Extremely tight enclosure with Buhler patented "Delta T" control allows high temperature, high humidity drying environment.

Capacity range 500-4,000 lbs/hr.

Standard stick lengths: 60 or 80 inches.

Ask for details

on the built-in reliability of Buhler dryers and other macaroni equipment. Call us or write: The Buhler Corp., 8925 Wayzata Blvd., Minneapolis, MN. 55426. (612) 545-1401/ Eastern Sales Office: 580 Sylvan Ave., Englewood Cliffs, NJ. 07632. (201) 871-0010/ Buhler Bros. (Canada) Ltd., Don Mills, Ontario. (416) 445-6910



Each spaghetti strand travels exactly the same path so you can count on consistent drying. [illegible] control stick elevator keeps strands from [illegible] from chain at transfer point to the drying rack.

Super sanitary design, easy maintenance. All [illegible] panels swing out for easy access to the [illegible] chute. Extra thick polyurethane [illegible] floor construction prevent [illegible]

Complete Macaroni Plants by **BUHLER**®

New President of Delmonico Foods

Joseph P. Viviano has been elected President of Delmonico Foods, Inc., Louisville, Ky., a subsidiary of Hershey Foods Corporation, Hershey President Harold S. Mohler announced. Viviano succeeded his father, Peter J. Viviano, who had been serving as Delmonico President since 1958, on February 1.

A native of Louisville, Joseph Viviano joined Delmonico in 1960, was named Treasurer in 1966 and Vice President in 1968. He is the grandson of Joseph T. Viviano, who founded Delmonico in 1928.

Honor Graduate

The new president is a 1959 honor graduate of Xavier University, where he received a bachelor of science degree in business administration. He was a member of Xavier's 1958 NIT Championship Basketball team and, prior to graduation, broke several of the University's career scoring records.

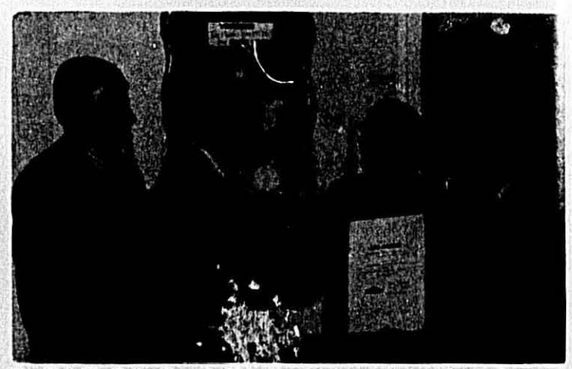
He is a director of Delmonico, Louisville Water Company, Inc., and Independent Boxmakers, Inc. and a member of the Xavier University Board of Governors and the University of Louisville Associates.

Viviano is married to the former Paulette Joyce, also a native of Louisville. The couple has three children.

Retiring President

Peter Viviano joined the firm in 1932 and later served as Secretary before being named President in 1958. He also served two terms as President and three terms as Vice President of the National Macaroni Manufacturers Association. He was educated at Xavier University and the University of Louisville.

Delmonico, a leading manufacturer of pasta products in the Kentucky, Tennessee, West Virginia, Indiana and Ohio region, was originally founded as the Kentucky Macaroni Company. It adopted its present name in 1946 and was acquired by Hershey Foods Corporation in 1966.



New York City Broker Honored—Steve Cosentino (second from right), with Seggerman-Nixon Corp. of New York, was named by Golden Grain Macaroni Co. as its outstanding food broker for 1971 "for exceptional merchandising efforts" on behalf of Golden Grain products. Taking part in the "Broker of the Year Award" presentation were (from left): Bernard Kettler, Eastern sales manager; Dr. Mark DeDomenico, assistant to Golden Grain President Paskey DeDomenico, and Dominic Forte, National sales manager. Cosentino was honored at the Plaza Hotel in New York during the recent National Food Brokers Association convention.

Prince Campaign

Prince Macaroni Mfg. Co., Lowell, Mass., is rotating three 30-second TV commercials in a $500,000 campaign of local spot announcements to promote Prince spaghetti, prepared spaghetti sauces and new curly egg noodles. The spots are programmed in or adjacent to almost every major TV "Special" scheduled in the New York, Boston, Providence, Springfield, Hartford/New Haven, Chicago and Detroit markets starting with the Gershwin Special hosted by Jack Lemmon right on through the Academy Awards this Spring—including the XI Olympic Winter Games coverage.

The campaign, by Venet Advertising, Inc., New York, for Prince includes other TV Specials, such as Bob Hope's Christmas Show, Peggy Fleming, BBC's six part series "The Search For The Nile," National Geographic Specials, Johnny Carson Scandals, Hallmark Hall of Fame's "Harvey," Tennessee Ernie Ford, Harlem Globetrotters, Neil Diamond, Bill Cosby's "Weird Harold" and Jack Paar.

30-second announcements are scheduled, January through May, on WNBC-TV in New York, WBZ-TV in Boston, WJAR-TV in Providence, WWLP in Springfield, WTIC and WHNB-TV in Hartford/New Haven, WCSH-TV in Portland, WMAQ-TV in Chicago, and WWJ-TV in Detroit.

