

**THE
MACARONI
JOURNAL**

**Volume 50
No. 2**

June, 1968

Macaroni Journal

OFFICIAL PUBLICATION
OF THE
NATIONAL
MACARONI MANUFACTURERS
ASSOCIATION



JUNE, 1968

Keep Cool
With Macaroni



PACKAGING PERSONALITIES



William Underwood and Thomas Kensett

Two enterprising gentlemen who, in 1820, became the first commercial packers of preserved foods in the United States, with operations in Boston and New York respectively. Using the process developed by Francois Appert in France eleven years earlier, they put up their products in plain glass jars.

MERCHANDISING Neither Mr. Underwood nor Mr. Kensett was able to promote his particular product with all the vigor and aggressiveness required for today's marketing techniques. They simply didn't know about persuasive packaging and effective merchandising. Rossotti, on the other hand, does know about such things and makes good use of the knowledge. Not only do we design and produce sales-promoting packages; we also plan and implement successful on-the-package sales promotions: Special Price Offers (cents-off or refund deals), Premiums (coupon or enclosure), and Product Tie-Ins (with another product in the same line or with an associated product in someone else's line). There's this inventory-and-money-saving advantage, too: Order only the precise number of promotional packages needed for the campaign—and still enjoy the economy of large-volume prices. Further information? Gladly! Just say the word and we'll get it to you promptly.

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In This Issue:

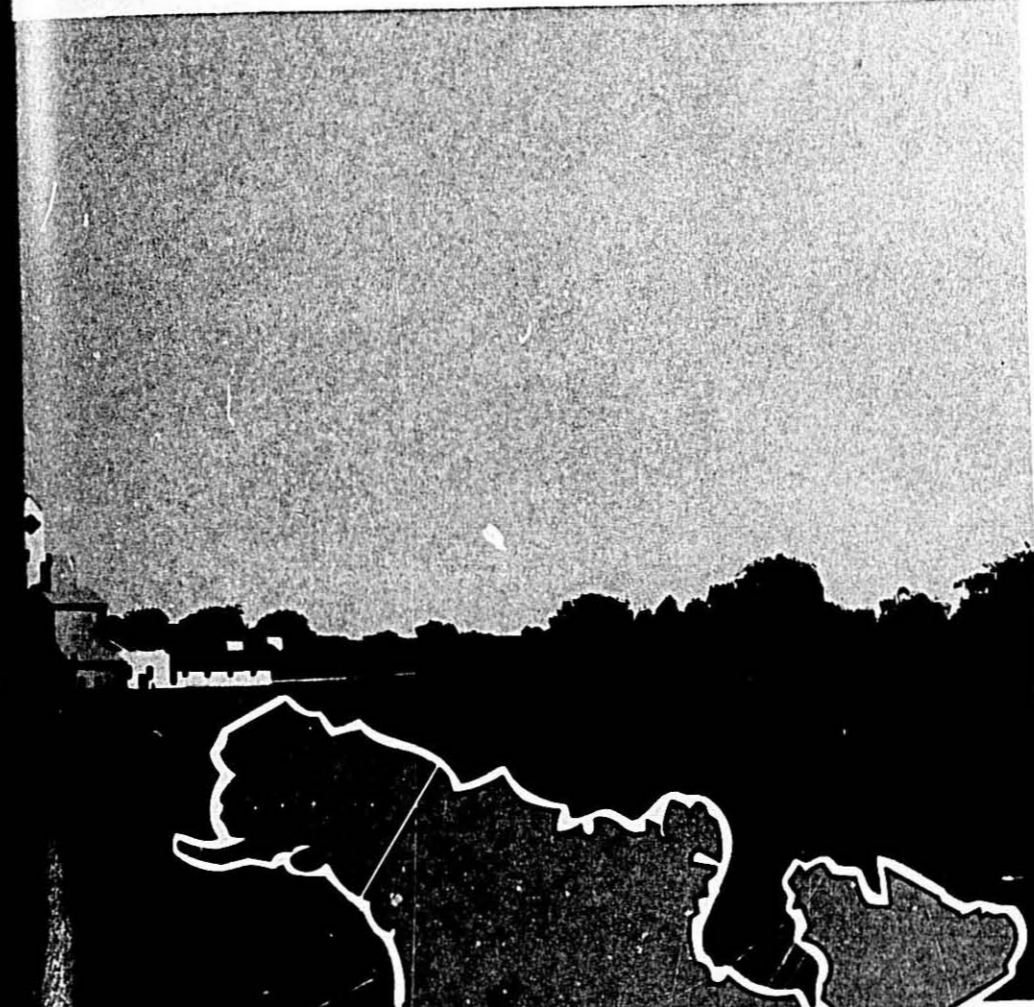
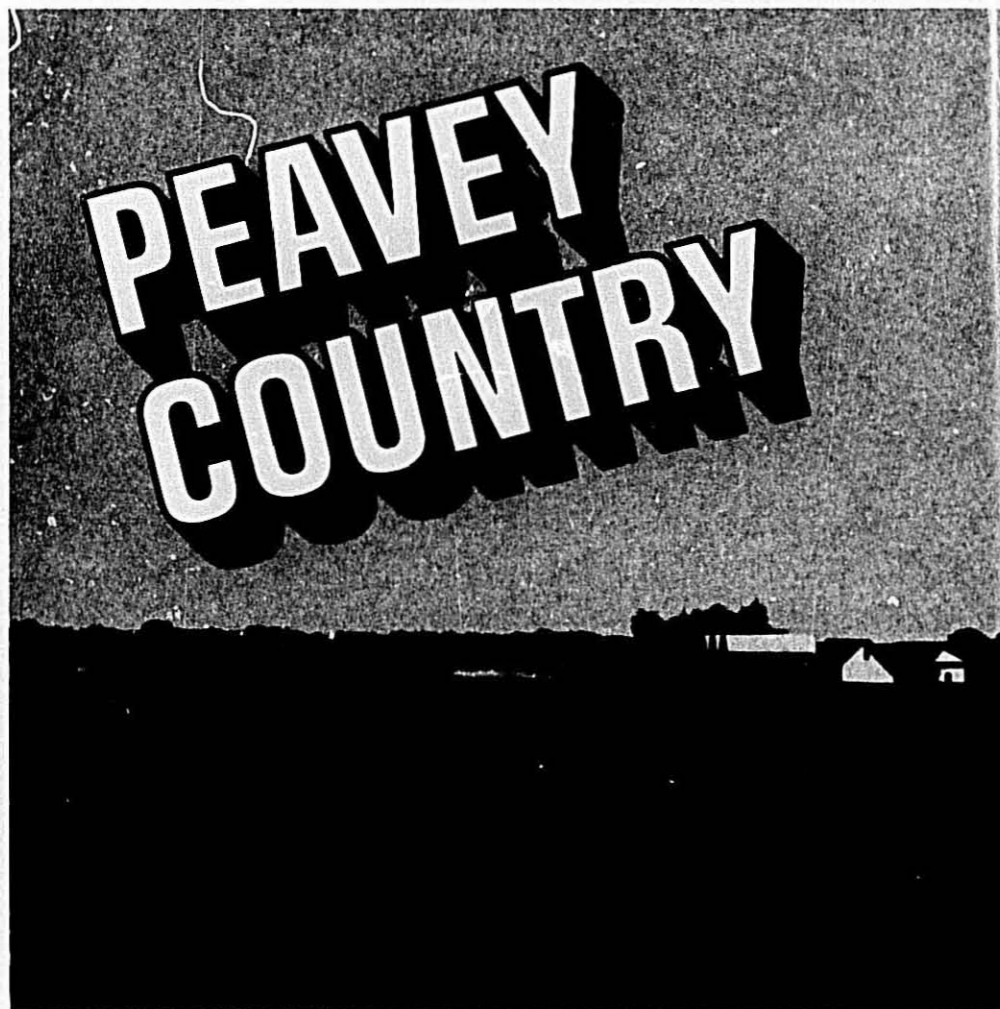
	Page
Keep Cool With Macaroni	6
Elegance and Variety in Casseroles	7
Menu for the Year 2000	8
Seminar on Wheat	10
Man and the Grasses	12
Government Egg Reports	16
La Rosa Plans Expansion	18
Quality Control of Farinaceous Materials	20
Quality Methods Exercised by Millers	24
Sanitation—It Hasn't Been Easy	29
Packaging Dynamics Play An Integral Role	34
Man and His World	36
What About Payola? George N. Kahn	40
Peavey Personnel—New Macaroni Company—	
Index to Advertisers	44

Cover Photo:

Donna Carr is a fun for macaroni products. Here she illustrates the full-color point-of-purchase posters pushing macaroni in summer salad combinations. Materials were prepared by the National Macaroni Institute.

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PEAVEY COUNTRY



Famous for its durum wheat

You might well expect Peavey to be a major factor in the milling and distribution of durum products. The reason? North Dakota's durum wheat fields where virtually all the nation's durum crop is grown—are in the heart of Peavey Country (see map). This is a broad, wheat-rich land that supplies the Peavey mills that specialize in the milling of Semolina and Durum flour.

Durum is an important product of Peavey, along with a multitude of other enterprises related to the growing, stor-

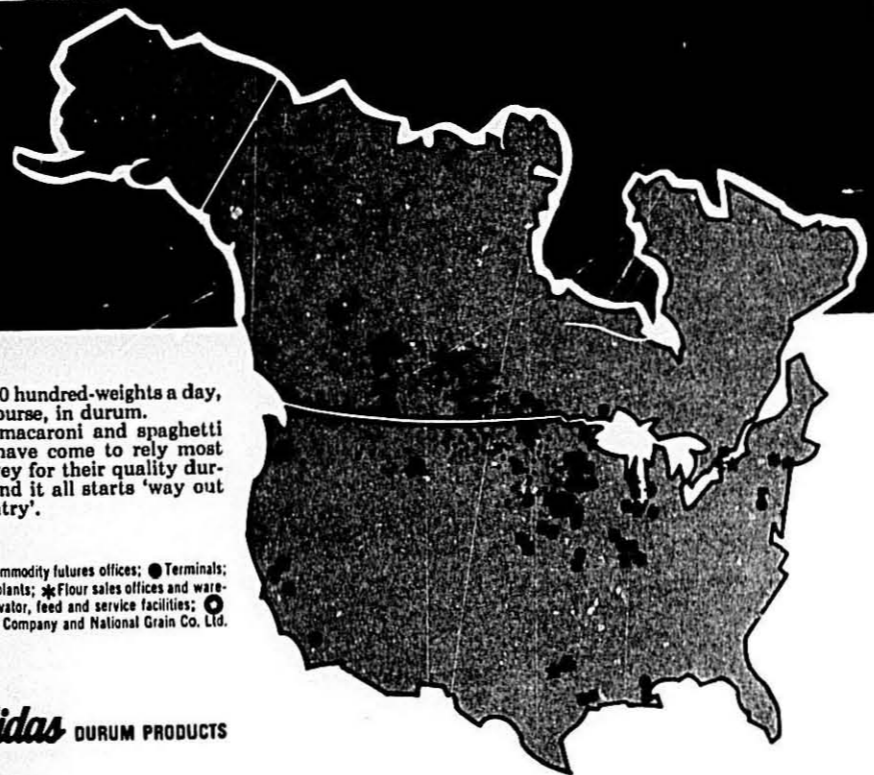
age, transportation, merchandising and processing of cereal grains. Peavey is a highly efficient operator in this complex business because its operations are streamlined and coordinated to the nth degree.

Durum mills operated by Peavey are located at Superior, Wisconsin, Grand Forks, North Dakota and Buffalo, New York. Peavey Flour Mills process wheat received from 700 grain elevators located in the areas producing the finest wheat in the world. Peavey has total milling

capacity of 60,000 hundred-weights a day, much of it, of course, in durum.

No wonder macaroni and spaghetti manufacturers have come to rely most heavily on Peavey for their quality durum products. And it all starts 'way out in Peavey Country'.

Merchandising and commodity futures offices: ● Terminals; Flour mills and mix plants: ✱ Flour sales offices and warehouses: ☐ Country elevator, feed and service facilities; ○ Home offices of Peavey Company and National Grain Co. Ltd.



PEAVEY COMPANY
Flour Mills

King Midas DURUM PRODUCTS

KEEP COOL WITH MACARONI

SUMMER PROMOTION FEATURES MACARONI SALADS



Donna Carr is a macaroni fan.

THE versatility of macaroni products is one of their outstanding assets and one which is helping to boost macaroni product consumption to record highs each year.

There are actually thousands of ways to prepare macaroni dishes, and this particular attribute is highlighted in the National Macaroni Institute promotional program which is a year-round effort. The use of macaroni products is not restricted to any time of year or any special season. The NMI home economics test kitchens are constantly developing new recipe ideas and serving suggestions which offer a variety of macaroni products in soups, casseroles, salads, to name just a few, that can be served for a mid-winter buffet party or in a backyard picnic.

It is this versatility of preparation that makes macaroni products of real value to the retailer. Macaroni's affinity for related items is well-known and is the subject of a great deal of promotional effort by the industry.

Summer Promotion

"Keep Cool With Macaroni" is the theme for the summer promotion of Macaroni Salads. The drive will be supported by full-color point-of-purchase

illustrations sent to chain and voluntary cooperative presidents, merchandising managers, and macaroni buyers by the National Macaroni Institute.

The posters are the inside spread of a brochure captioned: "Macaroni Has Many Mates." The posters say: "Keep Cool! Have a Macaroni Salad Today!" The recipe pictured calls for canned luncheon meat, pickles, French dressing, asparagus, green pepper and seasonings.

Macaroni Has A Lot Going

What else do macaroni products have going for them? The brochure points to (1) a national public relations program which spotlights macaroni in newspapers, magazines and on radio-TV coast to coast; (2) constantly growing consumption—1,432,000,000 pounds eaten last year; (3) macaroni products regularly outpacing total store volume growth; (4) total family acceptance from tots and teen-agers to senior citizens.

Grocers are urged to use the full-color posters at point of purchase, special displays, or over the wire illustrations.

Other Mailings

A similar mailing promoting Tuna-Noodle Casserole for Lent went out the end of the year. By late summer the third mailing will be made calling attention to National Macaroni Week, October 17 to 26. Theme for that drive will be "Spaghetti Goes Steady." Posters will feature Spaghetti and Meat Balls.

Generates Sales

In developing these promotional materials, the National Macaroni Institute took three popular recipes, an Egg Noodle Casserole, Elbow Macaroni Salad, and Spaghetti and Meat Balls. The ingredients for these dishes were purchased in a variety of supermarkets across the country and the costs were added up to reveal the value of the related items necessary to complete these three recipes. Based on the average unit costs of these three recipes (and this is the actual cost of the exact amount of ingredients called for in the recipes), a dollar's worth of macaroni products sells \$7.31 in related items.

In addition to these promotional efforts, the NMI for the past 20 years has sponsored a public relations program to educate and remind the consumer about

macaroni products. Every day of the year, stories, recipes and photos of macaroni dishes are appearing in newspapers, magazines or on radio and TV, spotlighting the versatility of macaroni products, their flavor appeal, economy and convenience.

This coast-to-coast publicity effort with our promotional program, plus the work of individual members in their own markets, has greatly contributed to the better than half a billion pound increase in consumption.

Elegance and Variety in Casseroles

BETTER Homes and Gardens Books, Division of the Meredith Publishing Company, Des Moines, Iowa, has sent an attractive set of apothecary jars with pasta products to television commentators for promoting their new Casserole Cook Book.

There is an increasing interest in casserole cookery today, with new emphasis on the preparation of elegant casseroles for family and guests. The casserole of yesterday was once a concoction of leftovers with little personality. Today, casserole cookery has many new faces as well as many new flavor combinations that weren't even dreamed of several years ago. The interest in elegant casseroles and one-dish meals is reflected in the new Better Homes and Gardens Casserole Cook Book. This completely new edition presents over 350 exciting recipes for skillet meats, hearty stews, elegant fondues and unique cook-your-own recipes to delight your guests—and family casseroles for any and all occasions.

Popular Varieties

Popular varieties of pasta (noodles and macaroni) are identified in the "Know Your Noodles" section (pages 76 and 77), and delicious recipes for their use are suggested.

The great variety of macaroni products available today in our grocery stores is a challenge to the homemaker who likes to prepare casseroles. The macaroni industry today boasts of more than 150 different shapes. Each seems to have its own flavor, which is enhanced and varied with subtle sauces, meat and vegetable combinations.

Shown in the illustration are six popular varieties of pasta which are truly versatile and they are available at most stores: they are corkscrew macaroni, mafalde, wagon wheels, bow ties, shell macaroni, and mostaccioli. Each can be tastily prepared with meat, vegetables and sauces.

Legends

There are very interesting legends behind the discovery of pasta. The creation and invention of pasta or noodles has been claimed and disclaimed by everyone from an Italian sailor to a Greek god. The Chinese recorded the eating of macaroni products as early as 5000 B.C.

The ancient Greeks called it "marcus" which means "divine food" and claimed it was a gift from the gods of Olympus, so that mankind might better enjoy the grains of the field.

The most popular legend concerns a Chinese maiden who, when lured from her bread-making by her lover, left the dough to rise in the sun. The dough overflowed from the pan and dripped in strings that quickly dried in the sun. When cooked, the new shaped dough was praised as delicious.

Recipes

Here are two popular recipes featuring pasta from the new Better Homes and Gardens Casserole Cook Book. These flavorful pasta products are blended with luscious sauces, meats and vegetables to please both family and guests.

