

THE MACARONI JOURNAL

Volume 45
No. 12

April, 1964

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Macaroni Journal



APRIL, 1964

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Macaroni Journal

April
1964
Vol. 45
No. 12

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139 North Ashland Avenue, Palatine, Illinois. Address all correspondence
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Cover Photo

Everyone enjoys macaroni, the universal food. Carla Kelly, Chicago school-teacher, savors spaghetti.

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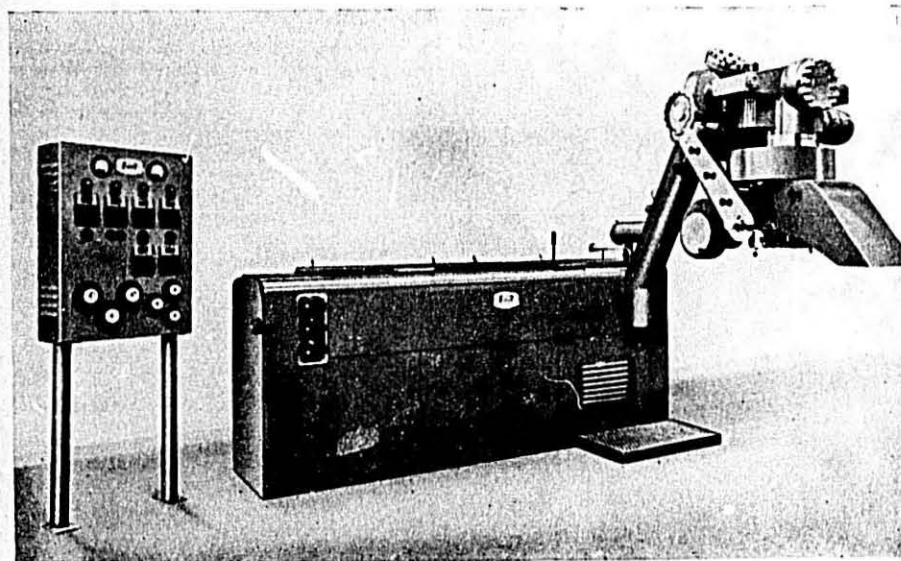
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APRIL, 1964

5

LO, THE MACARONI EATER

OF USEFUL KNOWLEDGE.

NEAPOLITAN MACCARONI-EATERS.



[The Macaroni Seller of Naples.]

IT seems apropos in this Anniversary Issue to go back into antiquity for some of the background and romance of the cosmopolitan food, macaroni.

In this modern day when consumer studies of uses and attitudes toward macaroni attempt to determine attitudes about the food in relation to cost, food value, social status, the frequency of use of its various forms in the dry product, frozen or canned, and the reasons for that use or non-use, it is interesting that this cosmopolitan food has been on the scene for a long time.

From the Penny Magazine

The following information came from the Penny Magazine of Useful Knowledge, printed about 1830, and obtained from the Nettleton Industrial Museum at Guilford, Connecticut.

Macaroni, or maccheroni,—the learn-

ed are divided as to the orthography and etymology of the word,— is the principal food of the poorer, and the favourite dish of all classes of Neapolitans. So much is this the case, that the people of Naples have had, for many ages, the nick-name of "Mangia-macaroni" or macaroni-eaters.

Grow on Trees?

A fine English lady at Paris once asked a gentleman of her own country, who had recently arrived from Italy, "on what sort of a tree macaroni grew?" But, in all probability, most of our readers who have seen the substance, do not partake of her ignorance, but know that it is made of wheat-flour.

"Grano duro," or "Grano del Mar Nero," the small, hard-grained wheat grown in the Russian territories on the

Black Sea, and shipped at Odessa and Taganrok, is considered the best for the purpose, and was once imported into Naples for the macaroni manufacturers. As that kingdom is essentially agricultural itself, the importation of this foreign corn was felt as an evil; but as the manufacturers always declared they could not produce good macaroni without it, and as a deterioration in the quality of the national dish would be felt as a serious national calamity, the import trade continued to be allowed, though the Neapolitan agriculturist frequently could not find a market for his home-grown corn.

A wiser step, however, than prohibition, was to procure and cultivate the particular hard grain in their own territories, and this has now been done for many years in Apulia, where the soil and climate are considered as most favourable. This grano duro is chiefly shipped at Manfredonia, Barletta, Bari, and other ports on the Adriatic, and is sold in the Neapolitan market under the name of the port it comes from.

The Best Is Grano Duro

The best macaroni is made entirely of the grano duro, but, in the inferior qualities, this is sometimes mixed with soft wheat. The conversion of the flour—which is somewhat more coarsely ground than that intended for bread—into the long round strings, called macaroni, is effected by a very simple process. With the addition of water alone, the flour is worked up into paste, and this paste is kneaded for a length of time, by a heavy, loaded block of wood, which beats into the trough where the paste is deposited; this block or piston is attached to a beam acting as a lever, whose fulcrum is near to the block, whilst the other extremity of the beam is some eight or ten feet from the fulcrum.