Boy Running

Prince commercials to be featured will, of course, include the "boy running" spaghetti spot which follows an Italian boxy, Anthony Martignetti, running through the streets of Boston's North End. A second spot, the recently produced Spaghetti Sauce commercial ties-in with Prince's new labeling on the complete line of different flavored sauces featuring a stylized pair of eyes. "For I Only Have Eyes For You" is the musical theme which accompanies the animated "extravaganza." A nostalgic female trio, reminiscent of the Andrew's Sisters' close harmony, accompanies jars with plumed headdresses as they do a Busby Berkley routine on a moving stairway.

Curly Egg Noodles

The third, a new commercial introduces Prince's New Curly Egg Noodles, featuring a straight-forward demonstration of the advantages of this new innovation vs. flat noodles, not just because of its different shape, but to make cooking, serving and eating noodles easier and more fun.

Backing up the introduction of New Curly Egg Noodles, Prince will run 1000 line ads and a series of small space reminder ads (four 28-line ads that appear in the same issue but on different pages adjacent to food store ads featuring the product) in New England, Chicago and Detroit markets. The 1000 line ad insertions feature an in-ad "10¢ Off" store redeemed coupon to induce trial usage.

In addition to the TV campaign and introductory newspaper campaign for Curly Egg Noodles, Prince will run 200-line newspaper ad insertions and 60-second radio announcements, featuring various consumer promotion offers on the Pasta and Prepared Spaghetti Sauce brand lines in selected markets within the New England area.

The Prince agency, Venet Advertising, Inc., headquartered in New York, created the Winter/Spring TV, radio and newspaper campaigns.

Lloyd Skinner to Be Honored

City of Hope Humanitarian Award Banquet will be held at Hilton Hotel, Omaha on April 19.

Flock Culling Legislation Proposed

The Wall Street Journal reports: This might be the year Congress decides the chicken comes before the egg.

That's bad news for laying hens, because it means millions of them could be transformed into chicken soup or chicken pot pies before their time. But for egg producers facing economic disaster as the result of the lowest prices in three decades, it could be very good news indeed.

What an apparent majority of the producers want is federal legislation granting the Agriculture Secretary power to order culling of flocks with 10,000 or more birds. Under a proposed bill backed by some 45 produce organizations, the Secretary would act if the average farm price for eggs remained below production costs for a 90-day period, and if requested to intervene by a 15-member egg industry adjustment board representing all classes of producers and geographic areas. The objective would be to bring egg prices back to the cost level, but no higher.

The culled hens could be sold for slaughter through regular commercial channels. Egg producers would have to register the size of their flocks with county Agricultural Stabilization and Conservation Service offices. Buyers of the poultry would certify the slaughter to the producers, who would turn this information over to the county offices. Violators would be subject to civil penalties of up to $5,000 a day.

United Egg Producers

United Egg Producers, an Atlanta-based egg marketing cooperative that has been the proposal's prime supporter, insists consumers wouldn't be hurt by such a "fowl adjustment program" (some on Capitol Hill are calling it "henicide") even though it might boost retail egg prices a bit over the short run. Over several years, egg prices would average lower. William Henry, a Georgia State University management professor, argues in the cooperative's behalf:

"Cyclic price patterns increase the cost of doing business over time," Mr. Henry says. "There is wastage of facilities and flocks as the industry overbuilds and then goes into a cutback."

That egg producers want to stop riding a price roller coaster is itself a surprising turn for an industry that has been one of the nation's purest examples of free market capitalism. Egg producers "understand the rules of the game as far as supply and demand and price fluctuations go," Harold Peck, a spokesman for Midwest Egg Producers Cooperative Association, told a Senate Agriculture subcommittee. But what they face is "an economic burn-out . . . of such magnitude that it threatens to bankrupt the entire industry."

Vaccine Breakthrough

Ironically, it was a scientific breakthrough—development of a vaccine for Marek's Disease, a poultry killer—that has helped prolong the current egg price depression. Use of the preventive caused the laying rate per bird to jump some 2.5% in 1971. That's a sizable advance considering the approximately 328 million layers in production on Jan. 1 and record U.S. output last year of approximately 72 billion eggs, 2.2% more than the previous record set in 1970.

The industry is troubled by the usual cyclical overproduction resulting from peak egg prices in 1969 and early 1970. Wholesale prices have dropped from more than 70 cents a dozen at New York then to less than 30 cents a dozen. And even more basic, egg producers say, is public resistance to the high-cholesterol egg because of a possible link with heart disease.

The current egg price depression, by rallying producer support, could be a major factor in getting a henicide bill through Congress this year. Plans for controlling eggs got as far as the Senate Agriculture Committee at least three times during the 1960s but always foundered on opposition within producer ranks.

Scant Attention

The scant attention the Senate bill, known as the Egg Industry Adjustment Act, has attracted so far in Washington is helping, too. Consumer groups and their Capitol Hill allies could sound the alarm over layer culling. Indeed, the New York City Department of Consumer Affairs already is warning that the bill might produce "an upward spiral" in retail egg prices and ultimately leave the egg producer no better off than now. But if serious controversy doesn't develop, urban and suburban lawmakers would find it relatively easy to vote in favor of a measure intended to keep many small producers from being forced out of business, backers believe.