Try this Italian favorite—Stuffed Manicotti—today!

Sauces

- 1 pound ground beef
- 1 cup chopped onion
- 1 large clove garlic, minced
- 2 6-ounce cans (1½ cups) tomato paste
- 2 cups water
- 2 tablespoons chopped parsley
- 1 tablespoon dried basil, crushed
- 1½ teaspoons salt
- Dash pepper

Fillings

- 1 pounds (3 cups) fresh ricotta, or cream-style cottage cheese, drained
- ½ cup grated Romano or Parmesan cheese
- 2 slightly beaten eggs
- ¼ cup snipped parsley
- ¼ teaspoon salt
- Dash pepper

- 8 manicotti shells
- ½ cup grated Romano or Parmesan cheese

In large saucepan brown meat lightly. Drain off excess fat. Add onion, garlic, tomato paste, water, parsley, crushed

JUNE, 1968



Better Homes & Gardens promotes Casserole Cook Book.

basil, 1½ teaspoons salt, and dash pepper. Simmer uncovered about 30 minutes, stirring occasionally. Meanwhile, combine ricotta or cottage cheese, ½ cup Romano or Parmesan cheese, eggs, parsley, ½ teaspoon salt, and dash pepper.

Cook manicotti shells in boiling salted water till just tender; drain. Rinse shells in cold water. Stuff manicotti with cheese mixture. Use a small spoon or cut the shells lengthwise with scissors; open to fill.

Pour half the tomato-meat sauce into 12 x 7½ x 2-inch baking dish. Arrange stuffed manicotti in a row. Top with remaining sauce. Sprinkle with ½ cup Romano or Parmesan cheese. Bake in moderate oven (350 degrees) for 30 to 35 minutes. Makes 6 to 8 servings.

Here's another mouthwatering recipe featuring mostaccioli:

Chili Mostaccioli

- 1 pound ground beef
 - ½ cup milk
 - 1 cup soft bread crumbs
 - 1 teaspoon salt
 - Dash pepper
 - 2 tablespoons shortening
 - 1 clove garlic, minced
 - ½ cup chopped onion
 - 2 11-ounce cans condensed chili-beef soup
 - 1 soup can water
 - 7 ounces mostaccioli or tubular macaroni (3 cups)
 - Grated Parmesan cheese
- Combine meat, milk, crumbs, salt, and pepper; shape into five oblong pat-

ties. In skillet brown patties in hot shortening. Remove. Cook garlic and onion in skillet till tender but not brown. Blend in soup and water. Return patties to skillet. Bring mixture to boil; simmer covered 15 minutes.

Cook mostaccioli according to package directions; drain; place on large heated platter. Arrange patties on noodles. Pour sauce over meat; sprinkle cheese atop. Serves 5.

Exciting Cook Book

Whether long or short, fancy, solid or hollow, the pasta products form the foundation for a wide variety of nutritious foods as part of any menu from soups to dessert. There are many other exciting and flavorful recipes in the new Casserole Cook Book featuring popular varieties of noodle and macaroni products. Priced at \$3.95, the Casserole Cook Book is available wherever Better Homes and Gardens books are sold.

Beef-O-Getti

Chef Boy-ar-Dee Beef-O-Getti, round rings of spaghetti in tomato and cheese sauce with 21 beef balls, is being marketed by American Home Foods division of American Home Products Corp., 685 Third Avenue, New York. The product comes in a 15-ounce can and retails for about 33 cents.

Full page, four-color ads are planned in TV Guide, Family Circle and Parents magazines. Each ad will contain a 10 cents off store coupon. Network television commercials, in color, will be shown on Saturday morning children's programs.

7

Menu For The Year 2000

In the March issue of McCall's magazine, Christine Sadler has written an interesting article on what people are expected to be eating in the year 2000. She states that a good reason for staying around until the year 2000 is to see what will be happening by then on what was once fondly known as "down on the farm," and so become acquainted with such new food delights as full-course dinners cooked a year ahead, irradiated by atomic energy, and stacked on kitchen shelves for heating and serving.

Hundreds of research scientists are seeking to ensure more food more quickly, so that we and the 200 million more Americans on the scene by 2000 will eat just as well as, perhaps better than, we do now and probably on considerably fewer calories. At the same time, of course, they are hoping their findings will help eradicate famine around the population-exploding world.

Down on the Farm

What they are doing will change "down on the farm" almost beyond recognition. A crop that cannot be harvested by machinery just will not be grown for processing by the year 2000. That's why they're rushing machines that can pick strawberries and cherries, trying laser beams to cut fields of cabbage or asparagus, developing chemical pruning, finding plant regulators to hasten ripening—or slow it, if that is the need in the world to come. At the same time, chances are that a lot of crops will be cropping up in unexpected seasons and places. A combination of hydroponics and synthetic light will make it possible to raise fruits and vegetables on location any time and anywhere, from mid-Montana to mid-Manhattan.

New agricultural satellites (first planned for orbit by 1970-71) will, from two miles above the earth, spot drought conditions and outbreaks of plant diseases, know how crops are doing around the world and tell just how many cattle a range will support.

Irradiation of Food

Irradiation of food, which keeps it fresh longer and eliminates the chances of food poisoning—by stopping all changes and killing bacteria—will be commonplace. With irradiation, too, it becomes economically feasible to ship tropical luxuries, such as mangoes and papayas, very long distances.

Don't worry about "atom-treated" food, incidentally. Any that gets on the market must be passed by the Food and Drug Administration. Treated bacon,

Irish potatoes, and some wheat products already are passed for human consumption, and a great back load of other applicants is awaiting approval. By the use of atomic energy, wines can age faster, prunes dry quicker and coffee be roasted in no time at all. One of the great peacetime uses for this discovery will be in the food field.

Not only are scientists speeding up plant growth and food processing, they are speeding up animals, too. In fact, a hen in 2000—unless she joins a union—will be laying 400 eggs a year, in comparison to 240 now, due largely to 18-hour light cycling. All meat animals and poultry will mature more quickly and cows will give much more milk.

Skyscrapers for Stock

Secretary of Agriculture Orville L. Freeman foresees the day when livestock may be raised in skyscrapers and never know a home on the range. In sprawling, multi-story, climate-controlled buildings (which need not be down on the farm at all), the cattle could live on the lower floors and hogs, sheep and poultry in the upper stories. The standard livestock ration by then perhaps would be forage preserved by freezing or gamma radiation, plus synthetic amino acids and fats.

Synthetics

By 2000, it seems likely that every nutrient needed for health can be made synthetically. But does this mean that a good dinner as we know it today will disappear? The authorities say, emphatically, no. Except for some far-out fadists, we are in little danger of becoming a nation that feeds on capsules and never sits down to a meal. There is every reason to believe that the good broiled steak, the crisp garden salad, the meaty, buttery baked potato (Editor's note: Macaroni hasn't replaced it yet) and the strawberry shortcake will be with us in the year 2000—probably in 3000 too.

14.5 Billion Coupons in 1967

U. S. advertisers distributed about 14.5 billion coupons to promote their products in 1967, it was estimated by A. C. Nielsen Company.

Newspapers continued to be the most popular medium for getting coupons into the hands of shoppers, according to Nielsen Clearing House, which processes redeemed coupons for manufacturers and retailers. Flexibility, lower cost, and ability to focus on small areas were among reasons cited for the heavy use of newspapers.

Following newspapers in order of distribution volume were magazines,

direct mail, Sunday supplements, and coupons carried in or on the package.

The use of magazines as a coupon distribution vehicle has increased during the past 12 months, Nielsen noted. Ability to select magazines which are directed to the woman of the household was mentioned as one reason for the increase.

The 10¢ coupon is most favored by advertisers. This face value represented 36% of coupons used in new product promotions. Others were: 25¢—7%; 11¢—15%; 9¢—8¢. The remaining offers, ranging from 5¢ to 50¢, totaled 19%.

Frozen Rice Dishes

A line of five frozen rice products are now in test from Green Giant Co. The cook-in-the-bag products consist mainly of precooked long-grained white rice, which is combined with various individually formulated sauces. The line comprises Rice Pilaf, Rice Verdi, Rice Medley, Spanish Rice and Buttered Rice.

Four-Point Farm Program

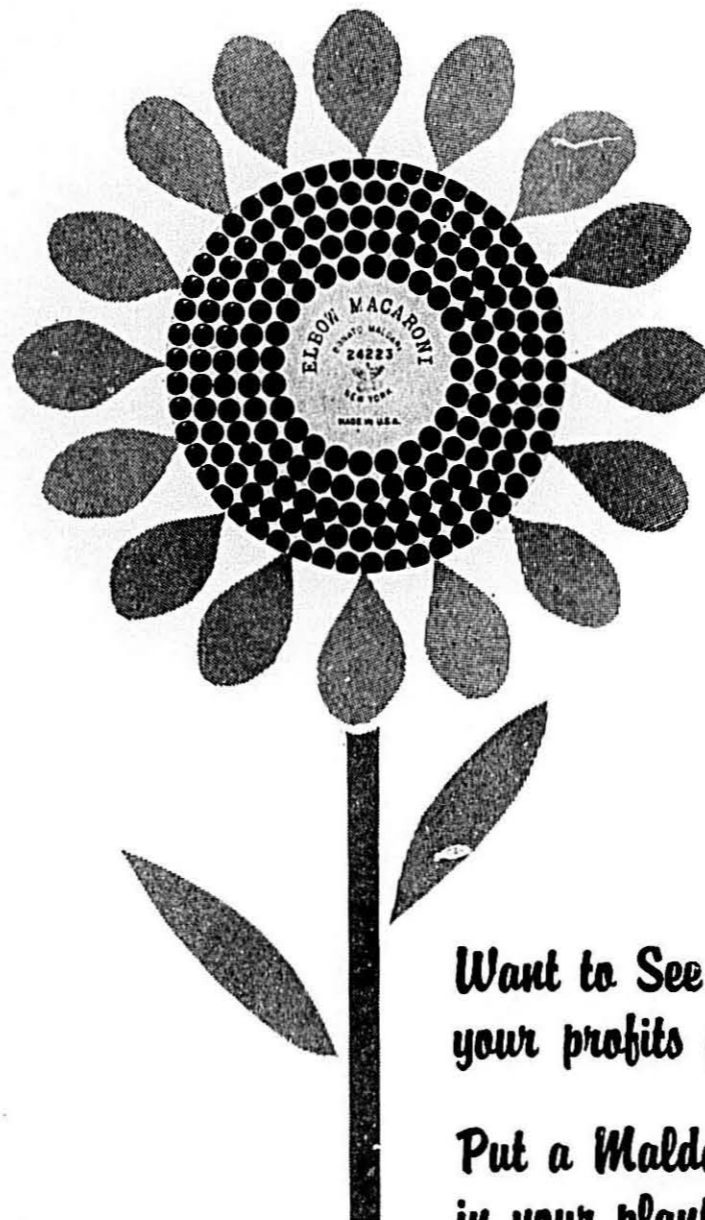
Agriculture has four high priority problems that must be quickly resolved. B. J. Malusky, assistant general manager of Farmers Union Grain Terminal Association, told the 66th annual convention of the National Farmers Union in Minneapolis.

First, he said, the flight from the nation's farms must be reversed. "To allow the family farm, the most efficient production unit in the world, to be replaced by large corporate enterprise that would control our food and fiber supplies could result in nothing but absolute economic chaos," Malusky said.

Second, practical sources of capital and credit must be made available to young people who want to get started in farming, he said. "Youth is the well-spring from which the agricultural power of tomorrow must be fed," he said.

Third, a workable bargaining bill that will at long last give farmers an influential voice in setting a price on their commodities is essential. Malusky told the delegates assembled in the Hotel Leamington convention hall. "We must grasp this opportunity for farm price improvement and make the most of it," he said.

Fourth, farmers must make wider and more profitable use of their cooperatives, he said. "There is no substitute for cooperation. It means people working together. And you can't make it out of soy beans like you make a synthetic hoe handle. It means personal participation—not just talk."



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SEMINAR ON WHEAT

The National Macaroni Manufacturers Association held a Seminar on Wheat in Minneapolis at the end of April. More than seventy delegates came to participate.

Visit Exchange

They visited the Grain Exchange, went through a mill, saw the product control laboratory of the Creamette Company and the research and development facilities of the International Milling Company.

At the Grain Exchange, they saw a film "Grain Exchange, Instrument of Freedom." Secretary Al Donahoo explained the function of the Exchange.

Herb Hankinson, grain buyer, Farmers Union Grain Terminal Association, described "What a Grain Buyer Looks For in Durum Wheat."

Following the visit to the Grain Exchange, a presentation on flour milling was given by Karl Truniger of The Buhler Corporation.

Dan Amstutz of Cargill, Inc., merchandising executive for the sale of durum and spring wheats, told of "The Place of Exports in the Durum Picture."

Eugene B. Hayden, executive vice president of the Crop Quality Council, and his colleagues, Vance V. Goodfellow and G. Allan Taylor, told the group of that organization's "continuing efforts to ensure durum wheat supplies."

Ray Wentzel, recently returned from a 45-day tour in Europe where he visited durum millers and macaroni manufacturers, showed slides and reported on the conditions he found.

Go Through Mill

The second day of the seminar, April 23, was a cold, snowy day, but there was warm hospitality at International Milling Company's "B" mill in St. Paul where tours were conducted to show the delegates the milling process.

Discussions for the day included a report on "Insect Control" by Tony Lett, sanitation engineer, and discussions on quality control from plant breeding to the production of finished goods led by Dr. Kenneth A. Gilles and Len D. Jibbitt of the Cereal Technology Department, North Dakota State University, and James J. Winston, director of research, NMMA.

At the Creamette Company's products control laboratory, Vice President for Production John Linstroth and Quality Control Chemist Eugene T. Karpiak explained the techniques and procedures utilized by this company.

Creamette President Robert H. Williams and his brother Lawrence D. Williams were gracious hosts.

Suppliers' Social

That evening, the firms of Amber Milling Division—G.T.A., the A D M Durum Department, The Buhler Corporation, International Milling Company, North Dakota Mill and Elevator, and Peavey Company Flour Mills were hosts at a reception and dinner at the Sheraton-Ritz Hotel.

Research Laboratory

The next day, buses were boarded for a trip to International Milling Company's laboratories for quality control, research and development, at New Hope, Minnesota; Delegates were welcomed by Dr. W. R. Johnston, and escorted through the facilities in small groups.

Following the tour, questions and answers were handled by Robert Bruning of International Milling Company, Sam Kuhl of North Dakota Mill and Elevator, and Norton Risdal of Peavey Company Flour Mills. Clifford Kutz read a paper by Lawrence L. Warren of the Archer Daniels Midland Company, who was detained in the East.

The final luncheon meeting concluded with advice by William A. Lohman, Jr., of Experience, Incorporated, on "How a Business Can Use Consultants."

Several of these papers appear in this issue of the Macaroni Journal. Others will be reported later.

Packaging Meeting

In addition to the seminar, the National Macaroni Institute Committee met at the same time in Minneapolis, and on Thursday, April 25, the Industry Committee on the Problem of Packaging Proliferation held a session on the problem of packaging proliferation.

Interest and enthusiasm was high, and suggestions were made that a similar seminar on eggs be held in Chicago next year, with time allotted for discussion of specific macaroni plant operational problems.

French Imports Down

Mr. Harold L. Koeller, assistant U. S. agricultural attache in Paris, estimated that imports of U. S. hard wheats should continue at about the present rate. During the first eight months of this season 92,217 tons were imported.

U. S. durum imports are expected to be down from last year, due mainly to the larger French production of durum. In July to February, the United States supplied 154,715 tons of durum to France, or nearly two-thirds of the total imports of such wheat.

Flying Start for Durum

Planting progress in the northern Great Plains is off to a rapid start. Early May showed the best progress to date since 1958. In many southern areas of North Dakota, seeding of small grains was virtually completed, and in the earliest sections the grain had emerged from the ground. In the latest sections along the northeastern border, nearly half of the wheat was planted.

Surface moisture seems adequate in all districts, and where heavier rains occurred at the end of April subsoil moisture was improved.

Plantings are expected to be about twenty per cent more than last year's 2,754 acres.

Computers to Aid Canadian Farmers

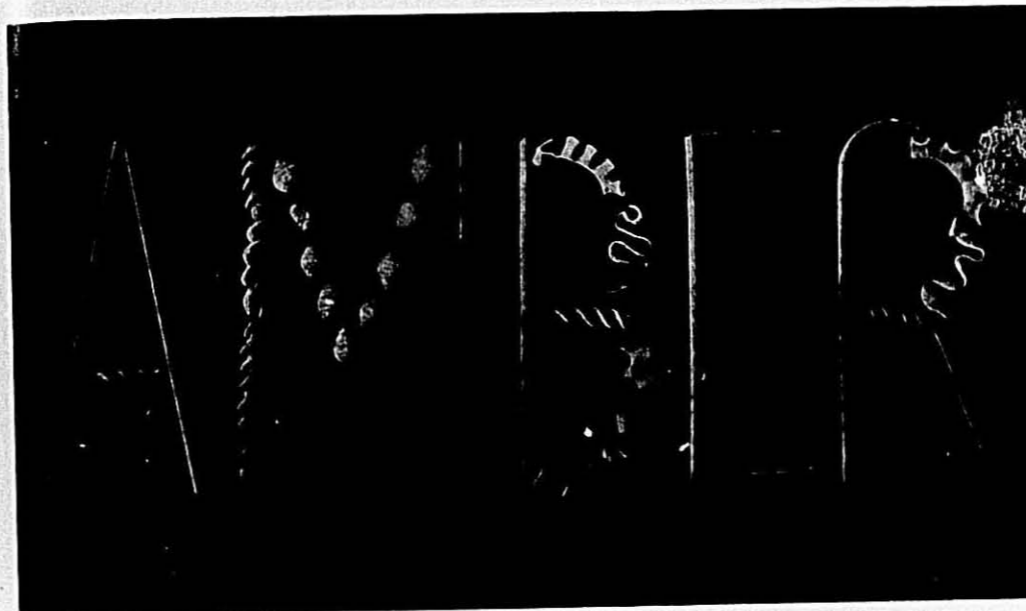
Computer Sciences Canada, Ltd., has been awarded a contract to design and implement the computer programs for an information system which will enable Canadian farmers to improve the productivity and profitability of their farm business.