One or more men or boys seat themselves astride at the farther end of this beam, and descending with their own weight, and springing up by putting their feet to the ground, give the requisite reciprocating motion to the lever. They, in fact, play at sea-saw with the block at the shorter end of the lever; and the effect produced on the eye of a stranger by a large manufactory where several of these machines and a number of sturdy fellows, nearly naked and all bobbing up and down, are at work, has something exceedingly ludicrous in it. When the paste has been sufficiently kneaded, it is forced, by simple pressure, through a number of circular holes, the sizes of which deter-

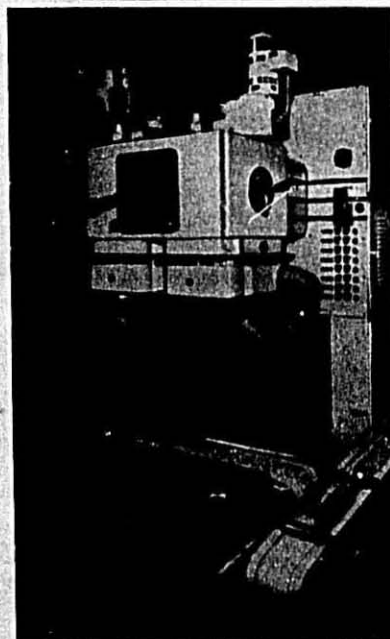
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APRIL, 1964

Lo, the Macaroni Eater—

(Continued from Page 6)

mine the name to be given to the substance. That of superior diameter is macaroni, that smaller is vermicelli, and that smaller still is called fedellini.

Hollow Tube

The macaroni is hollow throughout, and many persons have been puzzled to know how it is formed into these long tubes. Nothing is more simple. Over each of the larger holes meant for macaroni a small copper bridge is erected, which is sufficiently elevated to permit the paste to pass under it into the hole: from this bridge depends a copper wire, which goes right through the hole, and of course leaves hollow the paste that descends through the hole. Such of our readers as have seen our common clay-pipes for smoking manufactured, will readily understand this, for this part of the process is the same for macaroni as for pipes. There are some minor distinctions in the preparation of these respective articles, which it would be tedious to explain, but the material and main process are the same in all.

When the paste has been forced through the holes, like wire through a wire-drawer's plate, a workman takes up the macaroni or vermicelli and hangs it across a line to dry. From the long kneading it has received, the substance is very consistent, and dries in unbroken strings that are two or three yards in length.

Besides macaroni, vermicelli and fedellina, which are in most general use, the Neapolitans make from paste similarly prepared an almost infinite variety of other culinary articles, some of which are long, narrow, and flat, like ribbons, — some broad and thin, like sheets of paper, — some round, like balls, — some in the shape of beans, or smaller, like peas, etc., etc. To each of these the copious Neapolitan dialect has affixed a distinctive name. The vocabulary is thus immense! After those we have mentioned, however, the greatest favourites are, *lassagna*, *gnocchl*, and *strangola-prevete*,* (the last an odd designation, signifying, "strangle, or choke priest!")

*Prevete, (Neapolitan for the Italian word Prete.) Priest.

The Genoese

Manufactories of a like nature exist at Genoa, and in some other parts of the peninsula; but the Genoese mix saffron with their paste, which gives it a yellow colour; and the Neapolitans, proud of the only manufacture in which they excel, treat with great contempt the similar productions of all the rest of

Italy. It must be allowed, indeed, even by the unprejudiced, that their macaroni is by far the best. If it is made, of course, throughout the whole of this macaroni-eating kingdom; but the best is manufactured on the coast of the Bay of Naples, about La Torre del Greco and La Torre 'ell' Annunziata, two towns through which the traveller must pass on his way to the ruins of Pompeii, Paestum, etc., and where he is sure to see the macaroni works in full activity.

Pasta Della Costa

The productions of these works go by the general name of "Pasta della costa." They command higher prices than any macaroni, vermicelli, etc., made elsewhere, and are exported in very considerable quantities. Extraordinary importance is attached to these articles in some remote places in the interior of the kingdom, where communication with the capital is difficult.

In respectable Neapolitan houses macaroni is on the dinner-table at least twice or thrice a week, — in many, every day. It is served up first; and on macaroni days, generally speaking, no soup appears. The writer would rack his memory and ingenuity in vain attempting to describe the numerous ways in which it is cooked. But these are two of the most common preparations. The macaroni is thrown into a caldron containing boiling water, care being taken to bend and not to break the strings more than necessary (for half the beauty of this pasta consists in the length of its fibre), and it is there left to boil until, from white, it assumes a greenish tinge, which if properly managed, it does in about a quarter of an hour.

Verdi! Verdi!

Verdi-verdi green! green! is the expression of the Neapolitan's delight, when his macaroni has been properly boiled to the very second. It is then taken out of the caldron — drained of all the water, then saturated with some concentrated meat-gravy, sprinkled throughout with finely-grated cheese, and served up in a large tureen, in firm unbroken strings, which are easily detached from each other.