Although the Senate Agricultural Production subcommittee still is considering the legislation, its approval as well as that of the parent Agriculture Committee appear reasonably certain at this point. Sponsorship by Chairman Herman Talmadge, whose home state of Georgia is the nation's No. 2 egg producer, certainly doesn't hurt the bill's chances. The House Agriculture Committee, for its part, won't act until after a favorable Senate floor vote, but Chairman Bob Poage (D., Texas) is likely to favor a similar version, one House committee source believes.

Crucial Test

One crucial test for the Senate bill was the question of its support by the Nixon administration, which has generally favored the fewest possible restraints on producers. That was settled, however, when Agriculture Under Secretary Phil Campbell, a one-time Georgia agriculture commissioner and well-known friend of the poultry industry, appeared before the subcommittee.

Citing the "disastrously low prices," Mr. Campbell viewed the Talmadge bill as a way to stabilize egg prices "while providing producers with a reasonable, but not excessive, return." The department ordinarily wouldn't favor regulating production through slaughter of productive fowl, he said. But the slaughter in excess of normal culling rates might be as little as 1% each time the program was activated, and no more than 5%, Mr. Campbell estimated.

The department does want the present bill amended, though, to limit laying-flock buildup immediately following a cutback order, as well as to let producers decide by referendum whether the program should operate. The American Farm Bureau Federation, the largest farm organization, wants similar changes as the price of its support. Because of the financial emergency confronting egg producers, the Agriculture Department "wouldn't object" to an initial start-up of culling prior to a confirming referendum, Mr. Campbell added.

Opposition from Poultry And Egg Institute

In line with instructions from its Board of Directors, the Poultry and Egg Institute of America filed a statement explaining why it is not supporting the Egg Industry Adjustment Act (S. 2895).

Signed by Hugh Purnell, Purnell's Pride, Inc., Tupelo, Miss., chairman of the Board of Directors, and Harold M. Williams, president, the statement said:

"The Poultry and Egg Institute of America is the only national trade association that serves and speaks for the total poultry and egg industry.

"It has the broadest membership of any organization in the industry.

"It includes breeders, hatcherymen, producers, handlers and processors, and marketers of eggs and poultry. Its membership is made up of persons, cooperatives, and corporations. More than 1,300 of our members are "quota" producers (voting members), whose primary interest is concerned directly with

(Continued on page 45)

Opposition —
(Continued from page 43)

production. The overwhelming bulk of these producer members are on the egg side of our industry.

"A majority of our Board of Directors met December 9, 1971 to review this proposed legislation. It was explored in depth and debated extensively. Upon motion, duly made and seconded, it was agreed to submit to all directors, by mail, a motion to support S. 2895. This delay was allowed to permit directors to get a better feel of members' opinions and to let various state groups hold meetings.

"Directors were required to cast their ballots by January 1, 1972 and the ballots were sent directly to our auditors, a public accounting firm. The vote, as certified by our auditors, was 41 to 19 not to support the Egg Industry Adjustment Act.

Primary Interests

"Our Board of Directors currently consists of 74 members from 36 states. Half of them, according to the by-laws, must represent those whose primary interest is the production of poultry and eggs.

"Forty-seven directors are from proprietorships, firms, or cooperatives who own egg-producing hens. They would be classed as producers under this proposed legislation and would be affected by it. In some instances, egg production may not be the primary industry interest of these directors, but they do have sizable investments in egg production and are vitally interested in producing eggs at a reasonable profit.

"It is fair to say that producers of shell eggs are amply represented on the board with representation ranging from a small producer-director owning 20,000 hens, to a larger independent producer-director owning 300,000 hens, to a farm-cooperative-director whose members own 4 million hens.

"In its consideration of this proposed legislation the Board recognized that two main points had to be weighed.

"One was the current plight of the egg business.

"The other was the long-range impact any proposed legislation could have on the fundamental character of the poultry and egg industry.

Mandatory Slaughter

"The purpose of the legislation is to authorize mandatory slaughter of fowl in moments of over-production of eggs. The Secretary of Agriculture would be authorized to create a 15-man industry board of egg producers. An egg producer is defined as anyone owning laying fowl engaged in the production of commercial eggs. The broiler industry would not be covered.

"Flocks under 10,000 and 10,000 birds or larger flocks may be exempted by the Secretary, but this exemption is not mandatory.

"Any time industry would experience three consecutive 30-day periods when producers receive average egg prices below the average cost of production a fowl liquidation program would be put into effect.

"There is a concern that this could work to the disadvantage of an above-average producer whose costs of production are lower and thus his operation could be profitable.

"What of the man, too, who is producing especially for a specific market?

"Egg producers would be required to slaughter a specific percentage of their hens. The liquidation process would end following at least three consecutive 30-day periods when the seasonally adjusted farm price goes over the cost of production.

No Referendum

"The bill does not provide for any producer referendum and this lack of a right to vote by producers is considered by many as a major stumbling block to this proposal. The bill would expire two years after enactment unless renewed.