The contract was awarded by the Canadian Department of Agriculture. Dr. Varge Gilchrist, associate director for research in the Department of Agriculture, will direct and control the project.

Michael G. Goudge, president of Computer Sciences Canada, said the award covers the development of the initial phase of the Canadian Farm Management Data System.

Computer Sciences Canada provides organizations using computers in industry, science and government with computer system design, advanced programming, remote computing and related services. The company has facilities in Ottawa, Calgary and Vancouver. It is affiliated with Computer Sciences Corporation, the largest independent computer services company in the United States.

A distinctive feature of the new system will be its ability to present the farmer with a comparison of the individual aspects of his operation with those of other farmers'. When a farmer finds one aspect of his operation producing less profitable results than the average, he will be better able to pinpoint the problem by analyzing the details provided in the reports.



TO INSURE QUALITY IN ANY MACARONI PRODUCT, ALWAYS SPECIFY AMBER

In any size — any shape — it's always easier to control the quality and color of your products with Amber's first quality Venezia No. 1 Semolina, and, Imperia Durum Granular.

Nationally-famed macaroni manufacturers have long preferred these superior Amber products because of their consistently uniform amber color, uniform granulation and uniform high quality.

Because of our unique affiliations and connections throughout the durum wheat growing areas, Amber is able to supply the finest durum wheat products available anywhere.

We are prepared to meet your orders — prepared to ship every order when promised. And because of our rigid laboratory controls, highly skilled milling personnel and modern milling methods, you can be sure of consistent Amber quality. Be sure—specify AMBER.



AMBER MILLING DIVISION

FARMERS UNION GRAIN TERMINAL ASSOCIATION
Mills at Rush City, Minn.—General Offices: St. Paul, Minn. 55101
TELEPHONE: (612) 646-9433



Man And The Grasses

Highlights from a book by Robert Froman, published by J. B. Lippincott Co.

EACH spring the great harvesting machines roar out onto the plains of Texas and begin their long, slow journey northward across Oklahoma, Kansas, Nebraska, the Dakotas, and on into the Canadian provinces of Manitoba and Saskatchewan. From the harvesters gushes a great, golden flood of wheat. It flows through the mills, emerges in the form of our, then diverges into many streams, chief among which are those leading to the nation's twenty-five thousand bakeries. Finally, in a grand culmination of plenty beyond the wildest dreams of men of other ages, the wheat pours from the bakeries in the form of more than forty million loaves of bread per day and even more millions of other foods ranging from cakes to macaroni.



A sledge was the first plow.

stored indefinitely for use when other foods became scarce. And third, the wheat growers soon learned that when they captured young wild sheep or cattle or pigs they could turn wheat into mutton or beef or pork and, by keeping the animals around on the hoof, be still better prepared against times of scarcity of wild foods.

Farming Implements

It is probable that the first planting method consisted of making a small hole in the ground with a pointed stick and dropping a seed in the hole. The first planters must have noticed again and again that other things such as water and warmth and numbers of weeds being equal, loose earth produced better crops than did hard, compact earth. And even after they had noticed this repeatedly, it was not easy for them to do anything about it.

The next improvement in farming implements probably was accidental. Perhaps someone new to the procedures got hold of a stick shaped like a capital Y, and perhaps it was a little too heavy for one man to handle alone. Trying to make it work, these inventors-by-accident could have tipped the Y on its side and stuck one prong into the ground. If one farmer then pulled on the other prong and a second pushed on the base, the first plow was making the first furrow. Since such a plow loosened the ground much more deeply than a hoe and thus helped produce a bigger crop, the innovation might slowly have caught on in spite of being disagreeably newfangled.

Harvesting

The solution of the harvest problem now seems simple and obvious, but it could not have seemed so to the ancients who worked it out over many

generations. It involved three basic steps. The first (though not necessarily the first invented) was cutting the stalks of grain with sickles, the earliest examples of which were made by inserting sharp pieces of flint in curved sticks or antlers. Two or three men could cut an acre or more of wheat a day with such implements, far more than they could reap with their bare hands. The second step was beating the cut grain loose from the stalks with flails, and the third was winnowing the grain by repeatedly tossing it in the air so that the wind could carry off the chaff.

Reaper

One of the important parts of that pattern made its appearance on a farm in Virginia one summer day in 1831. It was a contraption pulled by a horse, and its important part was a saw-toothed steel blade that jiggled back and forth horizontally a couple of inches above the ground. Its twenty-two-year-old inventor, Cyrus McCormick, called it a reaper. In the course of a single day it reaped six acres of wheat, just six times as much as the best man could reap by hand.

Combine

In 1847 Hiram Moore hitched a team of twenty horses to an enormous, clumsy contraption, drove it out into a Michigan field, and in the course of a single day reaped, threshed, winnowed, and poured into burlap bags thirty acres of wheat.

Actually, Moore's combine, as the machine came to be known, was a little ahead of its time. It worked so fast and so efficiently that vast acreages of wheat were needed to keep it busy. But in the course of the next few decades those acreages gradually were opened by the invention and rapid spread of the use of modern plows and other equipment and by the westward surge of the pioneers.

Before the invention of these machines it took one strong, experienced man an average of about six eleven-hour days, not counting time to eat or rest, to prepare the soil, plant the seed, reap and thresh one acre of wheat. That figure had not changed much between the time of the ancient Babylonians and Egyptians and the time of Cyrus McCormick's childhood. Today, all that work takes a little less than four hours of one man's time.

(Continued on page 14)

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Man and the Grasses— (Continued from page 12)

So magnificently productive is the combination of the machine and the rich soil of America that for a generation we have had to worry not about famine but its opposite.

Ancient Automation

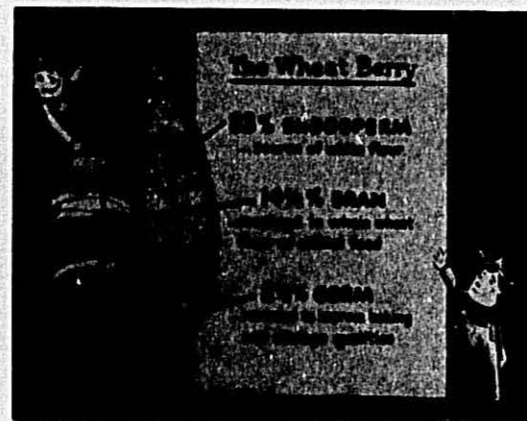
But the most remarkable fact about the high degree of automation in flour milling is that it is not a product of the industrial revolution of the last few generations. Milling has been like that ever since the days of the ancient Romans. The mills have grown enormously in size and in complexity during the last century, but for almost two thousand years they have required only occasional attention from humans.

When the wheat reaches the mill, it starts through a long series of complicated and ingenious cleaning operations. First, it passes under powerful magnets that remove any nails, bolts, and other bits of metal it may have accumulated during the reaping and threshing processes. Then it goes through several progressively finer sieves that rid it of sticks, stones, tiny weed seeds, and bits of farm soil. Finally, it hits a super-subtle device that feels the shape of each individual bit of matter in the millstream and rejects any that do not have the precise peculiar shape of wheat kernels, or "berries," as the millers call them.

With foreign matter thus removed, the wheat flows on to the sc. rers. Here it gets a severe beating with paddles that knock the beards, or "awns," off the tips of the berries. Then a laundry machine gives the berries a scrubbing to wash away dust accumulated in the creases along their sides, and the clean, glistening wheat is ready for the tempering bins, where it is sprayed with water and left to sit and recover for several hours.

Removing the Bran

Tempering toughens the outer coats of bran so that they can be more easily separated from the inner endosperm, which is the source of flour. Separation from the endosperm of the bran, which makes up about 13 percent of the wheat berry, and of the tiny, oily wheat germ, or embryo, which is about 2 percent of the berry, is a basic purpose of milling. The stream flows from the tempering bins to pairs of chilled steel rollers resembling corrugated rolling pins. Revolving toward each other, one faster than the other, they crush the berries into rough fragments. Usually there is a series of five such pairs of rollers with "scalpers" in between to sift off, into different streams, bits of bran and flour



already separated from the main mass of the berry.

Even after the fifth rolling and scalping, however, the bulk of the millstream, known at this stage as the "middlings," still contains a liberal sprinkling of fine bran particles. No amount of sifting will remove them.

From the purifiers the middlings go to sets of smooth rollers. Usually arranged in a series of seven, they pulverize the middlings progressively finer and finer. They also make it possible to eliminate the wheat germ, which will not pulverize like the endosperm particles, but, being gummy, flattens out into shapes that can easily be sifted out.

About Macaroni

Macaroni is merely dried flour-and-water paste. Any leavening is ruinous to it. For the best macaroni the flour is highly refined, ground very fine, and made from hard wheat high in protein content. The extra protein in the macaroni paste makes it tougher and more elastic than paste made from ordinary wheat flour. Except for this preference in the quality of the flour macaroni is one of the simplest of cereal foods.

Its simplicity is part of the reason for wide acceptance of highly inaccurate legends about its origin, because it is easy to imagine its having been made for the first time by accident. Probably it did originate in China, but many centuries before Marco Polo's time. It reached Europe at least a few decades before his birth; the first written mention of it in that part of the world seems to have been in a biography of a saint named the Blessed Hermit William, the Italian manuscript of which was copied in 1200.

One point not in doubt is that the food began growing toward its present popularity in the Western world during the Renaissance in Italy, and its popu-

larity spread first to neighboring Mediterranean countries. Part of the reason was that the hot climate made especially desirable a food that would keep well. Another part of the reason was that the comparative aridity of much of the land there suited it to growing the kind of hard, high-protein wheat that makes the best macaroni.

In America

In America the word "macaroni" first turned up with quite a different meaning. During the early part of the eighteenth century it became fashionable for sons of well-to-do Englishmen to round off their education by making Grand Tours of Europe. Like many other returned travelers before and since, some of them enjoyed trying to impress homebodies by trotting out the snippets of foreign languages and customs they had picked up. Apparently because it was one of the words they most frequently picked up, they came to be called Macaronies. Transplanted to colonial America, the term became a synonym for fop. Hence the famous verse:

Yankee Doodle went to town
A-riding on a pony;
He stuck a feather in his cap
And called him Macaroni.

It was not long thereafter, however, that the world acquired its modern meaning in this country. Shortly after the American Revolution, Thomas Jefferson served for a while as American Minister to France, visited Italy, tasted his first macaroni, and bought a machine for molding the paste into hollow sticks. It could scarcely be said that he founded the American macaroni industry, but he did help create an interest in the food, an interest that grew slowly but steadily all through the nineteenth century.

(Continued on page 16)

THE MACARONI JOURNAL

THE INSIDE STORY AT VIMCO:

(or, how Goodyear fiberglass-reinforced plastic bins save money, time and effort for a big macaroni company)

Space-saving Goodyear bins nest when empty, stack when full.

Easy-handling bins are lightweight yet strong, with tough NEOTHANE® rubber rims.

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Easy-to-clean with just detergent and steam or hot water, bins won't corrode, contaminate or rust.

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Man and the Grasses—

(Continued from page 14)

One obvious reason for the enormous increase in that interest in the last few decades is that millions of Italians came here in the early years of this century. Another not so obvious is the opening of the vast wheat lands of the Dakotas, Minnesota, and eastern Montana. These lands, so utterly unlike the Mediterranean littoral in most respects, are very much like it in their suitability for growing hard wheat rich in protein. Indeed, some of the wheat they produce is so hard and so rich in protein that it is unsuitable for most uses other than macaroni products.

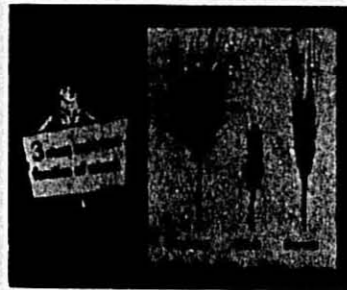
Macaroni Products

This term, "macaroni products," is an American invention intended to cover all the various sizes and shapes, not only of macaroni (properly, the hollow rods of larger diameter), but also the different kinds of spaghetti, the solid rods of smaller diameter, and noodles, the flat ribbons. In Italian they are generically termed *pasta alimentare* (nourishing paste) or, more commonly, plain *pasta*. All are made from the same mixture of flour and water except that noodles are supposed to include 5.5 per cent of egg solids by weight.

The manufacturing process is so simple that it has long since become highly automatic. Machines mix the paste and knead it to a proper smoothness, then push it through holes in metal discs. If there is a pin in the center of the hole, the result is a hollow rod; if no pin, a solid rod or ribbon. If there is a pin with a notch on one side, the paste travels a little faster on that side and ends as a curved rod to be cut into lengths of elbow macaroni. The rods, ribbons, or short pieces then go on to driers, which slowly and evenly remove moisture until each piece is a mere 13 per cent water. Then the pieces go into simple packages in which they will keep indefinitely.

All of which sounds decidedly cut and dried and dull, and that is what *pasta* well might be were it not for the Italian flair for taking pleasure in simple things. That flair has made of plain flour-and-water paste one of the world's most varied foods. Although a formal Italian dinner includes a course that is called *pasta* because it features one form or another of that food, other forms may turn up in the soup, the salad, the main course, and the dessert.

U.S. Bureau of Census counted 222 macaroni manufacturing establishments in 1963. Today there are 125 commercially important.



The Egg Situation

Production of eggs in the first quarter was 2% above the output in the same period last year. Part of this increase was due to 1 per cent more layers, while the rest was the result of an extra day in February. . . . Egg production in the second quarter, while seasonally high, is expected to be close to year-earlier levels. With fewer replacement pullets being added to the laying flock, production after mid year is expected to be 2 to 4 per cent below output during the same period last year.

Prices to producers for eggs in the spring are expected to continue at relatively low levels, but likely will average slightly above last year's. In the last half of the year, they are expected to average moderately to substantially above year-earlier levels.

Egg breaking activity in the first 2 months of 1968 was down 11% from year earlier levels. January and February breakings totaled 104,000,000 pounds of egg compared to 118,000,000 pounds in the same period of 1967. . . . Weekly deliveries of eggs to breakers during March also indicate a decline from the relatively large deliveries of March 1967. Breaking activities in the second quarter of this year may be near 1967 level with a cutback expected in summer and fall as prices increase above last fall's levels.

Poultry Industry Service Award

Gordon W. Johnson, president of Gordon Johnson Industries, Kansas City, Mo., received the Industry Service Award which the Institute of American Poultry Industries presents annually at its Fact Finding Conference.

Johnson was selected for the honor by an independent committee which considered 49 candidates nominated by people in the industry.

The award is made "in recognition of service to the poultry and egg industry above and beyond self-gain."

In reporting its choice, the committee credited Johnson with being an "idea man" who had done as much as any one person to make it possible for the poultry and egg business to become a modern, automated food business.

Dedicated to the growth and progress of the industry, Johnson repeatedly has invested the capital, time, talent, and energy of himself and his company, with no guarantee of compensation, to give the industry answers to many of its problems in production, processing, and marketing.

A native of Maine, Johnson was graduated in 1922 from what was then Iowa State College, and got a job as a poultry extension man in Iowa. He soon moved to the Buckeye Incubator Company as a salesman.

Today his company serves the poultry industry not only in the United States and Canada, but worldwide. Gordon Johnson equipment is manufactured, sold, and serviced from bases in the United Kingdom, Japan, and Australia, with additional sales companies in Panama, France, and Spain.

Past Recipients

Those who have received the Industry Service Award previously are: N. B. Clark, Jesse Jewell, Charles Wampler, Andrew Christie, Clyde Edmonds, Carl Koonz, Hobart Creighton, Herb Beyers, H. C. Pierce, John Huttar, O. A. Hanko, Howard Richey, Vic Pringle, Roy Ritter, and Victor W. Henningsen.