In the second preparation the macaroni, after being boiled in the same manner (for the Neapolitans energetically maintain that there is only one proper way of boiling it), and then strained, is merely anointed with a little butter which is thrown in, in solid pieces, and dissolved by the heat contained in the paste — to this grated cheese is added, as in the other process, and the further addition of tomato, or love-apple-sauce, makes the dish excellent.

The reader may be assured, that cooked in either of these ways — to say nothing of the other more recondite preparations of the Italian cook — macaroni is incomparably superior to that pappy, greasy, indigestible substance — a positive disgrace to the name it bears — which is sometimes intruded on our English tables. Prepared in the Neapolitan manner, macaroni is nutritious, satisfying, light, and easy of digestion.

It has been already said that this paste forms the principal food of the poorer classes of Neapolitans. They would be too happy, however, if they could get it every day! In the course of the week they are often obliged to satisfy themselves with bread generally made of Indian corn, with a few onions or heads of garlic, and a little *minestra verde*, (or greens boiled in plain water, with a small lump of lardo or hog's fat thrown in to give a flavour). Many thousands of them do not eat meat for weeks, nay months together, but they care not for this if they can have their macaroni, which is a substitute for every eatable.

On Every Corner

Venders of this national commodity are established in every corner of the city of Naples. Some have shops or cellars where they prepare and retail it, but a much greater number cook it on moveable furnaces in the open air, and sell it to their hungry customers in the streets, who eat it from the dealer's bench without plates, knives, forks, spoons, or any such luxuries. In former times these macaroni stalls dared to stand under palaces, and lined even the *Strada Toledo*, and other of the principal streets, mixed up, in grotesque confusion, with the stalls of other retailers and of artisans.

The concise Forsyth, who was there at the beginning of the present century, says, "A diversity of trades dispute with you on the streets; you are stopped by a carpenter's bench; you are lost among shoemaker's tools, you dash among the pots of a macaroni stall, and you escape behind a lazarene's night basket." Such is still the state of the inexperienced perambulator in some of the lower parts of the town; but of late years the characters and things enumerated have gradually been obliged to retire from the main streets and confine themselves to lanes and alleys, and the outskirts of the town; — in which last places, particularly on a "giorno di festa" or holiday, the macaroni venders are to be found in compact groups, and (not satisfied with the temptation offered by their steaming caldrons and well-known stalls) waving samples of their fare, at the end of long ladders, in the

(Continued on Page 76)

THE MACARONI JOURNAL



A Judge of Macaroni Products!

Yes, this young fellow is a judge all right! He is one of thousands of consumers who rule on the success of your macaroni products at the dinner table. That's why you start with the finest ingredients, and spare no effort to win his approval. And, of course, you exercise the utmost care in manufacturing to insure that the end result will meet his approval.

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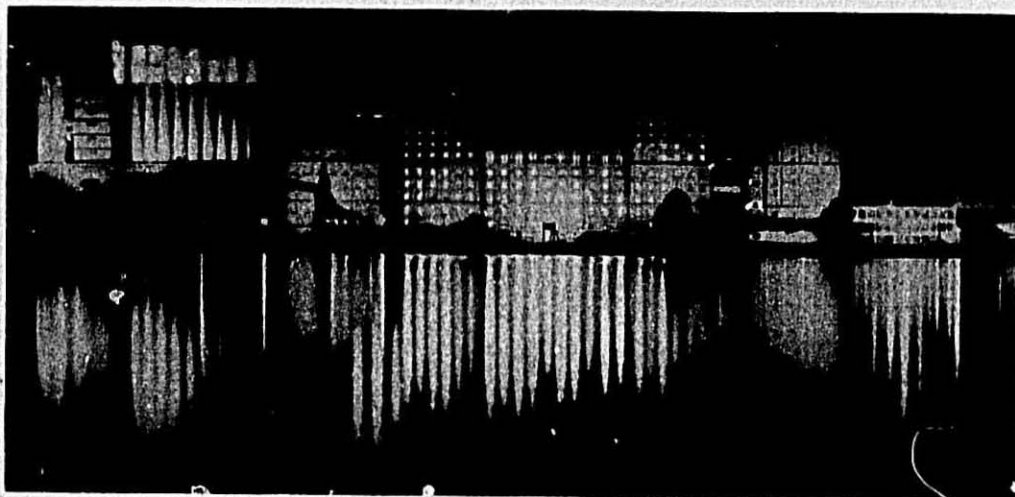
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APRIL, 1964



The Tre Kronor Mill in Stockholm, one of the largest mills in Scandinavia, has a manufacturing division which produces both macaroni and spaghetti.