"The Secretary would be authorized to require egg producers to register, to file reports concerning their production, prices and costs of production, and to keep books and records. He would also be authorized to examine all records, including income tax reports, deemed relevant by the Secretary, and to make such investigation as he deems necessary to carry out the act.

"Some producers feel that the bill would give producers an incentive to house more layers than are needed (as a hedge against government-ordered kill-offs in the future). Would this not then encourage over-expansion, instead of checking it?

"The egg industry has been a long time opponent of government centralized controls. Many in industry are worried that this would be a foot-in-the-door for further government controls.

"One thing is certain, Mr. Chairman. Egg producers are sharply divided over this legislation.

How Egg Products Inspection Act Affects Shell Eggs

The second part of the Egg Products Inspection Act, which goes into effect July 1, is explained in brief in the new U.S. Department of Agriculture flyer, "Shell Eggs and The Egg Products Inspection Act."

The first part of the Act, which went into effect last July 1, deals with egg products. The second part controls the disposition of what the Act terms "restricted eggs"—checks, dirties, leakers, incubator rejects, and loss eggs. In effect, the Act requires that eggs be U.S. Grade B or better to move into consumer channels. As a result, the Act affects egg packing plants, producer-packers, hatcheries, and food businesses.

If you're in any of these categories, you may come under the law. "Shell Eggs and The Egg Products Inspection Act" will tell you whether you do, and if so, what will be required of you. The new publication also tells you where to go for more information.

If you must comply with the regulations of the second part of the Act, you must do so by July 1, so send for "Shell Eggs and The Egg Products Inspection Act," (C&MS-95). Write to C&MS Information Division, U.S. Department of Agriculture, Washington, D.C. 20250.

Poultry and Egg Institute

Morris Schneider, Chairman of the Institute's Egg Products Committee, is writing breakers who are not now members of the Institute, pointing out the advantages of being a member.

A new, simple, and rapid technique for identifying Salmonella and enteric organisms was demonstrated at the recent Egg Products Quality Control School. It involves using Colab's Auxotab a prepared card on which purified cultures are placed. The color developed then identifies the bacteria group.

The Institute recently announced that its rule booklet, "How to Prevent Accidents," is not only in its third printing, but is also available in Spanish. The Institute's safety Committee is to be commended for preparing the booklet, and for multiplying its usefulness for the benefit of Spanish-speaking employees. These booklets are 35¢ each for 1-99 copies; 30¢ each for 100 or more. Orders should be sent direct to Mr. Bruce Dutton, Poultry & Egg Institute of America, 67 East Madison Street, Chicago, Illinois 60603.

Plentiful Eggs

Eggs will be the feature of the U.S. Department of Agriculture's Plentiful Foods List for April.

Other plentifuls on the April list announced by USDA's Consumer and Marketing Service are: milk and dairy products; canned cranberry sauce and cranberry juice cocktail; frozen concentrated grape juice and canned grape juice; canned applesauce and apple juice; canned pears; prunes and prune juice; and potatoes and potato products.

BUYERS' GUIDE

The following firms support the industry's trade association as associate members and/or as advertisers in the Macaroni Journal:

DURUM PRODUCTS

A D M MILLING CO., Box 7007, Shawnee Mission, Kansas 66207. Manufacturers of Comet No. 1 Semolina, Romagna Granular, Goldenglo Fancy Durum Patent Flour, Palermo Durum Flour. See ad page 5.

AMBER MILLING DIVISION, Farmers Union Grain Terminal Association, St. Paul, Minnesota 55165. Telephone: Area Code 612, 646-9433. Manufacturers of Venezia No. 1 Semolina, Imperia Durum Granular, Crestal Durum Fancy Patent Flour, and Kubanka Durum Flour. See ad page 11.

CONAGRA-MONTANA, INC., 2201 E. 7th Street, Oakland, California 94606. Silver Bow Brand—Sack or bulk. Walter Nisbet, Sales Agent.

GENERAL MILLS, INC., Sperry Division, Bakery Flour Sales, Western Region, P.O. Box 10-730, Palo Alto, California 94303. Manufacturers and distributors of Royal and Golden Durum Granulars; Sperry Macaroni Flour; Durella Semolina No. 1; Exalto and Santa Durum Clears.

INTERNATIONAL MULTIFOODS CORP., Durum Product Division, 1200 Investors Building, Minneapolis, Minnesota 55402. Manufacturers of Duregg Egg Noodle Mix, Como No. 1 Semolina, Capital Durum Granular, Capital Fancy Durum Patent, Ravena Durum Patent, Bemo Durum First Clear and Naples Durum Second Clear. General offices in Minneapolis; sales offices in New York and Chicago. Principal durum mills in Baldwinsville, New York, and St. Paul, Minnesota. See ad on Back Cover.