Government Egg Reports

U. S. Cold Storage Report	Apr. 1, 1968	Year Ago	5 Year Average
Shell Eggs (Cases)	80,000	40,000	44,000
Frozen Eggs—Total	81,983,000	43,870,000	42,231,000
Frozen whites	8,846,000	7,715,000	9,016,000
Frozen yolks	22,029,000	11,443,000	12,137,000
Frozen whole eggs	48,591,000	23,482,000	19,827,000
Frozen unclassified	2,517,000	1,030,000	1,251,000
Crop Report (48 States)	March, 1968	March 1967	
Shell eggs produced	6,129,000,000	6,092,000,000	
Average number of layers	319,872,000	315,452,000	
Average rate of lay	19.16	19.31	
Layer Report:	April 1, 1968	April 1, 1967	
Hens and Pullets of Laying Age	319,872,000	314,892,000	
Eggs Laid per 100 Layers	62.8	63.5	

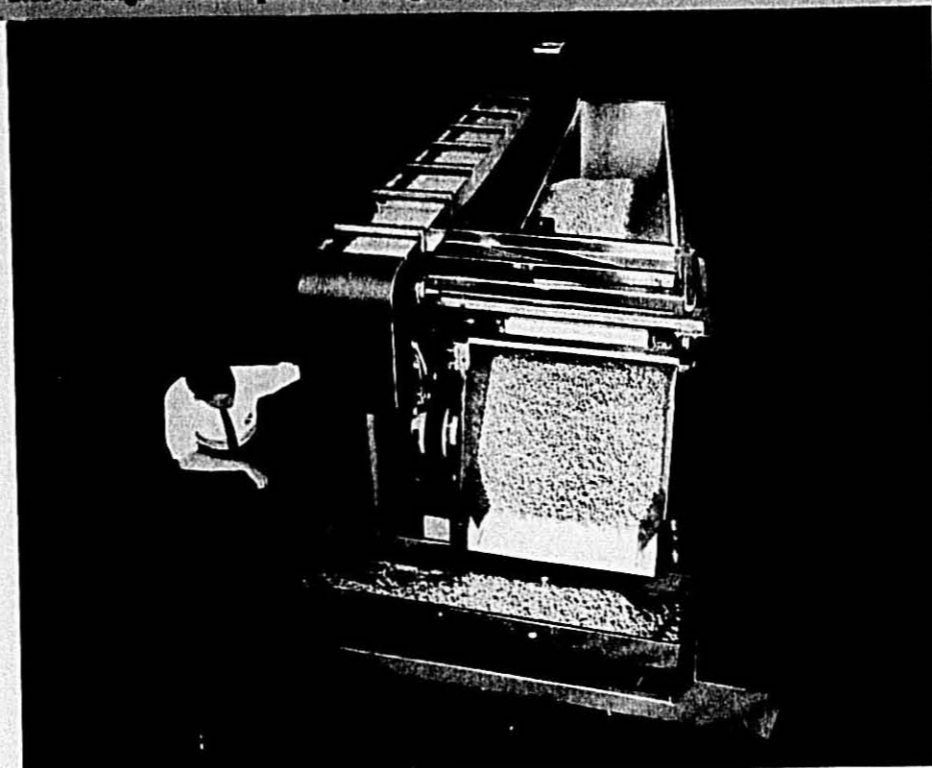
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Robert F. Sheehan

Mario Piazzolla

Lyman C. Kearns

Vincent P. La Rosa

La Rosa Plans Expansion

Vincent S. La Rosa, president of V. La Rosa & Sons, Inc., has announced several important management promotions which are part of an extensive expansion and growth program in both food and non-food lines.

In making this announcement V. S. La Rosa said, "Our current growth in sales of macaroni products and related food lines domestically and internationally, has made these expansion objectives possible. In addition, those men who have contributed to this growth potential have been rewarded for the superb caliber of their performance and personal commitment to the company."

Heading the list of key management changes is Executive Vice President Vincent P. La Rosa, who will assume the responsibility of accelerating this growth both internally and through an ambitious acquisition program.

Further significant management changes involve Mr. Mario Piazzolla, general counsel, Robert F. Sheehan, comptroller, and Lyman C. Kearns, director of marketing and sales, who have been elected Vice Presidents of the company.

Attorney

Mr. Piazzolla, 39 years old, with the company since 1956, has been an active member of the management group. A member of the American, New York and Philadelphia Bar Associations, Piazzolla is a bachelor and makes his home in Brooklyn, New York.

Comptroller

Robert F. Sheehan, a La Rosa employee since 1961 as comptroller, was previously with Peat, Marwick, Mitchell & Company, Certified Public Accountants, from 1953 through 1961. Mr. Sheehan is a member of the American Institute of Certified Public Account-

ants and the New York State Society of Certified Public Accountants. He resides in Flushing, New York with his wife Eileen and two children.

Director of Marketing

Lyman C. Kearns, director of marketing and sales, is a new member of the company and will be responsible for all food sales and marketing activities. Mr. Kearns came to La Rosa directly from Continental Can Company where he was Manager of Marketing. Prior positions included Product Manager for American Cyanamide, Marketing Consultant for Cudahy Meat Packing Company and General Product Manager for Colgate-Palmolive International. Mr. Kearns is a graduate of George Washington University in Washington, D.C., and did postgraduate work at Oxford University in England. He lives in Wayne, New Jersey with his wife and two children.

Frank Armour, Jr., Retires

Frank Armour, Jr., vice chairman of H. J. Heinz Company, concluded more than 41 years of service to the inter-



Frank Armour, Jr.

national food processing firm when he retired on April 30.

Henry J. Heinz II, chairman, said that the company's board of directors had acceded to Mr. Armour's request for early retirement. He said that Mr. Armour expressed the wish to free himself from formal business responsibilities in order to devote himself more fully to public affairs and other interests.

Chairman Heinz added, "The management of H. J. Heinz Company regrets the loss of an outstanding executive who played a key role in the expansion of our company in the United States and in many foreign countries."

Mr. Armour said that he had devoted his time and energies during more than four decades to Heinz and to food and grocery associations that served his company's interest. "Throughout this period," he said, "I have taken an active part in community affairs, but, quite naturally, business responsibilities had first claim on my available time."

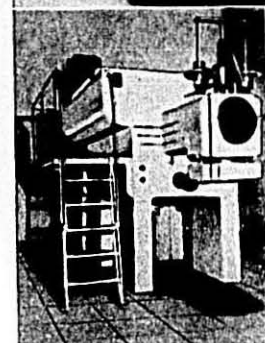
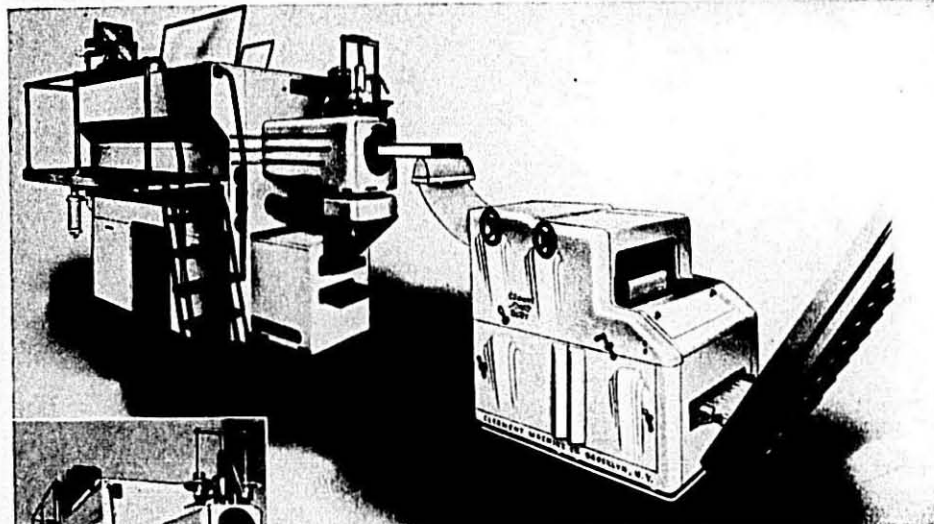
Among other business and civic commitments, Mr. Armour now plans to devote more time to expansion of the activities he began two years ago, when he was named chairman of the Republican Finance Committee of Allegheny County and vice chairman of the Pennsylvania Republican Finance Committee.

In community affairs Mr. Armour serves as a director of the Civic Light Opera Association, the Hospital Planning Association of Allegheny County, and as a member of the Executive Committee of the Pennsylvania Economy League. He served in a number of capacities over a 10-year period for the United Fund of Allegheny County.

Mr. Armour is a member of the board of directors of Goodwill Industries, The Methodist Church Union, and of Suburban General Hospital, Bellevue, Pa.

Clermont Unique New VMP-3 Extruded Noodle Dough Sheeter-1600 Pounds Per Hour

Clermont Extruded Noodle Dough Sheeter VMP-3



VMP-3 with short cut attachment.

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James J. Winston

by J. J. Winston

Director of Jacobs-Winston Laboratories, Inc.,
Director of Research of N.M.M.A.

der running tap water, until all the coloidal starch has been washed away, leaving behind a small ball of wet gluten. This wet gluten, to the experienced technician, will give evidence as to its quality. It should have good resiliency without tearing, and cohere very well after being pulled apart. In addition to this, good quality gluten shows high water absorption or water imbibition, and the following test is reliable in predicting the quality. This refers to the ratio between the wet and dry gluten. The wet gluten is weighed and then placed in an oven and dried to constant weight (bone dry). At this point, the weight of the dried gluten is then determined. A semolina or flour of good gluten quality, and durum, should show a high ratio between wet and dry, approaching the value of 3.

This indicates that the gluten, which is the essential ingredient, then yields a firm network or binding to the product, and has not been de-natured or weakened by any external factors or undesirable wheat blends.

Another test which should be performed is the determination of sprouted wheat that may have been used in the blend for the manufacture of the farinaceous ingredient. Sprouted wheat is a condition that often occurs in the field, prior to harvest time, where an abundance of moisture will be conducive to some of the carbohydrate material being converted into sugars. This phenomenon results in a condition where the flour tends to lose some of its cohesive qualities. This will produce a dough with poor binding qualities, resulting in a poorly manufactured product. Chemists determine the diastatic value by performing the analysis for

maltose, which is a form of sugar. The maltose value naturally will vary from crop to crop, depending upon the amount of sprouted wheat which is produced and used.

A rheological method used for determination of sprouted wheat is based on the use of the Amylograph apparatus. The reading in Brabender Units varies inversely with the degree of sprouted wheat. Therefore, a high Brabender Unit is a good indicator of a farinaceous material milled from sound wheat with a minimum of sprout damage.

A review of analytical data of farinaceous products which was publicized under our Bulletin #365 is worthwhile studying before we discuss other diagnostic tests for quality. The data below represents the analysis of different shipments of semolina and durum patent flours for a period of 3 months, namely, October, November and December, 1967, which is indicative of the current durum crop.

Ash Test: The ash determination plays an important part in determining the quality of the farinaceous material. Generally speaking, the higher the ash, the poorer is the quality since the high ash indicates that more of the bran has been included in the milling process.

Bran is undesirable because it produces a brown product, which is more susceptible to checking and breaking during the drying process. At the same time, it will tend to produce a poorly cooked product, owing to its effect on the starch, resulting in more slimy and stickiness. The ash determination is made in a muffle furnace, where the material is heated until all the organic matter is oxidized, and destroyed. This leaves behind a residue consisting pri-

Product	Number of Cars	Ash** %	Protein** %	Yellow %	Brown %	Flour %	Specks*** No.
Semollinas	102 Av.	0.66	12.52	49	33	2.7	27
	Max.	0.72	13.72	52	37	4.4	35
	Min.	0.62	12.14	47	28	1.2	15
Durum Patent Flours	96 Av.	0.76	12.39	47	31		
	Max.	0.90	13.18	56	36		
	Min.	0.68	11.90	44	24		

** Ash and Protein reported on a 14.0% moisture basis.

*** Number per 16 sq. inches (Brown + Black).

THE importance of an effective quality control program of both the raw materials and finished products is very well known to the successful processor of foods. During the past fifteen years, macaroni-noodle manufacturers have become acutely aware of the function of quality control and research, and are beginning to benefit from the interpretation of laboratory analyses and investigations.

The question often arises as to what constitutes a good quality research program to guarantee prime quality in the selection of ingredients for the fulfillment of high standard specifications. There are different types of tests available with the use of selected types of apparatus. Primarily, the manufacturer must consider the quality of the farinaceous materials. This must be governed by the following considerations.

Protein: The proper binding strength (protein quality and quantity) yield a product with good resiliency and resistance to breakage and disintegration, especially as gluten. It is incumbent upon the manufacturer to make certain that he is getting a semolina or flour with good quality characteristics, as characterized by its cohesiveness and resiliency.

These can be determined in one of two ways, (a) the manual procedure and (b) the mechanical method. In the manual procedure, the technician takes a certain weight of flour or semolina, generally about 25 grams, kneads it in a mortar and pestle to make a cohesive dough, and then kneads it by hand un-

derly of minerals, such as phosphorus, iron and calcium combined with oxygen in the form of oxides.

There are two methods of determining the ash, long and short procedures. In the short procedure, use is made of an ashing re-agent, such as magnesium acetate, which permits the ash process to take place at 700° centigrade, without any loss of material which may be caused by fusion of the ash. The long procedure requires a temperature of 550° centigrade, and thus incineration is generally done overnight. In either case, you will get comparable results.

Color Scores: The importance of yellow and brown is very fundamental, since it indicates to the manufacturer whether he is receiving a material made from a select blend of wheats. According to the U.S.D.A. standards for durum wheat, there are five permissible grades. Grades 1 and 2 have the minimum amount of damaged kernels and minimum amount of foreign material, and permit not more than 5% of other wheats to be admixed with durum. On the other hand, grades 3, 4 and 5 permit a range of 7% to 15% of damaged kernels; permit as much as 5% of foreign material; and permit as much as 10% of other wheats to be admixed with durum.

These other wheats generally consist of red durum or soft wheats, which are very undesirable. Therefore, the percentage of yellow and brown of raw material will to a great extent pinpoint undesirable wheats that the miller might be using in his blend. In the current book of methods of the American Association of Cereal Chemists, a method has been introduced which we have suggested to this scientific body. This is the disc colorimetric for evaluating the color of farinaceous materials and reproducing the data in terms of the color yellow and the color brown, in reflectance of color. This yellow and brown color is influenced to a great extent both by the blends of wheat used in the grinding and also as to whether or not more or less clear flour has been admixed with the raw material. The lower the grade of flour, the higher is the enzymatic activity, owing to the presence of lipoxidases. This enzyme has the property of oxidizing the yellow carotenoid pigments, thus yielding a product with a low yellow and a high brown, which is undesirable to the manufacturer. The technique involved in this determination is to treat a disc of smooth flour or semolina with water under certain standardized conditions. This is then subjected to drying in an oven which combines air velocity and heat in order to simulate the actual

drying process that goes on in your plant. The finished dry slicks are then compared to a standard Munsell color chart in a spinning position, and matched accordingly. The color is then read off directly by means of a protractor.

Speck Count: The speck count consists of counting the number of bran specks and black point fungus specks, which will appear in your semolina or middling particles. The miller has at times a most difficult problem of removing the fungus that comes in with the wheat, and which causes the black specks. However, from the point of quality control it is in your interest to receive a semolina that contains a minimum of these specks.

In our laboratory we make use of 4 x 4 flat glass which provides us with an area of 16 square inches. This glass is scored into 16 one-inch squares, which facilitates the reading of the specks. It is a good idea to read the specks at least three times and take the average. In our laboratory we are aided by the use of a bright light that furnishes a magnification of five times.

Grit Determination: Grit in farinaceous materials is used to define accumulation of what might consist of sand, rock, coal, glass, etc. which can be admixed with the raw material. This grit material can have a deleterious effect on your dies; and also on the cooking quality of the product. This is a determination that can be made in most companies where you have a technician employed. The procedure is as follows: Place 100 gm. of material in a 400 ml. Squibb type separatory funnel. Add enough carbon tetrachloride to float the material upon it. Shake the mixture of carbon tetrachloride and the sample. The heavier particles of grit which might consist of sand, rock, coal, glass, etc. will fall to the bottom of the carbon tetrachloride layer and may be removed by opening the stopcock and catching them in a beaker. Wash the grit with fresh carbon tetrachloride and decant to remove adhering flour and dissolved fat. Finally, wash the particles into a funnel containing filter paper and wash again with carbon tetrachloride. Weigh the grit particles and determine percentage.

Moisture: One of the first tests to consider is the moisture content of both your farinaceous material and your finished product. This test, similarly to many other procedures, has been standardized by both the A.O.A.C. and the American Association of Cereal Chemists. It consists primarily of utilizing either the air oven or the vacuum oven. The air oven procedure takes a period

of one hour and the substance is heated at a temperature of 130° centigrade. The loss in weight constitutes the moisture that has been volatilized. The other method, which is also offered, makes use of the vacuum oven where the material is heated for a period of five hours at 100° centigrade under vacuum.

Both of these methods agree very closely. In the past few years, there have appeared on the market several types of moisture meters, which depend upon the electrical conductance or resistance created by the sample under investigation. These meters will generally give you the results in several minutes, and will be in agreement with the official procedure within one-half of one percent. It is important to bear in mind that these different moisture meters should be calibrated periodically against the official oven test in order to produce the most reliable results.

Study of Starch Effect

A study to compare the short-term effects of sugar and starch in the diets of student volunteers will be undertaken at the University of Alabama under a \$46,325 grant by the Department of Agriculture. Dr. Frieda L. Meyer, a nutritionist in the school of home economics at the university, will direct the two-year study, and Dr. M. Isabel Irwin, an A.R.S. nutritionist, will be technical representative.

Eight college students—four men and four women—will eat controlled diets of foods typical of those consumed by Americans. On the sixth day of several test periods, the volunteers will eat a test meal containing one of the carbohydrates under study. Before this meal, and at five hourly intervals afterwards, researchers will take blood and urine samples to check how short-term metabolism is affected by the carbohydrates to be studied.

Carbohydrates to be tested are glucose, fructose, sucrose, wheat starch and corn starch. The basic information acquired on the early metabolic effects of these carbohydrates can then be related to known and assumed long-term effects.