MACARONI, THE UNIVERSAL FOOD

MACARONI is a universal food. Correspondents with the Macaroni Journal send us these reports from various countries:

The Tre Kronor mill in Stockholm is one of the largest mills in Scandinavia. It includes a department producing macaroni and spaghetti. There are three plants in Sweden producing about 6,500 tons annually. Spaghetti, packed in 400 gram packages, and elbow macaroni, packed in 300 gram packages, are the most common types. They are made from blends of hard wheat and durum. They plan to increase production of quick cooking macaroni in an effort to stimulate consumption of these products in Sweden.

Jolly Old England

Statistics from the Ministry of Agriculture in the United Kingdom indicate that pasta production has increased from 13,000 tons in 1958 to 15,200 in 1962. Semolina production increased from 18,800 tons in 1958 to 24,200 tons in 1962.

Observes the trade magazine "Milling": "As in Europe and the United States, the public appetite for macaroni and similar foods is reflected in an annual increase of consumption. Maybe production here is relatively small, but there are few products in the milling industry that can claim an expansion of 24 per cent in five years.

"Since we do not like the stuff ourselves, nor do we know of anybody in our immediate circle of friends who has a liking for it, one wonders where all the consumption takes place. No doubt

the Italian and Cypriot populations of Soho enjoy their macaroni every midday — possibly once or twice a day — and certainly macaroni dishes can be ordered in most of the big multiple store cafes or the product can be carried away in cardboard cartons or tins. But all this can hardly account for a regular increase in consumption. The only logical explanation is that the pasta-loving sections of our population are increasing numerically at an above average rate."

British Macaroni Industry, Ltd. reports that sales have been steady and are currently at the level of 16,000 tons per annum. Durum semolina is used for some products and granulation from hard wheats for others. Competition with imports is considered a major current problem.

French Food

Macaroni statistics from France are not available to us, but the trade publication "France Actuelle" reports that household consumption of food expanded 3.9 per cent in 1962. Food purchases still are the most important category in the family budget, which averages 1,000 francs (\$200) monthly. Spending is as follows: meat and fish represent a basic outlay of 143 francs; dairy products, 76 francs; eggs, 8 francs; fruits and vegetables, 70 francs.

Bread is now reduced to a minimum expenditure in the French budget, averaging only 21 francs a month. All products with a flour base amount to only 39 francs. Miscellaneous products come to a total of 39 francs. Among

them, coffee purchases average 10.5 francs a month, and sugar 7 francs. Beverage purchases account for 60 francs, 49 of which is for wine.

German Decline

In West Germany, macaroni consumption declined last year for the first time in several years. About 140 plants produced approximately 185,000 metric tons. Macaroni products in Germany are generally made with eggs and Amber Durum semolina, the price of which is dependent upon international quotation and is affected by resolutions of the Commission of the Common Market. Spaghetti, macaroni, noodles, short goods, and soup varieties are packaged in cartons and cellophane bags in sizes mostly of 250 grams.

Intensified competition has probably contributed to the stagnation of consumption. There are pricing problems and difficulties with discounting and deals.

In Switzerland, in the last half dozen years competitive conditions have put about 15 smaller plants out of business. Today there are some 44 units producing 52,000 metric tons. Italian imports add another 10 per cent to the total.

Swiss consumption is second only to the Italians, at 24 pounds per person per year. Most finished goods are packed in cellophane bags at 250 or 500 grams. Top quality is made from "special" semolina and fresh eggs, and sells at about 170 Swiss cents per 500 grams. Medium quality is made of "special" semolina without eggs, and sells at about 120 Swiss cents. The cheapest

quality is made out of ordinary granular without eggs, and sells around 83.3 Swiss cents per 1,000 grams. The great variety in shapes, qualities, and package sizes makes something of a problem. So does the increasing cost for labor as well as for raw materials.

Steady in Italy

Macaroni consumption in Italy remains steady, at the highest level in the world. An increased use of special product, such as egg macaroni, is taking place, with the population enjoying a higher standard of living.

There are possibly 790 to 800 manufacturing units in Italy including the very small installations. Those with a potential between 10,000 and 30,000 kilos per day number about 40, and are producing approximately 35 per cent of the total production. This is estimated to be around 1,600,000,000 kilos per annum.

Spaghetti and egg noodles are the most popular shapes, and are made from both hard wheat semolina and soft wheat semolina. The greatest quantity of products are sold unpackaged, with only about 10 per cent wrapped in cellophane or packed in cartons of 500 grams.

The greatest problems of the Italian macaroni industry are the differences in price of raw materials in Italy with respect to international prices, and the necessity of applying a new law for the classification of macaroni introduced in the market.

Malta Exports

On the island of Malta, the government still controls and subsidizes some macaroni produced in bulk retailing at 3½ pence per pound. Unsubsidized macaroni packaged in 200 gram sizes sells for almost twice that amount. The overtaxed unsubsidized macaroni cre-



Women watch machines in the Myojo Food Manufacturing Co. plant, Tokyo, Japan.

ates a bias as far as the public is concerned, which restricts the manufacturer in packaging and using sales initiative.