NORTH DAKOTA MILL AND ELEVATOR, Grand Forks, North Dakota 58201. Manufacturers of Durakota No. 1 Semolina, Perfecto Durum Granular, Excello Fancy Durum Patent Flour, Nodak Durum Patent Flour, Red River Durum Flour, and Tomahawk Durum Flour. General Sales Office: Grand Forks, Don Gilbert Sales Manager (701) 772-4841; District office: in Stillwater, Minnesota: Ray Wentzel (612) 439-5662; in Haworth, New Jersey: John Tobia (201) 384-3862; in Scotch Plain, New Jersey: Lou Viviano (201) 754-9031; in Louisville, Kentucky: Lewis Jones (502) 634-4213; in Coral Gables, Florida: Harry Bailey (305) 446-7919. See page 13.

PEAVEY COMPANY FLOUR MILLS, 860 Grain Exchange, Minneapolis, Minnesota 55415. Manufacturers of King Midas No. 1 Semolina, King Midas Durum Granular, King Midas Durum Fancy Patent Flour, Kubo Durum Fancy Patent Flour, Uno Durum Patent Flour, Durambo Durum Flour, Durum-Soya Blend Flour. General Sales Office: Minneapolis, Robert H. Cromwell, Vice President, Durum Sales (612) 333-0177; District office in New York: David F. Wilson (914) 694-8773; in Chicago: William H. Grady (312) 631-2700. See ad pages 26-27.

EGGS

ARMOUR FOOD COMPANY, Greyhound Tower, Phoenix, Arizona 85077. Frozen, dried or fresh liquid dark color yolk or whole eggs produced from Armour's own controlled chicken flocks. When these contented hens lay an egg it is rushed to new and modern egg breaking plants where they are inspected, candled, and in just a few hours, frozen in the attractive Cloverbloom container. There are no quality problems with such fresh eggs, but to be sure; they are pasteurized, homogenized, and continually tested. Natural or spray dried cheeses, creams, oils, butter and milk products; along with fresh and smoked meat products. Contact Bob Smith at (602) 248-5906 or Ernie Norden at (602) 248-5915. Ad page 29.

BALLAS EGG PRODUCTS CORPORATION, 40 North Second Street, Zanesville, Ohio 43701. Sales office in New York City. Packers of pasteurized frozen and spray dried high color yolks for the noodle trade.

V. JAS. BENINCASA COMPANY, First National Bank Building, Zanesville, Ohio 43701. Packers of frozen and dried egg products. High color yolks available. Plants in Louisville, Kentucky; Bartow, Florida; and Farina, Illinois.

HENNINGSEN FOODS, INC., 2 Corporate Park Drive, White Plains, New York 10604 (914) 694-1000. Manufacturers of free flowing egg yolk solids, free flowing whole egg solids, dehydrated chicken products, dehydrated beef products, dehydrated ham products, dehydrated turkey products. Technical assistance available. Samples sent on request. For information, contact: John T. Henningsen, Roy N. Nevans, Vito J. D'Agostino. Sales offices in each of the major cities in the United States, in Western Europe, in Japan, in Mexico and in South America.

MONARK EGG CORPORATION, 601 East Third Street, Kansas City, Missouri 64106. Manufacturers and packers of all dried and frozen egg products. Specializing in dark color for the noodle trade. Continuous U.S.D.A. inspection. Main office located in Kansas City. Brand name: Monark. Drying and breaking plans in Missouri and Kansas. See ad page 49.

MARSHALL PRODUCE CO., The Egg Products Div. of Marshall Foods, Inc., P.O. Box 1088, Marshall, Minnesota 56258. (507) 532-4426. All types of egg solids and blends, including whole egg solids, free flo & standard; egg yolk solids, free flo & standard; egg white solids, spray and pan dried. Three plants—warehouse stock from coast to coast. Ad page 44.

WILLIAM H. OLDACH, INC., P.O. Box 337, Flourtown, Pennsylvania 19031. Packers and distributors of frozen and dried egg products. See ad page 17.

SCHNEIDER BROTHERS, INC. Chicago office: 315 N. Carpenter St., Chicago, Illinois 60607, phone 312-666-3535. Chicago plant: 323 N. Carpenter Street, Chicago, Illinois 60607, phone 312-226-8368. Birmingham office and plant: P.O. Box 1590, Birmingham, Alabama 35201. Processors of frozen eggs since 1915. Broker, Chicago Mercantile Exchange.

EGGS

MILTON G. WALDBAUM COMPANY, Wakefield, Nebraska 69784. Phone: 402-278-2211. Dried whole eggs. Dried yolks (color specified); frozen whole eggs (color specified); frozen yolks (color specified).

MANUFACTURING EQUIPMENT

ASEECO CORPORATION, 1830 West Olympic Boulevard, Los Angeles, California 90006. (213) 385-9091. Manufacturers of complete sanitary storage systems for noodles, cut goods and specialty items: Aseeco-Lift bucket elevators, vibrating conveyors and accumaveyors. Engineering design and plant layout for complete macaroni plants from storage to warehouse, electrical engineering, control panels, supervision and installation of all equipment.

DOTT. ING. M., G. BRAIBANTI & COMPANY, Largo Toscanini 1, Milan, Italy. U.S.A. and Canada representative: Werner/Lehara, Inc., 60 East 42nd Street, New York, N.Y. 10017 and 3200 Fruitridge N.W., Grand Rapids, Mich. Manufacturers of completely automatic lines for long, twisted, and short goods. Production lines from 5,000 to more than 100,000 pounds in 24 hours. Pneumatic flour handling systems. All types of specialty machines, including ravioli and tortellini. Free consultation service for factory layouts and engineering.