In announcing the research grant, the Department of Agriculture said: "Research by Dr. Meyer and Dr. Irwin and other investigators has shown that the kind of carbohydrate affects the metabolism of other nutrients in the diet. Starches, for example, affect protein metabolism differently than sugars in the diets that are otherwise identical. Little is known, however, about how rapidly the effects come about.

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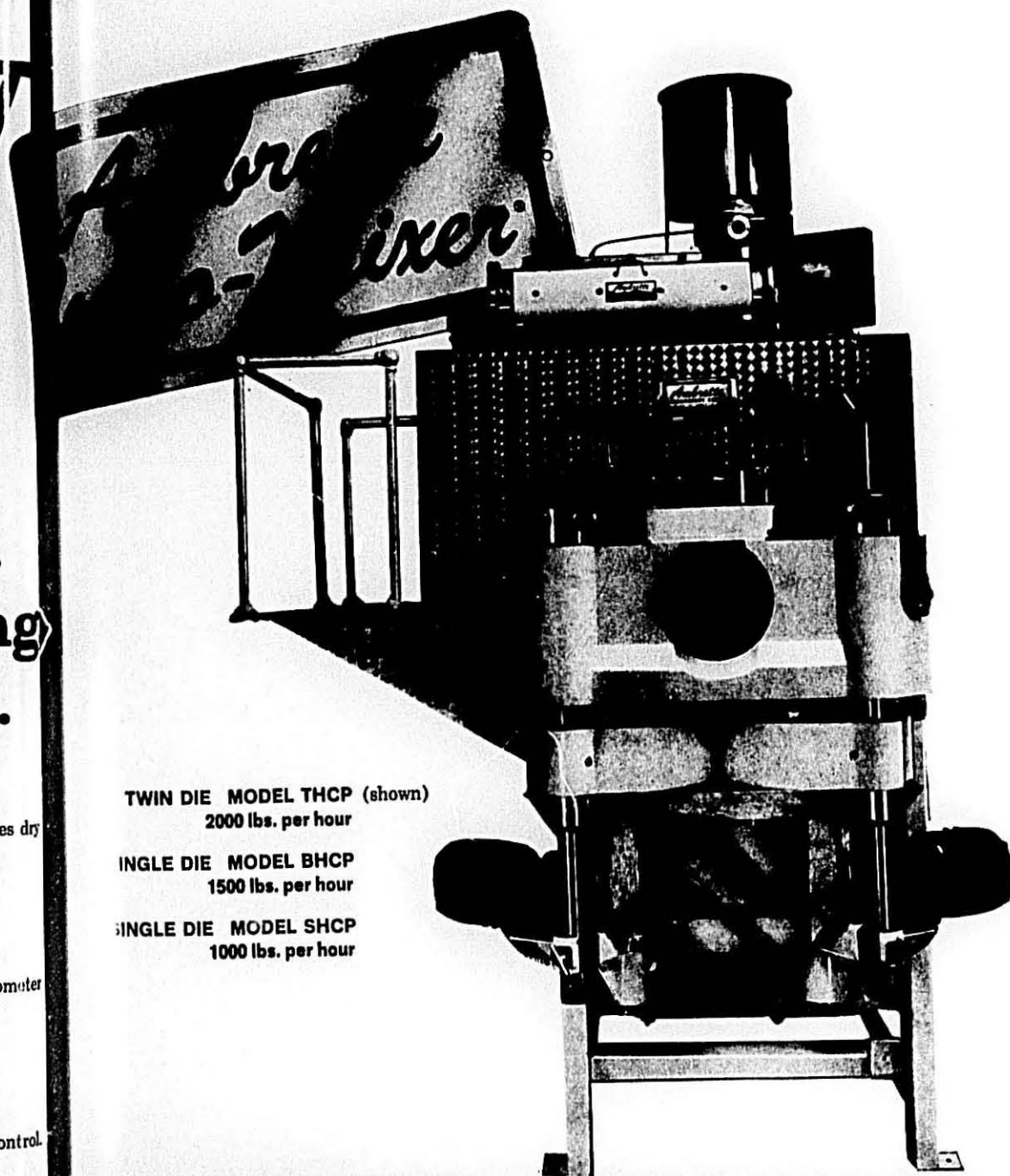
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Quality Methods Exercised by Millers

by Lawrence L. Warren, Quality Control, Archer-Daniels-Midland Company.

A SUBJECT of this nature permits a great deal of latitude. Rather than pursue any straight technical summary of quality control procedures used by the various mill laboratories, I choose to summarize a few general characteristics of durum wheat and then touch very lightly on quality assurance measures. In this approach, I may stimulate some questions but my coverage here will answer very few thoroughly.

Quality control or quality assurance, whichever phrase you may prefer, encompasses many things and has different meanings for most individuals. In any case, the control of quality is one of the vital factors in any company and is basically summed up as an overall team effort. Each milling company is daily utilizing the talents of a group of experienced individuals to purchase grain, process it into semolina and flour and sell these finished products. In so doing, each member of a team is making a contribution to the image of quality, an image which must prove a reality. In addition to manufacturing and selling fine quality semolina and flour, each company hopes to reward its management with a slight profit at the end of a fiscal year, and anything short of this goal certainly calls for some re-evaluation of the system.

Start with Good Durum

Needless to say, good durum wheat is the commodity of our industry and this paper will first move through some of its general characteristics. We look to North Dakota to provide us with a succession of crops, each providing approved varieties which will yield high percentages of semolina and, along with this, we want adequate protein, good gluten properties and an abundance of yellow pigment. Many of these factors we assume will be provided by each crop and, after all, they are fundamental to durum. I only make this point to remind everyone in our combined industries of the efforts being employed each year by the North Dakota and USDA personnel, along with the Crop Quality Council and its collaborators, to assure us this endless supply of good durum.

Irrespective of the best planning and a good variety picture, most years we do see durum wheats varying quite widely in many characteristics and this is primarily due to the effect of environment. This seldom presents a major

problem but it does necessitate a thorough crop survey at harvest time, one which very quickly informs management, grain buyers, and sales personnel what will confront them from a quality and economic standpoint for the year ahead.

General Factors

In spite of the environmental variations, there are some general factors about durum I will review. For one thing, they are never as strong as hard red spring wheats grown under similar conditions and this suggests to some we may be looking at different proteins and starches in the two general classes. The diastatic activity in durum is slightly above the normal levels found in sound bread wheat.

A major characteristic of durum endosperm which distinguishes it from all other varieties is the high level of yellow pigment, predominantly that of xanthophyll. It demonstrates roughly twice as much as that found in the bread type wheats and the yellow color imparted by this high pigment is the one so vital to our combined industries. I hope we never see the day when someone releases a durum variety which is deficient in this one factor.

Another basic feature is kernel size and shape. Durum wheats generally have larger kernels which are longer in relation to height and width than most bread wheats. They also tend to produce a slightly higher test weight per bushel than the other classes. Test weight is significant since it relates to semolina yield and is a factor in grain pricing and for those of you who may be concerned, it represents the volume of grain required to fill level a Winchester bushel measure of 2150.42 cubic inches capacity. Factors which tend to reduce test weight would include damaged kernels, starchy, weathered or shrunken kernels, foreign material and moisture content. Test weight is a portion of the grain grade and features in price structure since it does definitely relate to milling quality and semolina yield. Along this line, a test which has limited appeal with quality control, and is further related to test weight, is the 1,000 kernel weight test. It has proven a useful tool in plant breeding work where the quantity of grain is limited and we know 1,000 kernel weight does relate to milling yield. The larger the kernel, the greater the ratio of endosperm to bran, hence the potentials of

improved semolina yields. Factors such as bran thickness and vitreousness may be limiting conditions for this test.

Two Basic Mixes

In our industry, it is common to have two basic mixes—one for the production of semolina and another for the production of flour. This need not necessarily be the case but is often dictated by the sheer economics of grain. In the durums available to millers, the best milling quality will be found in those wheats of highest grade with large kernels of a uniform size and highly vitreous in nature and free from impurities and wheats of other classes. Wheat for semolina milling should be high in protein and have medium strong gluten characteristics, a high concentration of yellow pigment, and a low concentration of lipoxidase. When these sets of conditions are met, the yield of semolina is held at maximum with a fairly uniform particle size and free of specks and grit.

If the wheat is to be milled into flour for macaroni or noodle processing, the specifications are less rigid insofar as grade is concerned. On the trading floor, grain buyers once furnished with an official grade can normally, by a quick observation of the percentage of vitreous kernels, make a reasonable estimate of how the wheat can be used.

Protein Important

Protein content is important and in any given crop year the mills survey the new durum available to their market and establish mix levels which are compatible with the survey data and will also provide the gluten properties needed for production of good paste products. Protein is going to vary considerably and ranges of 10.0 to 15.0% are common; but, fortunately, we can expect a major portion of this grain to fall in the 13.0 to 14.0% bracket and it is in this range mills hope to carry their mixes.

As soon as the laboratory is furnished durum wheat samples from the trading floor or a grain firm, it becomes routine to start in on a set of procedures which aid in binning this wheat by protein content, color score, and grade. It is of little significance to buy expensive durum and then co-mingle it with grain of a lesser quality at this point.

Grade is furnished as well as protein but are double-checked by the mill. To

(Continued on page 28)

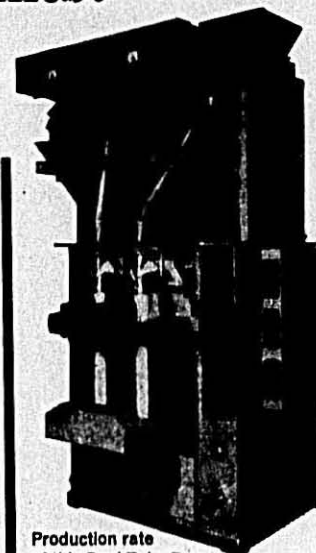
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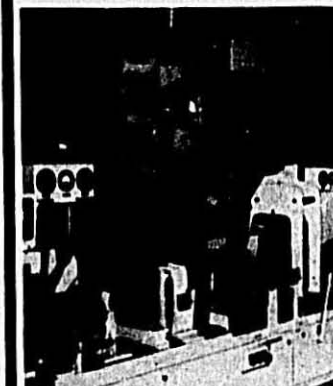


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Quality Methods for Millers—

(Continued from page 24)

approach color and other quality factors, an experimental milling is essential and this is carried out in a batch-type operation on a unit equipped with break and reduction rolls properly corrugated so as to arrive at a 50 to 60% yield of high quality semolina. For this process, the wheat must be cleaned and tempered much as would be done for a commercial unit. In this stage, little attempt is made to arrive at actual semolina yield potential due to the lack of purification systems for the experimental unit; however, some broad concepts can be developed.

The semolina now available from the small unit is ready for making color comparisons, gluten quality tests and diastatic activity determinations. Color scores at this point, an arbitrary numerical value, serve to provide the grain buyer with important information concerning his purchase and permit the wheat to be binned in its appropriate category. It is especially important to have this information at the beginning of every harvest period when those responsible for wheat procurement are developing information on desirable growing areas. These efforts are not dispensed with at any time but are less demanding as the crop year progresses.

Arriving at Color

There are several ways of arriving at color on the experimental millings, but probably the most common for initial concepts is a dry slick comparison with known standards, and I have further liked the procedure of making a slab for relating the semolina color to macaroni color. The slab process is simply one of hand mixing a small quantity of semolina and water in a cup to produce a paste consistency similar to that of commercially extruded processes, roll the dough mass into a thin uniform strip and place in a low temperature oven. Upon completion the slabs are examined visually to make comparisons with those made from commercial millings and to further compare with the dry experimentally milled semolina. Laboratory model extruders are valuable for basically the same reason. It is pertinent to determine if this yellow pigment of the semolina carries through into the paste product and to be certain there is no dullness or gray color predominating in the finished line. Dullness can be a function of wheat type, grade or just poor milling, but at this stage we are still concerned with basic wheat selection.

The enzyme lipoxidase tends to destroy a portion of the yellow pigment of

semolina during the stage of macaroni processing. It tends to be more predominant in certain durum varieties than others and is concentrated in the germ and bran fractions of all varieties. Whole wheat durum contains several times as much lipoxidase as purified semolina, and longer extraction flours contain a higher percentage than those of shorter extraction. Choice of semolina streams on a color basis could be misleading with respect to lipoxidase activity and it is advantageous for the mills to consider this test on a stream basis.

Gluten

Concepts of gluten quality may be obtained with the Brabender farinograph or the technique of hand washing semolina. Farinograms can provide some data on absorption levels, rate of hydration, and dough strength, but are subject to the variations of granulation, protein and variety. Hand washing of gluten is very informative as to gluten quality and strength providing the process is carried out by someone with sufficient experience to make a judgment. It is not essential to use these procedures on all inbound cars but they are useful in developing new crop data and as a screening procedure for certain grain purchases.

Milling Task

Once the mill approaches the task of making mill mixes for semolina and flour production, the task is relatively simple and handled with confidence if inbound grain has been adequately classified as I have just outlined.

Mixes are normally channeled through cleaning equipment and washed prior to tempering. In the wheat cleaning stage, the removal of sand, small stones, and gritty material of all nature is pertinent. Tempering wheat involves adding water and holding in tanks where it is drawn directly to the roll surfaces. There are definite relationships of water and time but they vary slightly between mills; and the basic concept is to control each factor so as to produce a maximum yield of semolina from the vitreous durum endosperm and effect an efficient removal of the bran coating.

Testing

The testing of commercially milled semolina, granular and flour is primarily a repeat performance of that carried out on experimentally milled stocks but does take on a new significance. Now we are actually providing useful control data to milling production staffs and passing judgment on the ability of these products to meet customer specifications.

Grit Count

One of the first matters to come under scrutiny is that of grit count and the quantity of black or bran speck. A simple procedure for grit is to place 100 grams of semolina into a separating funnel along with carbon tetrachloride. The semolina and bran particles float on top while the heavier gritty material sediments to the bottom, is drawn off and weighed to make a percentage calculation. Visual inspections for dark or branny specks are routine to assess the efficiency of wheat cleaning equipment and milling procedures. Here a quantity of product is placed on a glass plate partitioned into squares and counts recorded.

Granulation Data

Granulation data is extremely important and constant use of the Ro-Tap and Rotomatic equipment is quite routine in both the mill and laboratory. Numbers and types of sieves will vary with mills and customer specifications. Each must be mindful of the Federal Standards of Identity for semolina and the granulation ranges most suitable for use in continuous extrusion systems. In this area of granulation, millers must also be careful in handling and loading techniques which may result in materially altering the original product through degrees of air classification or stratification by product density. Some pneumatic handling systems can present problems providing the ratio of air to dry component is not balanced.

Ash and Protein

Ash and protein content are checked at specific intervals on mill production and on each car loaded for shipment, but if initial mixes are made correctly, these factors fall in a uniform pattern. Ash is useful as an index to uniform milling and, in the event of a high value, it should be backed up with a color test to determine if this result is due to poor milling, is a change in percentage, or is brought about by grinding wheats carrying higher-than-normal endosperm ash. If finished mill products are free of bran and grit, display a good yellow color which holds up in a slab or extrusion process, the actual ash value is no more than conversational.

Diastatic Activity

In a year when durum wheats have experienced heavy weathering in the field, mills are alert to official grades showing a percentage of sprout damage; however, the grade alone is not sufficient to give complete information concerning the potentials of alpha amylase activity. There are several approaches to the measurement of dias-

tatic activity in milled wheat flours, such as maltose and falling number test, but we feel the amylograph is best since it primarily measures the action of alpha amylase and this is the enzyme involved in liquefying of starch gels. The procedure involves mixing 100 grams of flour with a buffered solution and heating at a constant rate of 1.5° per minute from 30° to 95° Centigrade and reading the maximum viscosity in Brabender Units. This technique has proven very satisfactory to the mills both in wheat selection and for quality assurance of finished products.

Sanitation Program

A complete and well rounded quality assurance program by a mill must reach beyond the point of grinding good durum into semolina for functionality and eye appeal. This involves the area of sanitation and the accompanying measures taken to insure the manufacture of safe and uncontaminated products which would meet the high standards of your industry and those of the Food & Drug Administration.

It has become routine for most mills to carry out a degree of testing for insecticide and pesticide residues on wheat purchases and some of the finished semolina and flour. Our basic concern here is not so much with policing our mills and elevators, where competent technicians and sound sanitation policies are in force, but with the actions taken at the farm and small terminal level. Involved in the testing program would be the chlorinated hydrocarbons, examples of which would be DDT and lindane, and the organic phosphorous compounds which include malathion and a few others which do not fall in either broad category. Gas chromatography techniques have provided a means whereby experienced analysts can, by use of electron affinity detectors, come up with some very accurate values on the pesticide group, figures which fall in the parts per million or parts per billion range.

Bacteriological Area

In the bacteriological area, I think all semolina and flour produced today by mills will meet individual customer specifications and those of the National Canners Association. Some routine testing is carried out for coliform, molds and yeasts, salmonella and the more common standard plate count. I will not elaborate on these other than to indicate most mills now have looked at sufficient samples over a period of three or four years to be assured wheat flours

SANITATION - IT HASN'T BEEN EASY

by E. H. Tony Leitte, Industrial Fumigation Engineer

When one thinks and speaks of sanitation, it involves a multitude of different phases. Usually we think of it as sanitary hygiene and that involves food hygiene, air and water pollution, sewage disposal, radiation hazards, the effect of light, heat and noise, etc.

Your principal concern as a manufacturer of food products falls in the category of food hygiene. You and you alone are responsible to provide the foodstuffs that meet the sanitary requirements of both state and federal governments. Their requirements as you well know continue to get more and more difficult to meet.