Raw material for the subsidized product is a mixture of American Winter, Manitoba and Australian wheat. The basic cost is 2 pounds, 10 shillings and 8 pence per 140-pound sack. But for controlled local subsidized distribution, the cost is 18 shillings and 11 pence per sack. Local sales of uncontrolled macaroni are overtaxed and cost the manufacturer 4 pounds per sack in raw material.

The four plants on the island produce about 5,000,000 kilograms annually, mostly spaghetti and ziti, although large corrugated elbows and shells used for filling with cottage cheese are popular.

Pasta Portelli, one of the four plants, is concentrating on export business, and has introduced their products into ten

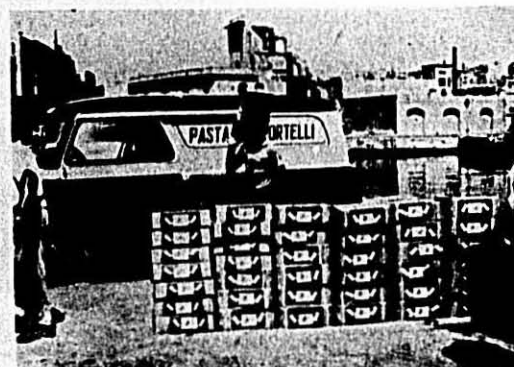
countries, including Italy where they are enjoying repeat business.

In Israel

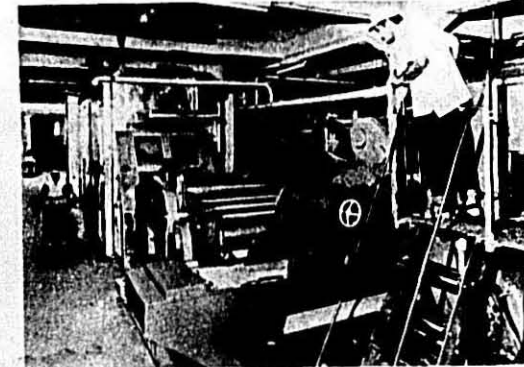
The standard of living in Israel is increasing, and more expensive foods are being consumed at the expense of macaroni consumption. The ten plants in the country produce about 7,000 tons annually. Noodles, macaroni, square flakes, and the like, are made of semolina and flour. The cheaper qualities are packed in paper bags. Better products go in polyethylene bags or cartons. Prices vary accordingly.

The Israeli government's efforts to stabilize the currency have had their influences on the profitability of local industry, because price increases of manufactured goods have to be avoided while costs, mainly labor, increase slowly but steadily.

(Continued on Page 14)



Macaroni products being unloaded on the quay in the Marsa, Malta, harbor for export to Italy.



In Chile, the Corozzi plant in Quilpue makes noodles in a straight line continuous operation on modified Clermont equipment.