THE BUHLER CORPORATION, 8925 Wayzata Boulevard, Minneapolis, Minnesota 55426. Planning and engineering of complete macaroni factories: consulting service. Manufacturers of macaroni presses, spreaders, continuous dryers for short goods, noodles, long goods and twisted goods, automatic accumulators for short, long goods and noodles, die cleaners, laboratory equipment. Complete flour and semolina bulk handling systems. Sales offices at 580 Sylvan Avenue, Englewood Cliffs, New Jersey 07632; phone (201) 871-0010, and Buhler Brothers, Ltd., 1925 Leslie Street, Donn Mills, Ontario, Canada. Phone (416) 445-6910.

CLERMONT MACHINE COMPANY, Div. of Clermont Operating Corp. 280 Wallabout Street, Brooklyn, N.Y. 11206. Manufacturers of automatic continuous lines short and long cut pasta; entirely automatic noodle, nest and coil lines (no trays); conventional and fast drying cycles with pre-dryer and finish dryers including bucket and cleat conveyors and many other food processing machinery.

CONSOLIDATED BALING MACHINE COMPANY, 162 Sixth Street, Brooklyn, N. Y. 11215, has issued a new catalog sheet illustrating and describing baling presses and compactors that produce dense compact bales from waste materials such as paper cardboard, metal scrap, plastic, etc. All Consolidated machines are completely self-contained with pump, motor and controls incorporated into each unit. Write Department MJ4 for Bulletin G12. Sales offices: R. B. Pomicpic, 1485 Bayshore Blvd., San Francisco, Calif. 94124; phone (415) 467-7120. Goldberg & O'Brien Electric Co., 1410 S. Clinton St., Chicago, Ill. 60607; phone (312) 829-3300. See ad page 49.

DEFRANCISCI MACHINE CORPORATION, 46-45 Metropolitan Avenue, Brooklyn, N.Y. 11237. Full range of automatic lines of machinery for both short cuts and long goods including lasagna, from 500 to 5,000 lbs. Automatic long goods cutters, automatic sheet formers and noodle cutters. Drying rooms. Die washers, dry egg feeders, hydraulic tube cleaners, and conveyors. Direct canning spreaders for filling spaghetti at a pre-determined quantity directly into cans. Sanitary, hose down, presses. Concentric extrusion dies. Twenty-five pounds per hour Laboratory Extruders. Pilot and production extruders for snack foods and cereals. See ad pages 6-7.

HOSKINS COMPANY, 509 E. Park Ave., Libertyville, Illinois 60048. Sales representatives for: DeFrancisci Machinery Corp., manufacturers of macaroni machines; Autoprod, Inc., manufacturers of pizza and frozen casserole machinery; Semco, manufacturers of bulk flour handling systems; Aseeco, manufacturers of food conveying and storage equipment. American Sanitation Institute, a division of the Huge' Co., sanitation consultants.

MEYER MACHINE COMPANY, P.O. Box 5096, San Antonio, Texas 78201. Manufacturers of Simplex Conveying Elevators, Vibra-Flex Conveyors, all types of conveying and elevating equipment, special dryers for macaroni and noodles. Factory Sales Manager: Perry Watts, AC 512, 734-5151. Sales Representatives: Eastern, PME Equipment, Inc., AC 201, 687-5926, Union, N.J.; Mid-western, Clayton-Tomei & Associates, AC 312, 463-3600 Chicago; Western, Industrial Vibrator & Machinery Co., AC 415, 697-3000 Burlingame, Calif. See ad page 31.

SOBROOK MACHINE, Division of Volpi & Son Corp., 544 3rd Avenue, Brooklyn, N.Y. 11215. Phone: 212-499-5922. Complete line of noodle cutting, ravioli, capelletti and gnocchi machinery; drying units; cutting machines; continuous production presses and sheeters; 25 to 250 lbs. per hour. Complete line of Giacomo Toresani Machines.

DIES

D. MALDARI & SONS, INC., 557 Third Avenue, Brooklyn, N.Y. 11215. Phone: 212-499-3555. Specializing in extrusion dies for the food industry. See ad page 9.

GUIDO TANZI, INC., 6917 Milwaukee Avenue, Niles, Illinois 60648. Phone: (312) 647-9630. Manufacturers of all types of dies. Specialists in teflon dies. See ad page 21.

PACKAGING EQUIPMENT

AMACO, INC., 2601 West Peterson Avenue, Chicago, Illinois 60645. Designers and distributors of all types of weighing, bag-making, filling and cartoning equipment for all branches of the macaroni trade. Ad page 35.

TRIANGLE PACKAGE MACHINERY CO., 6655 W. Diversey Avenue, Chicago, Illinois 60635. Triangle supplies a complete range of models of vertical, form, fill, seal bag machines suitable for operation on both supported and unsupported films. Bag sizes to 14" x 23" may be accomplished with this machine. Bag machines for the full variety of short cut macaroni and noodles are available.