My principal interest in your effort to meet the sanitation requirements has been to assist the flour milling industry to provide you with insect and rodent contamination-free Durum flour, the basic ingredient in your products.

It is my belief that a primary motive for the federal government to actively enforce the Pure Food Law on flour was brought about during the second world war. U. S. mills shipped flour all over the world to not only feed our fighting men, but to feed the thousands of inhabitants in the war torn areas. Shipments of flour that went to the tropical areas where the temperatures and humidity are high soon became unfit for human consumption. High temperatures and humidity provide ideal conditions for insects to multiply. Some years ago a top federal entomologist told me that

are showing up salmonella negative and represent one of the most sanitary food items available.

Durum millers are also making sure your products are free of rodent and insect infestation. Basic procedure is to buy sound, clear wheat, store it under sanitary conditions and clean it thoroughly prior to milling. To insure a food item which is acceptable to the FDA, we must run sufficient microanalysis determinations to prove an effective program. Fortunately, the vitreous durum kernel is not the favorite habitat of insects and semolina and durum flours are normally more free of contamination than the bread flours.

You will note I have not covered all procedures nor have I been very technical about those in use. Any supplementary information you desire is certainly available from any of your suppliers.

a mathematician in his laboratory had calculated that one pair of tribolium confusum (flour beetle) in nine months under ideal breeding conditions could produce an insect population of one billion three hundred million insects. It is therefore easy to understand why some of the flour in storage in tropical areas was literally crawling with insects in a few short weeks. Our fighting men certainly shouldn't be expected to eat bread made from insect contaminated flour.

FDA Investigations Begin

Immediately following World War II, the Food and Drug Administration armed with the Federal Food, Drug and Cosmetic Act of 1938 began at the bakery end of their investigations. The bakeries soon became impressed with the need for improved sanitary conditions and the inspectors soon realized that the bakeries couldn't be expected to produce sanitary bread unless they received sanitary flour.

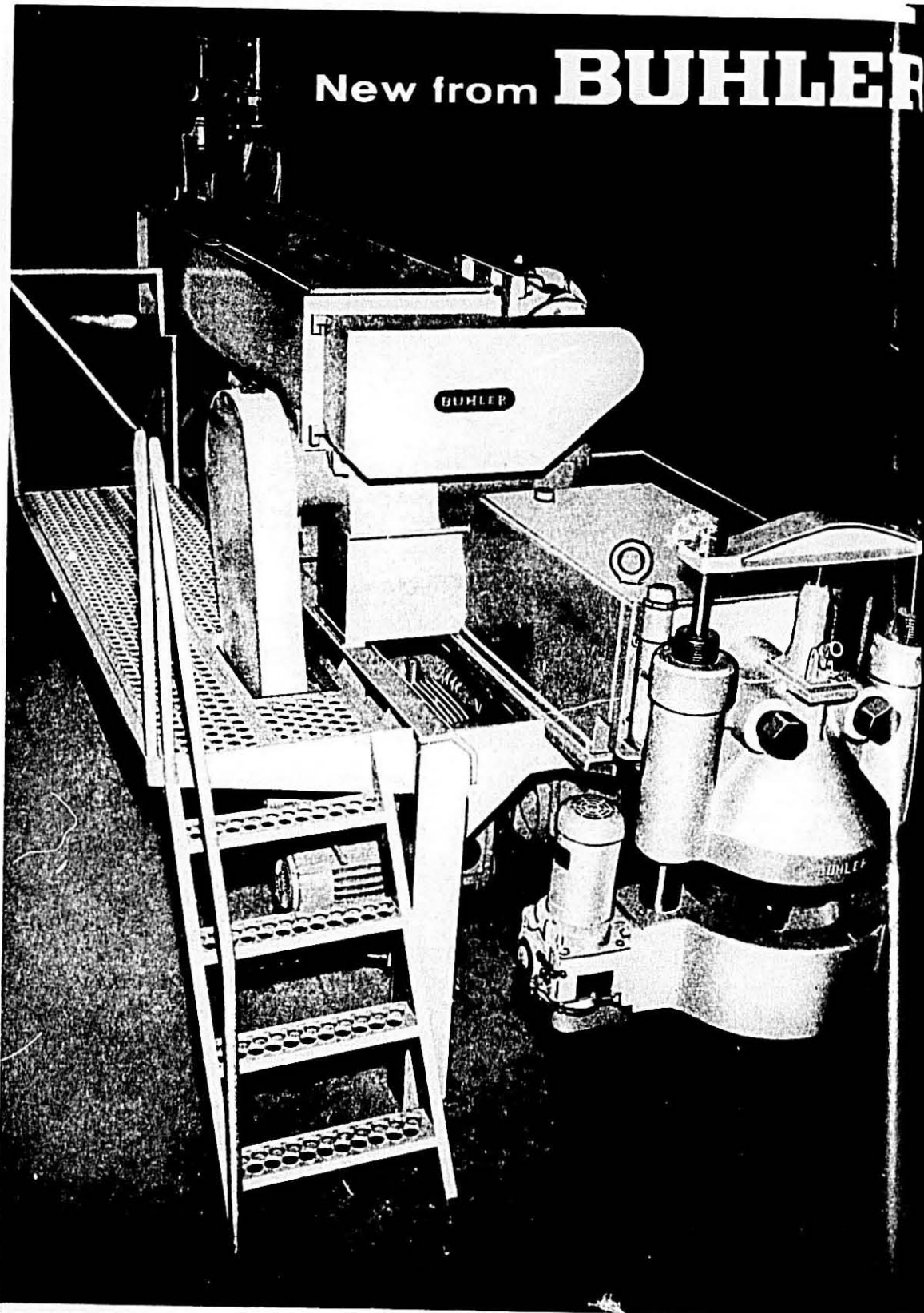
The federal inspectors then concentrated on the flour milling industry. This all came about at a very bad time for the flour mills because the world wide demand for flour stopped at the end of the war. The flour milling production capacity far exceeded the demand from primarily domestic needs. Many shipments of contaminated flour were seized by Food and Drug. Mills were fined, which hurt—but the worst of all was the bad publicity the mills received. The need for the flour milling industry to improve their insect control efforts became evident and the need for new and better designed equipment all contributed toward the closing of many mills. If my memory is correct nearly two out of three mills that existed during World War II are now out of business.

Here again—the Food and Drug people soon learned that the flour milling industry could not be expected to produce insect and rodent contamination-free flour unless they received clean wheat. This led to investigations in terminal elevators, in freight cars, in country elevators and finally on the farm.

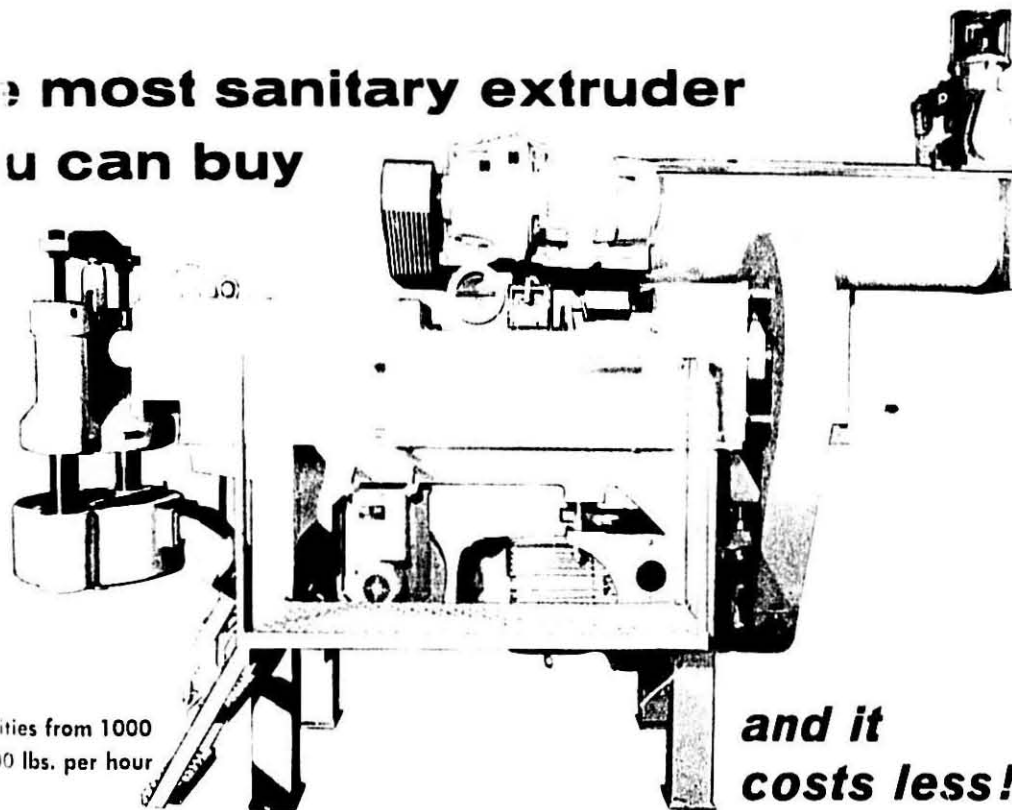
When insect contamination of wheat was found in terminal elevators it was not easy to fumigate the thousands of

(Continued on page 32)

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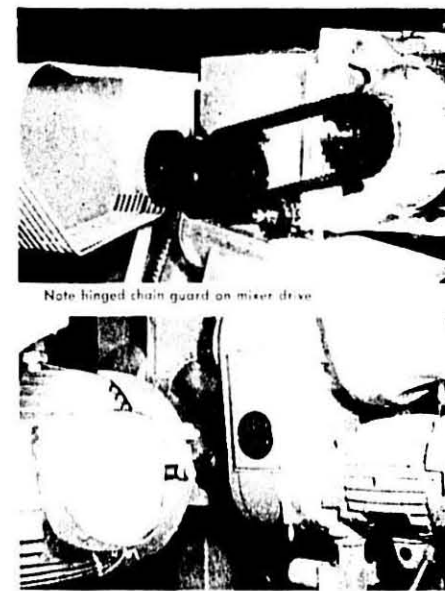
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Sanitation—

(Continued from page 29)

bushels in each silo bin. Efforts were made to pour grain fumigants on the top of the bin, but the fumigant settled down through the channels of least resistance of the grain and complete insect kills were not received. It soon became evident that the grain had to be transferred from one bin to another empty bin and the fumigant added at thousand bushel intervals. All this was very expensive and time consuming.

As for the railroad box cars that hauled the wheat from the country elevators to the terminals—it was soon learned that much contamination resulted from them, but to my knowledge, no real pressure has ever been applied to this phase nor did the railroads cooperate to improve their old cars in design or build acceptable cars until several years later.

Elevator Problems

As for the country elevator—they too had their problems. When harvest time rolled around the elevator operator was under terrific pressure. He didn't have the time or a simple means of checking to find out, if the farmer was trucking in clean wheat. Due to the country elevators' limited storage facilities the bulk of the grain was loaded into box cars and shipped to the terminal elevators.

The farmer was unconcerned about clean wheat because he was paid in accordance with the normal grain grading standards which did not include contamination factors. He usually held all the grain he could on the farm for better prices. His storage buildings were not screened, so the farm chickens, pigeons and sparrows ate real well and dropped their stool freely over the surface of the grain. No effort was made to control rodents and they contaminated far more wheat than they could eat.

FDA Findings

The foregoing facts brought about a year long survey conducted by the Food and Drug Administration. It was found that 12% of the wheat brought direct from the fields was infested with insects; 31.7% was infested or contaminated while in storage on the farm; 43.9% was infested in country elevators; 66.8% was infested in terminal elevators and 40% was infested in other storage areas.

As a result of this year long study a tremendous effort was made to stress the importance and the need for all of the links in this chain to educate every

one connected with the handling of wheat. Food and Drug immediately established that only 2% of the wheat could be insect damaged and that only two rodent pellets per pint of wheat would be permitted. As time went on the requirements became tougher and tougher.

Miller Amendment

The tremendous efforts that had been made to provide clean wheat to the flour mills did not mean that the flour mills have relaxed their efforts because they, like yourselves and other links in the chain of clean food products, are under constant surveillance. Since the enforcement of the clean wheat program, the flour mills soon became subjected to the Miller Amendment, which established tolerances or safe residues used to control insects in flour. The FDA required the chemical manufacturers of the insecticides to prove that each chemical ingredient was safe to use in and around food stuffs. The costs to just develop an effective insecticide in itself is a very great investment, but when they had to prove how many parts per million could be permitted—it ran into hundreds and thousands of dollars. As a result—chemical manufacturers have lost their incentive to de-

Cleanest Flour Ever

velop new and better insecticides. This all means that the same insecticides have been used for the past twelve to fifteen years and consequently the insects are becoming resistant or actually immune to them. This means ever increasing dosages to do the job. For this reason I have for the past several years highly recommended that of the few insecticides that are acceptable for use that these few be rotated to combat insect resistance to any one insecticide.

So today the flour and all flour products are cleaner than ever before. Today not a flour mill nor a manufacturer of a flour product would not agree that without the Food and Drug act, we would not have done the job nearly as well. The United States of America is the greatest nation in the world and its people are entitled to have the cleanest and most wholesome food in the world.

FDA Details Inspections

Significant adverse conditions or practices uncovered by FDA inspectors during visits will now be furnished to the most responsible officer of a firm. Reports are designed to encourage voluntary compliance.

FDA defines "significant adverse conditions" to mean "conditions which have caused violations or could lead to

violations on which the District would recommend regulatory action."

Approved Lubricant

American Oil Company scientists have developed a new, multi-purpose grease for machinery used in the processing and packaging of food products. It was announced today.

The new product, Amoco Food Machinery Grease, is formulated entirely from substances which the federal Food and Drug Administration allows to be used in lubricants which may have incidental contact with food being processed, said D. R. Oberlink, product manager. Its basic ingredient is a medicinal grade mineral oil.

The meat and poultry inspection divisions of the U. S. Department of Agriculture have ruled the new Amoco product acceptable for processing machinery in federally inspected meat and poultry plants where no significant contact with the product is expected, Oberlink added. It is one of only a few lubricants which meet the requirements of both FDA and USDA.

Amoco Food Machinery Grease is suitable for plain and anti-friction bearings, slides, guides and other moving parts. Its anti-rust properties will give good protection to machinery during off-season idleness. It resists water, steam and food and vegetable juices, and will withstand moderately high temperatures, according to tests in a variety of food processing operations during its development.

Processing in the following types of plants was included in the test program, Oberlink said: Eggs, citrus fruits, baby foods, cereals, powdered milk, meat canneries, bakeries, candy, breweries, potato chips, condensed milk pharmaceuticals and soft drinks.

Amoco Food Machinery Grease is virtually odorless, colorless and tasteless.

"Governmental agencies are exerting tighter control on industries processing food and drink for human consumption," Oberlink said. "In the past, many food plants were satisfied to use a light-colored grease, or one with a white pigment.

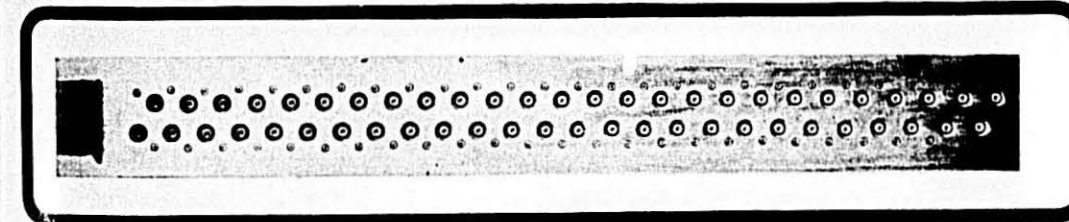
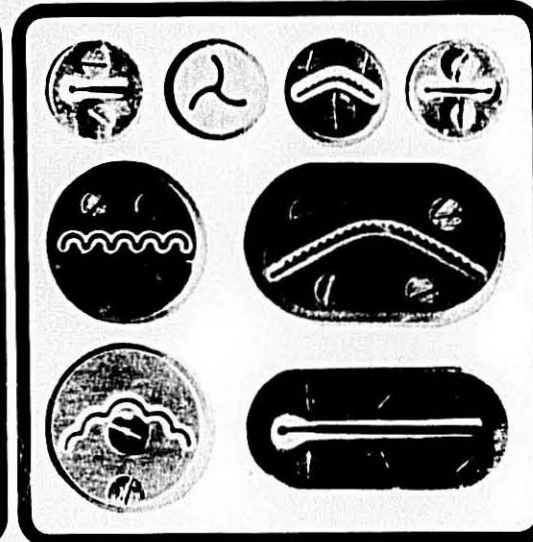
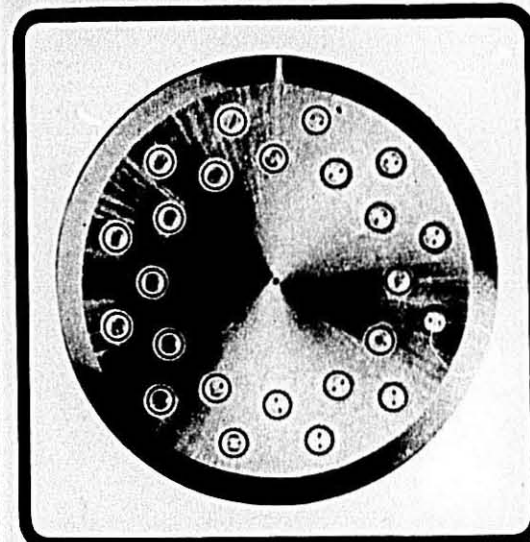
"Now, they are interested in more than appearance. They want a grease of known purity in the plant, even where contact with food is only a remote possibility."