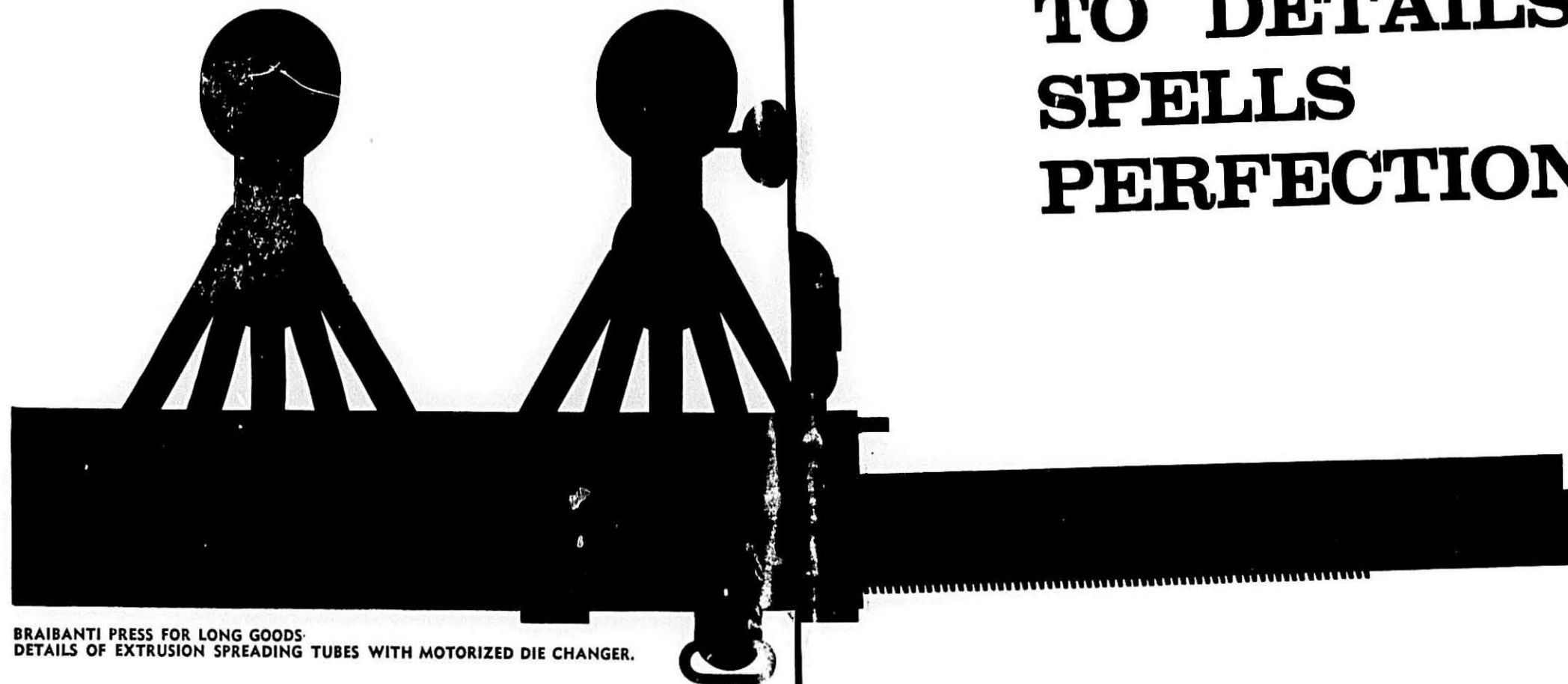
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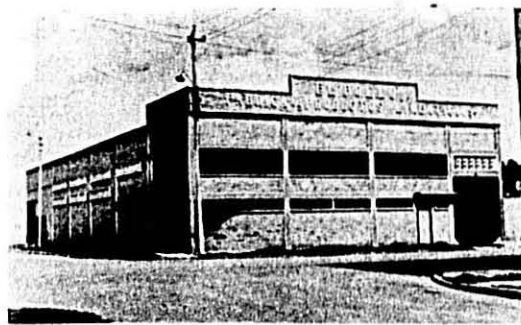
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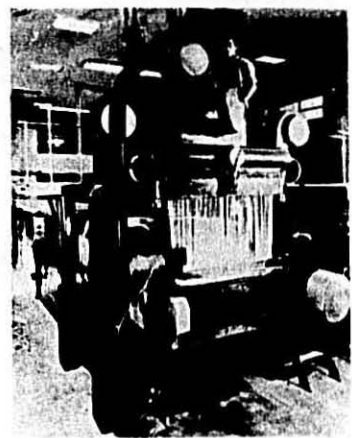
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New plant of Melani, Alvarado Ramirez, Ltda., manufacturers of "El Pollo" brand macaroni products in Bogota, Colombia. On the right: a recent Pavan installation in the new plant.



Macaroni, Universal Food—

(Continued from Page 11)

Jump in Japan

In Japan, macaroni sales have been increasing by 20 to 30 per cent for the last several years. Future prospects are considered bright.

Twenty-three factories produce about 45,000 tons of product annually. Because the import of durum is restricted, high protein flour milled from Manitoba wheat is used. This sells for about 2,500 yen, or \$7.00 per cwt.

Finished goods are packed in cellophane or polyethylene bags of 300 grams, which sell for about 50 yen.

Great efforts are being made to sustain the increase in consumption, and the pinch for capital for expansion is a problem.

Consumption is fairly steady in Australia, where 15 plants produce about 24,000 tons per annum. The large plants get larger, and the smaller plants are disappearing. Though the Italian influence is strong in the popularity of spaghetti, rigati, mafalde, noodles and shells, medium hard grain flour is used. Approximately half of this is sold in bulk, half in packages. Because competition is keen, price-cutting is a major problem.

North America

In Canada, immigration from Europe has stimulated macaroni consumption in recent years. A five per cent gain was reported for 1963. Approximately 10 plants in the country produce 200,000-300,000 pounds. Both semolina and granular are used, and bulk products sell at retail at about 13 cents a pound; packaged goods at about 18 cents a pound.

Competition is keen in Canada too, and labor's efficiency and the low margin of profits are matters of concern.

In the United States, 1963 was a year of promise and disappointment for ma-

caroni. Sales were up almost 10 per cent, but profits were down. This was reported in the February issue of the Macaroni Journal.

Latin America

In Chile, there are a dozen plants. One large one produces 32,000 tons annually, while a medium sized plant produces some 14,000 tons. Compania Molinos y Fideos "Carozzi" in Quilpue is currently producing 120 tons daily and plans to erect a new plant near Santiago with an estimated production of 60 tons daily.

Mr. Rene Munoz Salazar of "Carozzi" recently signed a contract for \$1,000,000 worth of processing equipment to be purchased from M. G. Braibanti & Company, of Milan, Italy. Engineer Ettore Berini consummated the sale.

"Carozzi's" technical director, Ricardo Borello, reports that their company has three mills for processing durum wheat for their use. The acquisition of wheat at harvest time ties up considerable amounts of capital, and high taxes caused by social legislation pre-

sents problems for management.