Triangle also supplies the Flexitron Net Weighing System which may be utilized in conjunction with these vertical, form, fill, seal units, featuring the famous Flexitron weigh cell, together with sophisticated product and handling capabilities. This system offers exceptional operating speeds and accuracies. Other fillers may be furnished with the form, fill, seal machines in accordance with the product characteristics.

Triangle also supplies the Gaubert Scale for the net weighing of long cut spaghetti or other products. Such scales may be combined with cartoning equipment or with the Gaubert Wrapper for overwrapping of this product in polyethylene or supported films. District offices are located conveniently around the country.

PACKAGING SUPPLIES

DIAMOND PACKAGING PRODUCTS DIVISION, Diamond International Corporation, 733 Third Avenue, New York, N. Y. 10017. Creators and producers of multi-color labels, folding cartons and other packaging materials: point-of-purchase displays, outdoor posters, booklets, folders, banners and other advertising materials. Sales offices in 28 principal cities offer nationwide package design service and marketing consultation. Nine manufacturing plants are strategically located coast to coast. See ad Inside Back Cover.

E. I. DU PONT DE NEMOURS & COMPANY, INC., Wilmington, Delaware 19898. The principal films from Du Pont used for packaging macaroni and noodles are: Du Pont "K" 307 cellophanes, 2-in-1 polyethylene bag films, "Clysar" polyolefin films, plus laminations of "K" cellophane/"Clysar." Regional Sales Offices: East Orange, New Jersey; Des Plaines, Illinois; Atlanta, Georgia; Brisbane, California.

FAUST PACKAGING CORPORATION, 100 Water Street, Brooklyn, New York 11201. Creators and manufacturers of multi-color cartons and promotional material for macaroni-noodle products and frozen foods.

MUNSON BAG COMPANY, 1366 West 117 Street, Cleveland, Ohio 44107. Converters of cellophane and polyethylene bags as well as printed roll stock for automatic bag equipment.

PARAMOUNT PACKAGING CORP., Oak Avenue, Chalfont, Pa. 18914 (215) 822-2911. Manufacturers of polyethylene and polyolefins and multi-color printers of rotogravure and flexography. Convertors of flexible packaging materials. Laminators and bag manufacturers. Manufacturing plants: Oak Avenue, Chalfont, Pa. 18914; Samsonite Blvd., Murfreesboro, Tenn. 37130; 2621 S. Birch Street, Santa Ana, Ca. 92707; Western Sales and Marketing Center, 30100 Mission Blvd., Hayward, Ca. 94544. Sales offices in Austin, Texas; Dallas, Texas; New York City; Chicago; Cleveland; Atlanta; Miami; Hayward, California; Murfreesboro, Tennessee; Winston-Salem, North Carolina.

REXHAM CORPORATION, Park 80-West-One, Saddle Brook, N.J. 07662. Rossotti Sales of Rexham Corporation specializes in the manufacture of folding cartons for the macaroni industry. Rexham is a new, publicly owned and independent company formed in January 1972 by the spin-off of the packaging group of Riegel Paper Corporation. The Rossotti Sales group, headed by Charles C. (CR) Rossotti, continues to offer the macaroni industry depth of experience and the Rossotti Packaging System. Rexham's Board Conversion Division, with manufacturing facilities at Newark, New York State and Hazelwood, Missouri amplifies the Rossotti program through packaging machinery services, extensive R & D, broad-based structural and graphic design and, of course, modern high-speed, manufacturing equipment.

SERVICES

JACOBS-WINSTON LABORATORIES INC., 156 Chambers Street, New York, N.Y. 10017. Consulting and analytical chemists; sanitation consultants; new product development labeling and packaging advisors; pesticide and bacteriological analysis. See ad pag 15.

ACCOMPANIMENTS

LAWRY'S FOODS, INC., 568 San Fernando Road, Los Angeles, California 90065 and 1938 Wolf Road, Des Plaines, Illinois 60018. Manufacturers of Lawry's Spaghetti Sauce Mix, Goulash Seasoning Mix, Chili Mix, Beef Stew Mix, Tartar Sauce Mix, Seafood Cocktail Sauce Mix, Taco Seasoning Mix, Enchilada Sauce Mix, Seasoned Salt, Seasoned Pepper, Garlic Spread, Spanish Rice Seasoning Mix, liquid dressings, dry salad dressing mixes, gravy-sauce mixes, and dip mixes.

FORTIFICATION

VITAMINS, INC., 401 North Michigan Avenue, Chicago, Illinois 60611. Phone: 312-527-9400. Manufacturers of enrichment ingredients used by macaroni manufacturers and flour millers. Also manufacturers of defatted wheat germ and other high biological quality protein supplements for enhancing the flavor, functionality, and nutritional value of macaroni and spaghetti products. Federal standards of identity for enrichment of macaroni and spaghetti products permit the use of up to 5 percent defatted wheat germ. Sales representatives: Midwest, Jack W. Rogers, Chicago, Illinois 312-527-9400 West, Joseph P. Manson, Tiburon, California 415-474-9151.