One of the new lubricant's most important features is its multi-purpose application Oberlink said:

"The safety and convenience to food processors of serving all grease points with one grease and one gun has overriding advantages."

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Packaging Dynamics Play An Integral Role at Buitoni



IN 1967, out of an industrial site in South Hackensack, New Jersey, one of today's most dynamic marketing, packaging and production programs in the macaroni industry was developed. Buitoni Foods Corporation working hand in hand with Diamond National Corporation came up with an outstanding success story.

Marco Buitoni arrived from Italy in mid 1966 to assume the position of president of Buitoni Foods. Soon after he began functioning in his new post, several new concepts began to manifest themselves. Foremost were the new marketing proposals to better present the company's products to the consumer while building a more recognizable brand identity.

New Designs

To accomplish this two-fold task, the company called for a total redesign of the entire Buitoni packaging line. For this assignment, Buitoni selected Frank Gianninoto Associates. Under the direction of Doris Gianninoto and Gene Rossi, the new design program was immediately under way. Many designs were reviewed and the decision was made for the design now in use. The graphics were designed to appeal to the consumer, yet were suitable to use as a framework into which many products could be incorporated. The new packages captured the spirit of the new Buitoni with elegance of overall design and appetite appeal of superb vignettes.

Packaging and Automation

The next step was to select a packaging supplier capable of doing justice to the Gianninoto designs. At the same time Buitoni wished to automate its packaging operation in order to accommodate the anticipated increase in volume. To solve both needs, the company called upon Diamond National Corporation.

Working with the new designs, Diamond proceeded to develop the packaging and automation program. The result is a completely new concept of integrated packaging machinery. Called the Diamond Hi-Flo System, it consists of Kliklok formers and sealers working in tandem with an Olofsson feeding and weighing system.

Designed specifically for high speed handling of free flow products, the new system enabled Buitoni to quadruple production speeds on its packaging and filling operation. Over- and under-filling were virtually eliminated, and a literally sift-proof package was created. A high speed feeder was combined with a hot melt system resulting in a very tight seal.

After the filled cartons are sealed, they are overwrapped with clear cello, giving the package an eye-appealing shelf impact and adding considerably to shelf life.

Increase Volume

William Boland, product manager of Buitoni's macaroni line, indicated a

definite upturn in sales and noted the company can meet the requirements of the market place. With a line of 18 macaroni products, it is impractical to inventory large stocks of all items. Nevertheless, Buitoni can stay abreast with their best moving items.

The second product line to undergo a complete overhaul was the Buitoni sauce and prepared foods line under the supervision of Richard Deyo, product manager. While new and improved sauce formulas were being introduced by the company, Diamond National began to lithographically reproduce Gianninoto's label designs. These labels reflected the continuity of color and design of the overall Buitoni packaging concept.

The next line to be re-worked was frozen food products under the direction of Frank Cassata, frozen foods product manager. Still maintaining the basic design elements, new cartons were produced by Diamond National which currently are making a substantial impact in frozen food cabinets. Supporting the new design and packaging effort are the delightfully pleasant television commercials, filmed on location in Rome, under the direction of Robert Scurlock, Marketing Director of Buitoni Foods.

By combining sound marketing foresight, pointed advertising, creative and tasteful design, and an efficient packaging system, Buitoni is well on its way to meeting its planned marketing objective and surpassing all previous sales goals.

Warehousing Supervisor

Virgil Lind has been appointed Manager of Field Warehousing for Skinner Macaroni Company, it was announced by H. Geddes Stanway, Executive Vice President.

"Mr. Lind's long experience in sales, and more recently as Territory Sales Supervisor will be a prime asset to him in his new duties," Mr. Stanway said. "While he will be functioning in a new capacity, he will be in close liaison with Sales Supervisors, relieving them of the burdens of direct warehouse supervision in their territories."

"This is a natural step in the company's growth achieved and planned for the future. The expanded distribution activity and the resultant pressures for continued and better service to the customer; distribution costs; and inventory levels control all are factors in warranting this appointment."

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Indians of Canada with wood and steel tepee.



Montreal Aquarium; bridge crosses St. Lawrence River.

Man and His World

At least 40 countries and probably 46 will present their own national displays in the new exhibition, Man and His World, opening May 17 in Montreal on the site of Expo 67. In addition, 15 other governmental and private institutions will stage the same attractions as in 1967, new offerings or a combination of both. The pavilions of 22 other participants (countries or institutions) will feature presentations conceived by the City of Montreal and sponsored either privately or by Man and His World.

And all this is only part of what Man and His World will be, for further developments are taking place daily. An

example: Among the new presentations will be a permanent world museum of humor. It will be housed in the pavilion which Switzerland built and occupied in 1967.

Four years ago, Montreal launched the first International Salon of Cartoons. Last year, it attracted artists from 54 countries.

The Salon of Cartoons now will become a permanent fixture in Montreal but the scope of the museum will be much wider, ranging from early days until today. Well-known cartoonist Robert LaPalme, who conceived the idea of the Salon of Cartoons, will be director of the new pavilion.

Another new presentation will be a memorial to Expo, to be staged in the former pavilion of Canada. A wide variety of mementos will be included.

The territory occupied by Man and His World will be the same as at Expo with the exception of the area known as Cite du Havre.

Materially, physically and visually the new exhibition will recall much of what was at Expo: The same islands, the same view of Montreal, the same canals and lakes, greater flower displays (200,000 tulips will blossom, including 15,000 which grow to 10 inches in diameter), the same public services, the same minirails, the same public

places, most of the same sculptures, the same street furniture, the same amusement park at La Ronde.

Czechoslovakia and Yugoslavia are the only two countries which have definitely decided to demolish their pavilions. They have been sold to Newfoundland.

Most of the elements seen in the Expo pavilions again will be on view. Several new elements are to be added, in fact, to Man the Provider.

Insofar as the Cite du Havre is concerned, Habitat 67 will still be there (its apartments now are being rented to the public by Central Mortgage and Housing Corp.). Labyrinth will be operated by the National Film Board; Expo Theatre and the International Art Gallery have come under the jurisdiction of the Quebec Cultural Affairs Department; the International Broadcasting Centre will remain under the control of the Canadian Broadcasting Corporation.

"Man and His World," say Mayor Jean Drapeau and Executive Committee Chairman Lucien Saulnier, who are heading the organization, "will be the world's most grandiose and the largest permanent manifestation of universal culture ever presented."

The exhibition is under the jurisdiction of the city's Executive Committee. Its decisions are implemented through the newly-created Real Estate Department, headed by Director Guy Haas.

Robert F. Shaw, deputy commissioner of Expo, is serving as a technical advisor.

Among other developments, these are these:

- Telephone Pavilion again will show the Walt Disney film on Canada which was such a hit;

- Canadian National and the Canadian Pacific-Cominco pavilions will show the same successful productions as last year.

Visas Available

A mission to the islands during Man and His World's run from May 17 to October 1 will be from 10:00 a.m. to 2:30 p.m. La Ronde will open at noon each day and close at 2:30 a.m.

Instead of Passports, Visas—season, weekly and daily—will be the admission tickets to the exhibition. Information concerning Visas should be addressed to Man and His World, City Hall, Montreal. American Express will handle sales outside Canada, supplying retail distributors as well.

The NMMA Convention Registration Desk will have a supply of daily Visas.



On A "Cook's Tour"—Joseph P. Pellegrino, executive vice president of Prince Macaroni Mfg. Co., Lowell, Mass., is shown flanked by other food experts at program to aid needy children in Hartford, Conn. Pellegrino, main speaker at the annual event, discussed facts and legends about the pasta industry to audience at the Hartford Hilton Hotel. From left, Betty Barrett, food editor of the Hartford Courant; Pellegrino; Mary O'Connor, food editor of the Hartford Times; and Mary Ellen Krygowski, home services director of Hartford Gas Company. Mrs. McCarthy demonstrated preparation of a gourmet Italian dinner featuring Prince products.

Avis Truck Pool

A Truck Pool that will guarantee trucks to food companies for peak and seasonal requirements on a pre-planned basis was announced by Avis Truck Rental.

The Truck Pool will permit food companies either to reduce their present truck fleets or avoid buying additional trucks, according to Frank J. Max, Jr., Vice President-General Manager. Heart of the plan is guaranteed availability of a specific number of trucks for pre-set periods during the year, Max said. It is the first pool plan in the truck leasing industry, he added.

Features of the Truck Pool include:

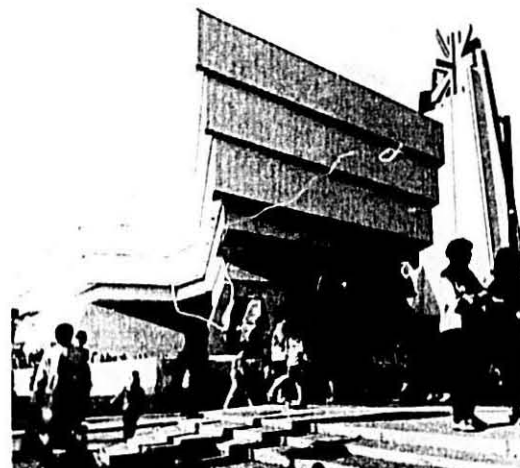
1. A full survey of the food company's fleet operations to pinpoint precise extra truck needs.
2. Minimum applicable rental rates, depending on types of trucks and Pool days. Special, reduced rates for longer-term Truck Pool arrangements.
3. Trucks reserved for client at pre-set dates.
4. Complete service and maintenance of trucks during their use.
5. Full insurance coverage of trucks.
6. Interstate use of trucks, if required.
7. All fuel supplied.
8. No advance deposit.

"A food company that experiences seasonal peaks during the year can contract in advance with Avis to have exactly the number and type of vehicles it needs for precisely the days it needs them," Max explained. "And it can do this without any advance cash outlays."

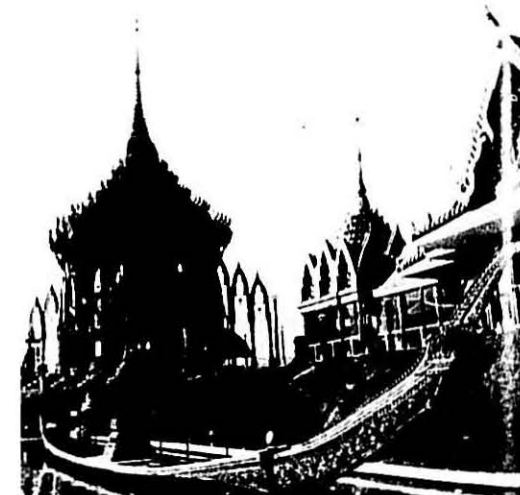
He cited as an example a food processor that might need two extra trucks for a 10-day period in the spring, a three-week period in the early fall, and a 12-day period just before Christmas. Such a company would arrange with Avis to have two trucks for 43 days during the year with the precise dates specified in advance.

"Many companies keep extra trucks in their fleet to handle these peak requirements," Max said. "By setting up this Truck Pool, we will be able to match the requirements of many companies, since peak periods vary widely among companies in different industries."

Often, the extra trucks that companies keep for these peaks are obsolete vehicles, battered in appearance and extremely costly to operate, Max pointed out. Selling off these units will enable companies to reduce overhead, payroll, and fringe benefit costs, in addition to eliminating a high-cost vehicle, while paying only for the days its Truck Pool units are in service.

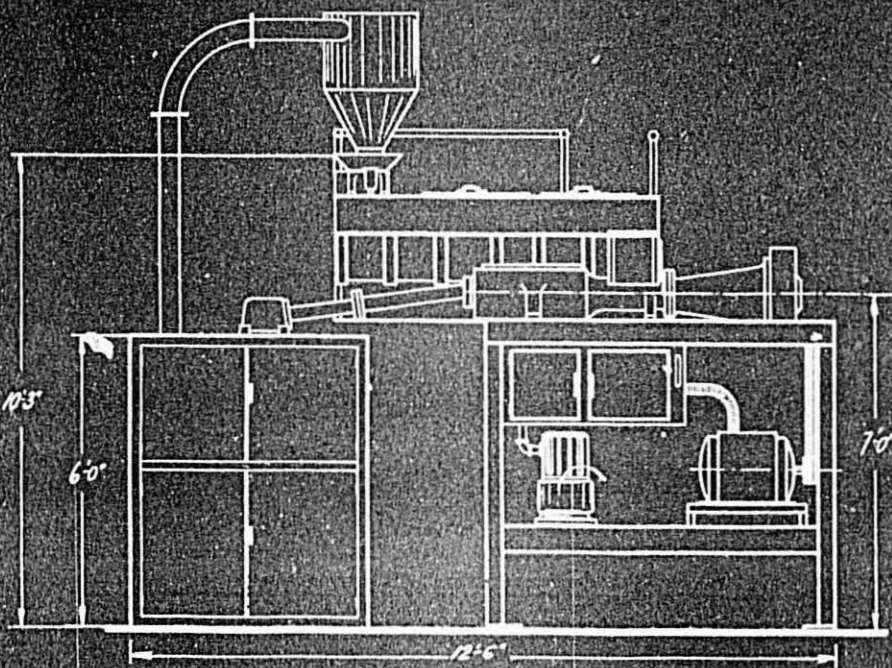
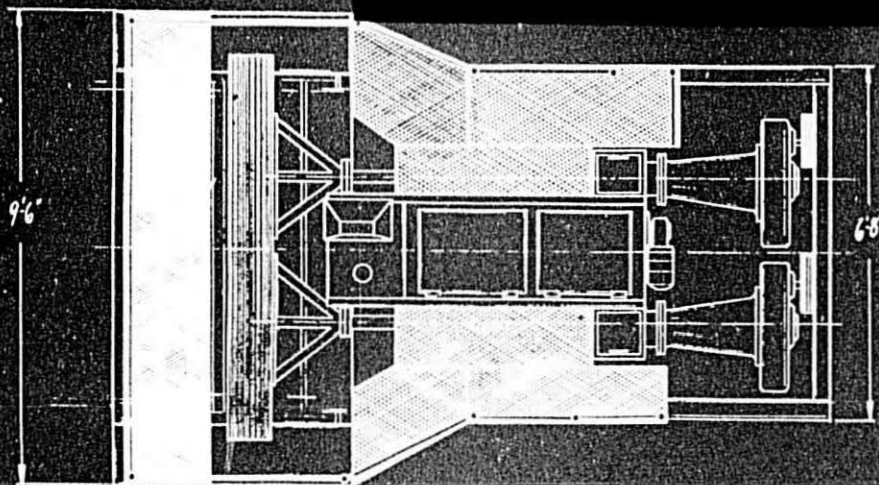


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George N. Kahn

SMOOTH SELLING®

by George N. Kahn

WHAT ABOUT PAYOLA?

This is No. 42 of 48 sales training articles.

A YOUNG salesman stormed into his supervisor's office one day and demanded a new territory.

"How come?" the boss asked. "Everybody wants payola before they'll give me an order," the salesman replied.

Now this was a grave charge and it came as a complete surprise to the supervisor.

"Do you mean that buyers have solicited you for a bribe?" he questioned. The salesman hedged.

"Well, not exactly," he said, "but I get the feeling that they'll give me an order if I pay them off. Besides, I've heard rumors that all the purchasing agents are on the take."

This salesman was not given a new territory. He was fired. He had had a very poor record of earning, and the sales manager decided that he used the payola accusation to cover up his failings.

Supervisor Was Right

I later had occasion to study that particular territory for this company and I found that the sales manager had been absolutely right in his decision.

The buyers had well-established reputations for honesty. Further, their firms would not tolerate any unethical practice and would have dismissed an employee on the spot for asking for or taking a bribe.

I also learned that the complaining salesman had made an unfavorable impression on buyers and was distinguished chiefly for his sloppy presentations and lack of facts.

A Look at the Facts

The famed Al Smith used to say, "Let's look at the record." I think that's a good idea in this case.

Anyone in business knows that some

unsavory practice exists. It must be admitted that there probably are some buyers or purchasing agents who work on a payola basis. But they represent a minute percentage of the total doing business with salesmen. From my experience in marketing I would estimate that one out of 75 or 100 actually engages in this kind of activity. The great majority of them are honest, conscientious employees trying to do the best they can for their companies.

I have found that the payola burzaboo is most often merely an assumption on the part of the salesman and even worse—an excuse for poor performance.

The scapegoat is a familiar and convenient device in our society. When things are going badly there is a tendency among some salesmen to throw the blame elsewhere. It doesn't matter that some fine reputations may be besmirched in the process; just fire away. I wonder how some of these salesmen would like to be hit with unproven and unfair charges.

To assume that everyone is being paid off is simply an admission of weakness by the salesman.

"I can't make the sale so payola must be the reason." What faulty reasoning!

The Sweetener

A larger number of salesmen believe that the way to a buyer's heart is through his stomach. Wining and dining the buyer, they feel, will produce the order. Included in this philosophy are such refinements as theater tickets, trips on yachts and expensive gifts.

The salesmen who offer these "sweeteners" play a little game of self-deception.

"I'm really not offering buyers a bribe," they reason. "I'm just creating a little good will. After all, what's wrong with taking a buyer out to a good dinner?"

I shall not dwell on the moral falsity of this argument, but instead I want to offer a practical objection: These methods generally don't work.