In Puerto Rico six plants owned by four firms report increasing sales. Seventy per cent of the spaghetti, vermicelli and short cut macaroni is sold in bulk; twenty per cent in half-pound packages; ten per cent in one pound packages.

In Costa Rica, Lic. Jorge Musmanni E., a representative of Centennial Mills of Portland, Oregon, in Central America, has organized a group of investors from Panama, Nicaragua, Honduras, El Salvador, and Guatemala, besides members of his own family who have been in the macaroni field for some sixty years, to launch a macaroni enterprise. They are contemplating a project that will cost about \$375,000, and have applied to the Banco Centroamericano de Integracion Economica at Tequigalpa, Honduras, who will finance 60 per cent of the project. Investors interested in opportunity in this part of the world are invited to contact Sr. Musmanni.

More Supermarkets in France

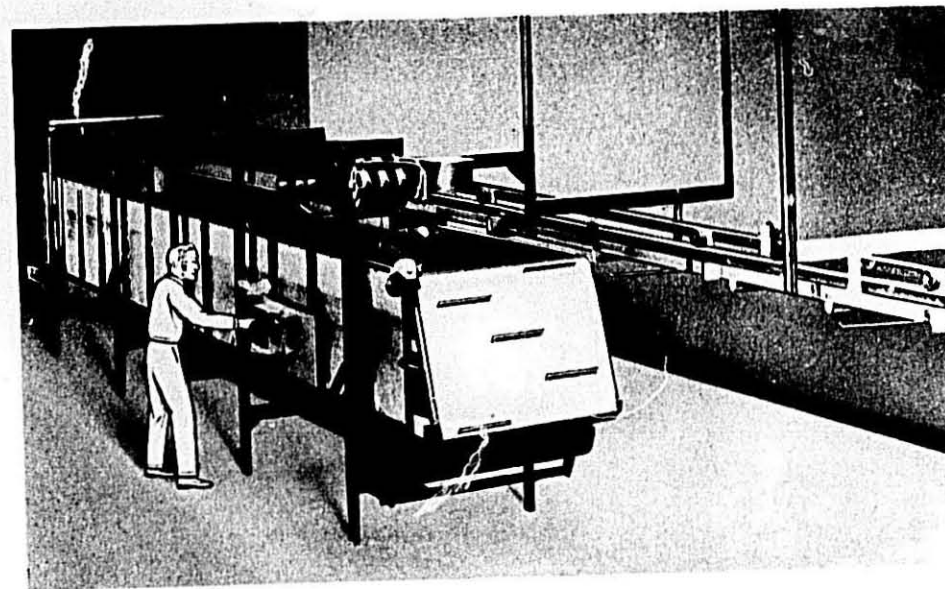
As of January 1, 1964, there were 323 supermarkets in France according to the publication France Actuelle, up 116 for 1963. Sales were about \$4,000,000.

General Mills in France

A new French food company, Heudebert, S. A., has been formed jointly by General Mills, Inc. of Minneapolis and Biscuiterie Alsacienne of Paris, France. It will manufacture and distribute a line of long established consumer foods under Heudebert trade name, reports Michel Theves of Biscuiterie Alsacienne, who is president and general manager of Heudebert, S. A., and General E. W. Rawlings, president of General Mills. Principal food products of Heudebert are rusks and various cereal products, tapioca and cocoa.



Ettore Berini of Braibanti beams at the signing of a \$1,000,000 contract by Sr. Rene Munoz Salazar of Carozzi.