Consolidated Baling Machines

A new series of Automatic Refuse Compactors have been introduced by Consolidated Baling Machine Company, Brooklyn, New York. The new series consists of two types of compactors. The "Con-Pak" model is completely automatic and compresses trash and refuse at up to 12 to 1 ratio in weights easy to handle from 50 to 100 lbs. In this manner, refuse from as many as 35 apartments can be easily disposed of in cartons and plastic bags.

"BalePaker" is another refuse compactor available from Consolidated. Additional information and literature may be obtained by writing Consolidated Baling Machine Company, 162 Sixth Street, Brooklyn, New York 11215—Dept. MJ.

INDEX TO ADVERTISERS

SEMINAR ON WHEAT

Minneapolis Grain Exchange

Sunday, April 9—7:00 p.m.
Welcoming Reception in the Garden Court, Radisson South, Minneapolis.

Monday, April 10
9:00 a.m.—Board buses for trip to Minneapolis Grain Exchange.
9:30 to 11:30—Tour the Exchange.
Tour Peavey's Control Laboratories.

"What a Grain Buyer Looks for in Durum"
John Roarke, Amber Milling Division, Farmers Union Grain Terminal Association.
11:30—Buses return to Radisson South.
12:30—Luncheon in Great Hall East-B.

Afternoon sessions in Great Hall East-A
1:30 p.m.—**"Durum—from plant breeding to cereal technology"**
Dr. Kenneth A. Gilles, VP for Agriculture, North Dakota State University.
Orville J. Banasik, Chairman, Cereal Technology Department.
Dr. David E. Walsh, Professor, Cereal Technology Department.

2:30 p.m.—**"Work of the North Dakota State Wheat Commission."**
Paul E. R. Abrahamson, Administrator.

3:00 p.m.—**"Efforts to Insure Good Durum Supplies."**
Vance V. Goodfellow, Executive VP, Crop Quality Council.

4:00 p.m.—Discussion—questions and answers.

Tuesday, April 11
8:30 a.m.—Board buses for trip to Peavey Co. Flour Mill at Hastings.

11:30 a.m.—Return for luncheon at Hazeltine Country Club.

1:30 p.m.—Tour Peavey Technical Center at Chaska.

Questions and answers on milling matters:
Larry Warren, Archer Daniels Midland;
Bob Buning, International Multifoods;
Sam Kuhl, North Dakota Mill and Elevator;
Jim Jacobs, Peavey Company Flour Mills.

Wednesday, April 12
9:00 a.m.—Sessions in the Great Hall Center

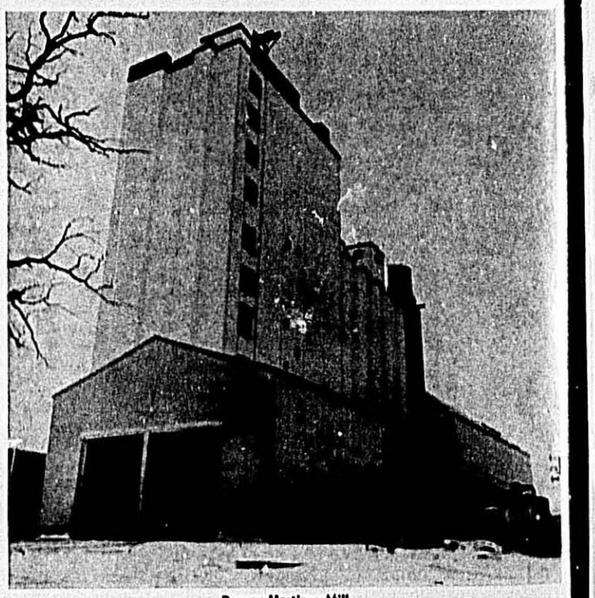
Discussions on Good Manufacturing Practices—Panelists from mills and machinery companies.
Moderator: Jim Winston.

12:00 Noon—Luncheon in the Great Hall. Address: "Macaroni, the Great American Wheat Food"—Robert M. Green, Exec. Sec., National Macaroni Mfrs. Assn.
Adjournament by 2:00 p.m. checkout.

Reservations required. Registration $25.

Write:

The National Macaroni Manufacturers Assn.
P.O. Box 336
Palatine, Illinois 60067



Peavey Hastings Mill

Okay.
Who put egg in the noodles?

Sal Maritato did.
So now when you buy Multifoods' new noodle mix called "Duregg" – all you add is water.
We've gone ahead and added the egg solids to Multifoods' top-quality durum flour.
A number of our customers have already ordered "Duregg" in hefty lots.
Here are a few reasons why *you* should:

- Duregg eliminates time-consuming, in-plant blending of flour and egg solids with expensive machinery.
- Duregg is ready when you need it. No thawing, less chance of contamination, and less time and mess.
- Duregg eliminates the need to re-freeze unused egg.
- Duregg assures a consistent blend.
- Duregg eliminates the necessity to inventory two ingredients. Storage and record keeping is reduced.
- Duregg simplifies delivery. Now it's one source – Multifoods.
- Duregg lowers your manpower requirements.

Enough said. Order your Duregg with a phone call.
The number is 612/339-8444.

INTERNATIONAL
MULTIFOODS
DURUM PRODUCTS DIVISION
GENERAL OFFICES, MINNEAPOLIS, MINN. 55402