I know many successful salesmen and not one of them achieved his position

through payola—either the cash or nightclub variety.

Case History

A case history from my files illustrates the fallacy of the payola idea.

A mechanical contractor, Joe Billings, once called his salesmen together and gave them the word: "Go out and show the engineers in the prospect firms a good time." The salesmen were told further that they need not spare any expense.

Well, even in our expense account economy this was quite a boon for the salesmen, and they tackled the assignment with great enthusiasm. Never had engineers eaten and drunk so well. Joe Billings meanwhile sat back and waited for the expected orders to come in.

He waited a long time. He might have waited even longer had not someone straightened out his thinking.

Joe's benefactor was the owner of an engineering firm Joe had been trying to woo with his all-out campaign in high living.

The company owner and Joe met accidentally at an outdoor barbecue given by a mutual friend.

The owner got right to the point. "My engineers tell me that your salesmen have been showing them a high time," he said to Joe.

Joe nodded.

"It's a waste of time and money," the owner said bluntly. "Our engineers are college trained experts who recommend purchases on the basis of quality, performance and cost. I'd fire any one of them in a moment if I thought he was being influenced by a steak dinner."

Joe was embarrassed but he got the point. In fact, it was the best favor that had ever been done for him. He checked around after that and found that his policy was showing no results. There were even some indications that it was losing business for him.

From then on Joe concentrated on training his salesmen to make sound presentations. His business improved considerably in a few months.

Another Kind of Payola

The standard forms of payola are generally ineffective, but there is a kind of payola the salesman can develop for his own welfare. Nothing is exchanged here except help.

The salesman should concentrate on making the purchasing agent's job easier and improving his position.

This is the kind of payola that pays off.

The purchasing agent has a tough job. He's in as much of a competitive situation as you are. His firm expects him to get an edge on rival companies by doing a superior buying job. You can assist him in this by showing him where his firm can save money with your line; giving him the benefit of industry knowledge you have picked up; and by always being open and above board with him. This is the honorable way and the one that will get you in the top earning bracket.

Jack Ormon, a conveyer belt salesman, has made himself so useful to purchasing agents that they vie to take him out to dinner. He never appears for an interview without having some kind of new information for the buyer. In many cases, he will spend hours of his own time in developing systems for prospects. These are systems for which the buyer would pay a fat sum on the open market.

Jack's reward is a steady flow of orders that has made him one of the heaviest producers in his industry. He would not even think of offering a bribe or payola of any sort.

"Why should I?" he explained. "It's against my principles and I don't need it to get along. Such practices do more harm than good."

Jack's feelings are echoed by many top salesmen.

The Peril of Payola

The salesman who offers payola puts himself and his company in grave jeopardy. He will earn the contempt of his peers and will stunt his own growth in selling.

A salesman who engages in dishonest practice acquires a reputation that can never be erased. It will follow him wherever he goes. He may as well carry a sign advertising his indiscretion.

The company suffers, too. It cannot keep a constant eye on its salesmen and must, in most cases, depend on their loyalty and innate sense of what is right and what is wrong. If this trust is betrayed, the firm might unfairly be accused of malpractice.

The head of an awning and sash firm told me that he had to fire a salesman

who insisted on buying purchasing agents expensive gifts.

"But that wasn't the worst that happened," the president continued. "The word got around about this one man, and the practice was thought to be common among all our salesmen. Of course, it wasn't, but a lot of buyers expected the same kind of treatment. It made for a messy situation that took me three years to correct."

The man who gives payola makes it hard for other salesmen to operate legitimately.

Play It Dumb

The buyers who ask for payola are rare. If you should encounter one, don't make the slightest move toward any negotiation.

If he hints at or suggests payola, pretend you don't understand him; play it dumb. If he asks outright, tell him flatly that you do not do business that way. If he makes it clear that the only way you will get an order is by making a payoff, I believe you are justified in reporting this to your superiors. A wound that is not treated becomes infected.

Ron Howes, an electrical equipment salesman, had an interesting experience with a purchasing agent who demanded a three per cent cut on the orders he gave.

"I refused," said Ron, "and I left his office. Five minutes later I called my headquarters and informed them of the incident. My boss listened carefully and then told me to return to my hotel room and wait for a call."

"It came in 45 minutes. My boss said I was to go back to the company where I would be given an order. I made a dandy sale but not with the same purchasing agent. He had been canned. The marketing manager of my company had phoned the president of the prospect firm and related my story. The president was so mad he fired the agent on the spot after the latter admitted my charge.

Ron, incidentally, became sales manager of his firm. He issued a standing order that all requests for payola were to be reported to him immediately. His salesmen are given strict instructions at the beginning of their employment that the firm will not tolerate payola in any form.

Submerge Those Rumors

There's far more talk of payola than there is substance. Rumors float around freely in the business world and reports of payola are among them.

If such a rumor comes your way there are two courses open:

1. Make the rumor carrier come through with some facts. Pin him down as to names, places and dates. You'll find that he can't answer your questions.

2. Bury the rumor as soon as you hear it. Don't let it travel any further. Squelch it so it won't cause any more trouble.

Also, don't be too sensitive in the buyer's office. His refusal is in all probability based on the merits of your product. Don't try to "read into" his objections some kind of insinuation or hint that he might change his mind if you made some kind of offer. You can make a serious mistake this way.

It's easy to make yourself immune to payola. Simply ignore it. Have you built up the right attitude toward this unwholesome practice? Try this quiz and see. If you can answer "yes" at least six times, you have nothing to fear.

Yes No

1. Are you against payola on principle? — —
2. Do you condemn the practice publicly? — —
3. Do you refuse to engage in any discussion of it with a buyer? — —
4. Do you demand facts when you hear rumors about payola? — —
5. Do you squelch those rumors? — —
6. Do you try to make yourself helpful and useful to the purchasing agent? — —
7. Would you report a solicitation of payola? — —
8. Are you aware of the damage payola could do to your reputation and that of your firm? — —
9. Do you avoid excuses for your failure to get an order? — —

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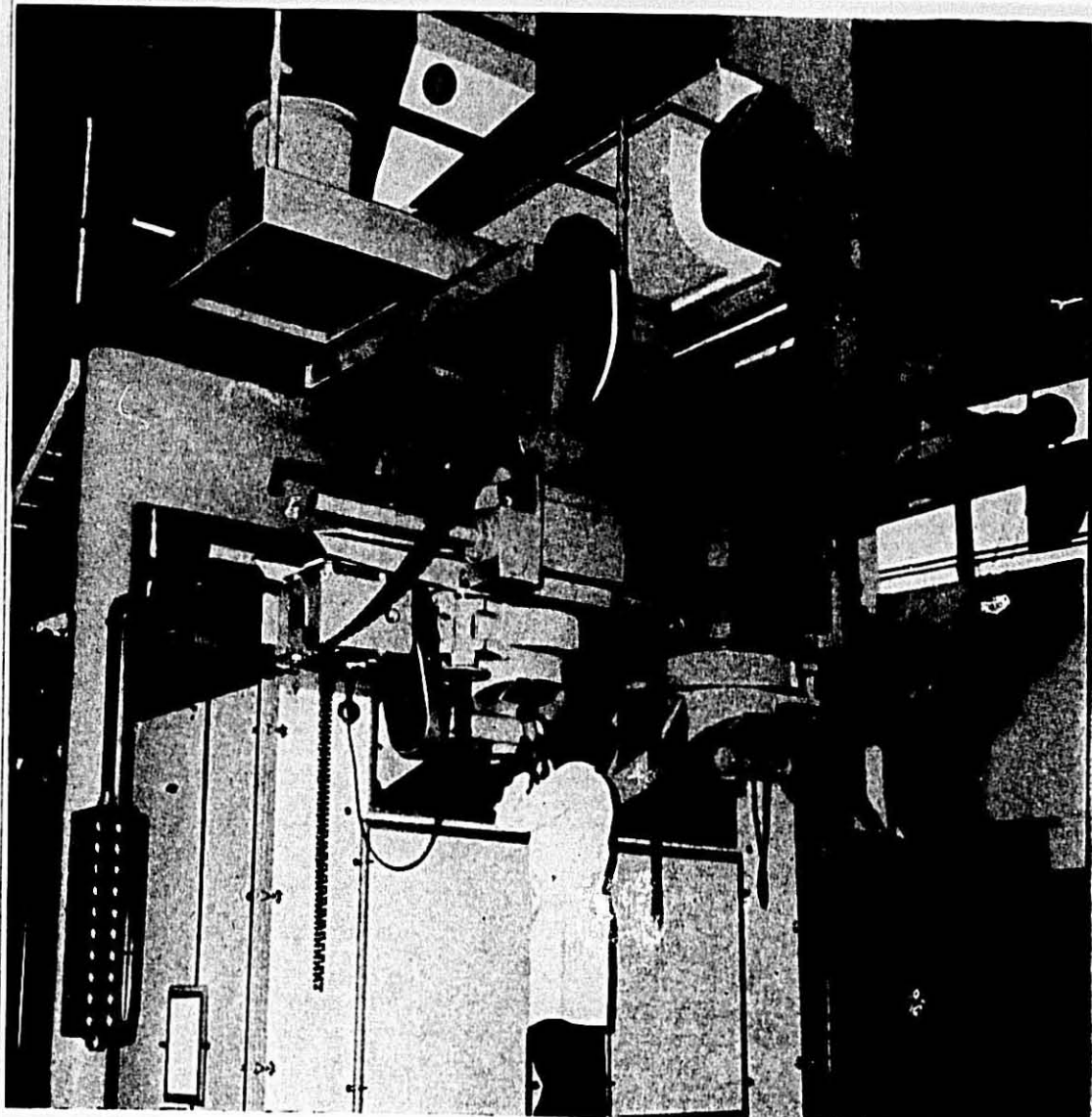
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Lester S. Swanson



Victor M. Hanson



David Wilson



David F. Wilson

Peavey Durum Sales are headed by Lester S. Swanson in Minneapolis. Les has been with Peavey 42 years, 26 of them in the durum business. He is assisted by Vic Hanson. Peavey's eastern business is handled by David Wilson and his son David F. Wilson. The elder Wilson has been with Peavey for over 43 years and works out of New York City. Chicago headquarters are managed by Bill Grady (not pictured). Peavey also maintains offices in San Francisco.

Mill Manager Dies

Elnor M. Olson, 64, manager of the Peavey Flour Mills in Superior, Wis., died April 19 in a Duluth hospital following a long illness. Mr. Olson, a life-long resident of Superior, had been associated with the Peavey Company flour mill for more than 40 years.

Mr. Olson began his career with Peavey as a clerk in 1924. He was made office manager in 1939. His first administrative position with Peavey came in 1947. Mr. Olson was made plant manager of the Superior mill in 1961.

"Elnor was one of the best of managers," said Mark Heffelfinger, executive vice president of the milling division.

"He had a real insight into how to get the cooperation of his people in meeting and serving the needs of his customers. He had the respect of all he worked with."

John Campanella Dead

John Campanella, long-time flour broker of the firm S. Campanella Sons of Jersey City, New Jersey, passed away on March 22. Sympathies are extended to his widow and children, William and Mary.



J. John Cuneo



James G. Tallon

New Macaroni Company

A new new firm called the Long Island Macaroni Company has developed and is selling a new macaroni and spaghetti brand called LaRegina. The company's modern new plant is located in Deer Park, Long Island.

J. John Cuneo, president of the company, stated, "that the product line was meant to complement rather than compete with established brands." Mr. Cuneo explained that the company's philosophy was to market quality macaroni and spaghetti products in a clear poly economy size two pound bag. The poly bag allows the consumer to see exactly the type of macaroni or spaghetti she is buying. Often, though most packages are well marked, mistakes are made. "However, our clear see-through bags virtually makes purchases mistake proof" says Mr. Cuneo.

The Company's officers and owners are a balanced blend of manufacturing, purchasing, sales, advertising and marketing know-how.

Prior to starting the Long Island Macaroni Company, three of the principals, J. John Cuneo, John C. Lalena and James G. Tallon, were long time associates of a regional manufacturer of macaroni and spaghetti products.

Joseph Santoro, another principal, has been for forty years one of the industry's highly regarded manufacturing experts. Vincent J. Daralo, another member of the firm, has been a well known and respected member of the advertising business, and until his association with Long Island Macaroni was a senior vice president and partner of Hicks & Griest Advertising Agency.

LaRegina macaroni products are represented in the metropolitan New York

area by the Ira E. Robinson Company of Long Island.

INDEX TO ADVERTISERS

Advertising Council	33
Amber Milling Division	11
Ambrette Machinery Corporation	22-23
A D M Durum Department	25-26
Asseco Corporation	17
Buhler Corporation	30-31
Clermont Machine Company, Inc.	19
DeFrancisci Machine Corporation	28-29
Diamond Packaging Products Div.	43
Goodyear Aerospace Corp.	15
International Milling Company	46
Jacobs-Winston Laboratories, Inc.	13
Maldari & Sons, D., Inc.	9
Monark Egg Corporation	13
Montani, P. & G.	33
National Macaroni Mfrs. Assn.	13
Peavey Company Flour Mills	4-5
Rossetti Lithograph Corporation	2
Waldbeum Company, Milton G.	13

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WANTED—Bowl Type Kneader, any size. Prefer good to excellent condition. Please state manufacturer and weight capacity. Box 253, Macaroni Journal, Palatine, Ill. 60067.

WANTED—Your reservation for the 64th Annual Meeting, N.M.M.A. Le Chateau Champlain, Montreal, July 15-18, 1968.

THE MACARONI JOURNAL

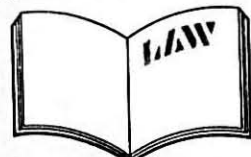
Macaroni Quiz



1. What famous movie star said, "Everything I've got I got from eating spaghetti"? (a) Gina Lollobrigida (b) Sophia Loren (c) Shirley Temple.



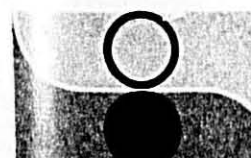
2. The Chinese enjoyed macaroni products in various forms as early as? (a) 5000 B.C. (b) 1500 A.D. (c) just after the egg roll.



3. According to law, egg noodles must contain—in addition to semolina, flour and water? (a) 10% egg solids (b) 5.5% egg solids (c) one mealball.



4. The Department of Agriculture reports a record world wheat crop for 1966. How many bushels will that be? (a) 940 thousand (b) 9.4 million (c) 9.4 billion.



5. The Diamond Packaging Products Division provides top quality packaging to the Macaroni Industry by which printing method? (a) Offset Lithography (b) Letterpress (c) Gravure.

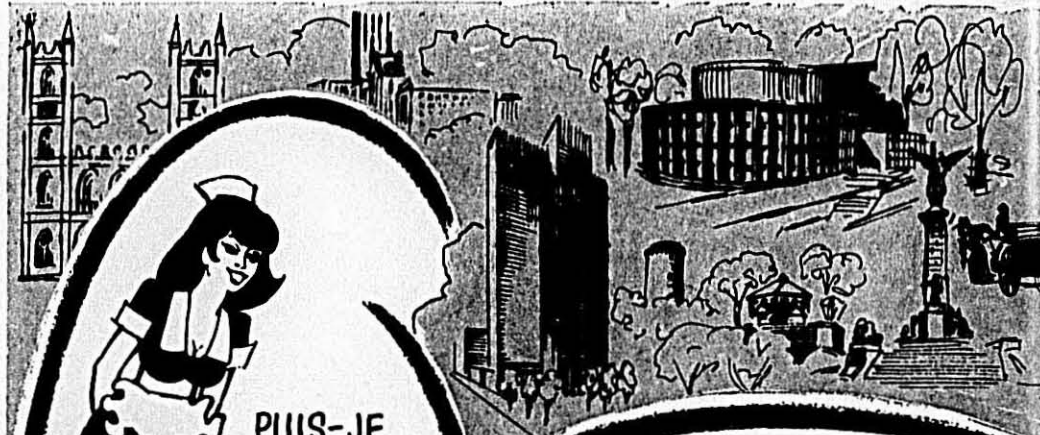
Answers to Quiz:
1: b, 2: a, 3: c, 4: b, 5: b. Take your pick.

IS SHE MADE OF SPAGHETTI?

Next to the hot dog, macaroni products such as spaghetti and noodles (with hamburger) are mealtime favorites of millions of Americans of all ages. How much do you know about macaroni? Try this Diamond Packaging Products Division Quick Quiz and see.

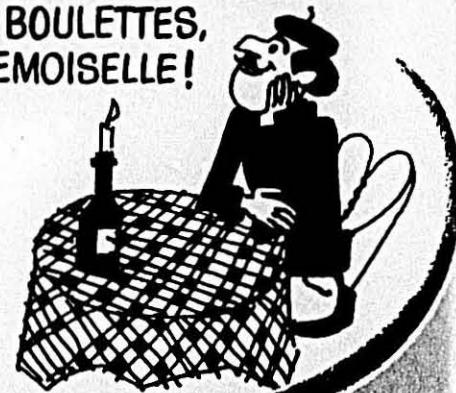


DIAMOND PACKAGING PRODUCTS DIVISION
DIAMOND NATIONAL CORPORATION
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PUIS-JE
VOUS
SERVIR DE
QUELQUE
CHOSE,
MONSIEUR?

OUI!!...MAIS POUR
MAINTENANT JE DÉSIRE
UNE ASSIETTE DE SPAGHETTI
AUX BOULETTES,
MADEMOISELLE!



NOUS NOUS VERRONS À
L'ASSEMBLÉE EN MONTREAL!