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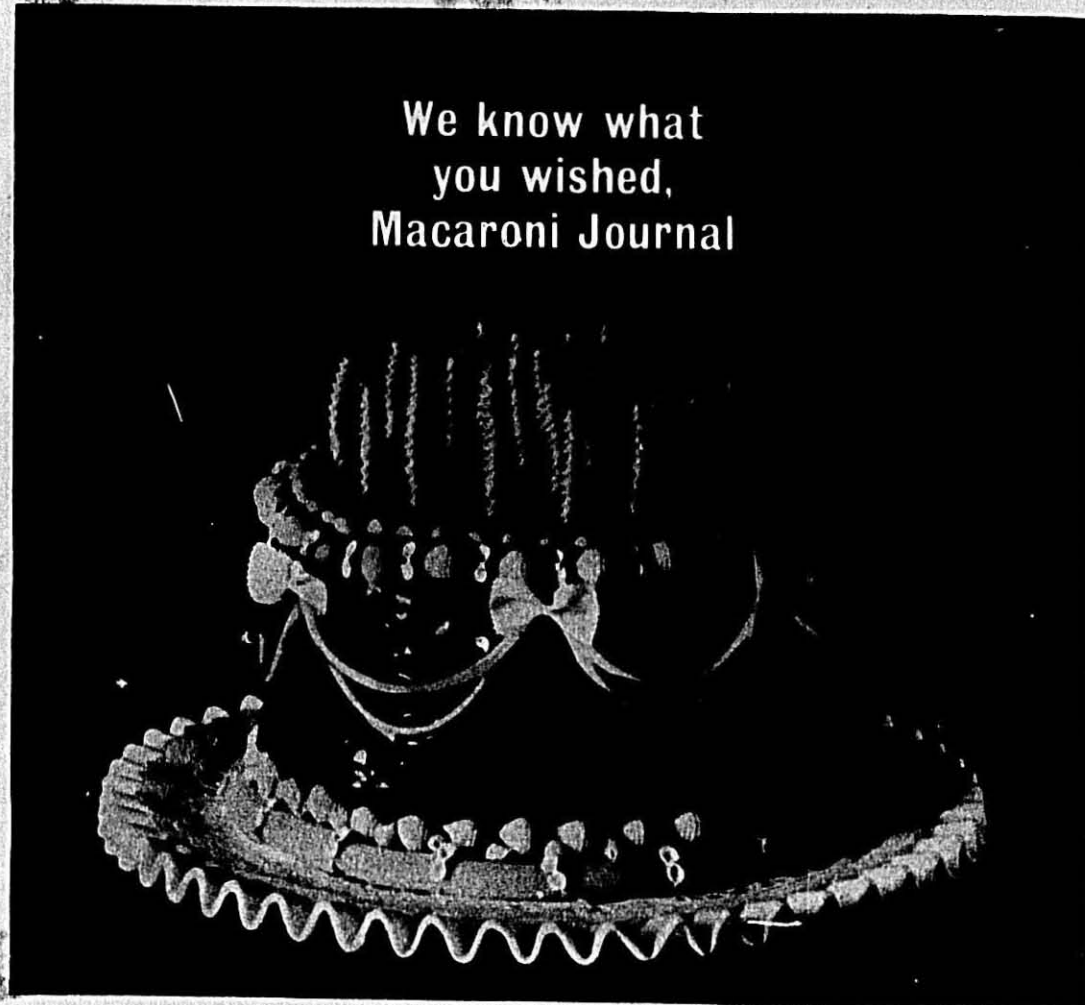
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The Role of the Cereal Technologist in Durum Research

by K. A. Gilles and L. D. Sibbitt



L. D. Sibbitt on the left; K. A. Gilles on the right.

Editor's note: This article is published with the approval of the Director of the Agricultural Experiment Station, North Dakota State University, Fargo, North Dakota, as Journal series No. 40.

DURUM research is a teamwork effort which requires time, patience and considerable financial resources. Fortunately, at North Dakota State University, these elements are being brought together to enable plant breeders, cereal technologists, plant pathologists, and other scientists to attempt to create new and better durum, hard red spring wheat and malting barley varieties which may be produced economically for sale to the consuming and processing industries.

Here are the major participants in this program of grain production, research and utilization:

PLANT BREEDER
GRAIN PRODUCER
MILLER-MANUFACTURER
CEREAL TECHNOLOGIST

The plant breeder is fundamentally concerned with the production of new grain. He and the cereal technologist must retain close cooperation to produce new types of grain which have marketing potential: the new grain would be valueless if it could not be used by the industry.

The cereal technologist is charged with the responsibility of evaluating the grain and being knowledgeable con-

cerning the movement of the grain from the farmer's gate to the ultimate consumer. The entire purpose, of course, of the research team is to create new varieties which the grain producer may effectively and economically sell to the consumer.

Advisory Committee

To encourage better communications between the millers, macaroni manufacturers, and cereal technologists, an industrial advisory committee was established two years ago. This committee meets with the staff of the Cereal Technology laboratory at Fargo in March of each year. The purpose of the group is to share experiences and information relative to utilization and research on wheat and wheat products. By this means, we hope to establish closer communication between industry and the academic research worker with the ultimate hope that better products may be produced scientifically which will better meet the needs of the industry.

During the course of the meeting, the research workers in the Cereal Technology laboratory present a summary of their past year's work and request comment from the industrial representatives. As the North Dakota Agricultural Experiment Station is charged with the responsibility of doing research work which may ultimately be applied to improve the economy of the north central great plains region, our work is not solely of an "ivory tower"

concept. Consequently, this committee assists us in accomplishing a basic objective of the North Dakota Agricultural Experiment Station.

Cereal Technology

The role of cereal technology has several types of activities in this over-all program:

Variety Development Team
Maintain Good Quality
Methods Development
Basic Research
Chemistry
Technology
Teaching
Public Relations

First, the variety development team screens out unacceptable new wheats before they are released for commercial production on farms. The second important role is to maintain good quality in all of the new varieties which are released for production.

Another aspect of this work refers to the development of new methods of technology and analysis; some recent research work with the amylograph may be potentially helpful in selecting semolina for production of better quality macaroni products. Other methods that are currently under study includes improved methods to detect the presence of mixtures of the bread wheat and durum wheat; this study appears to be rather hopeful.

Basic research pertains to the chemistry of the raw material, wheat, as well as to the chemical and physical changes that occur after the wheat has been processed both in milling and macaroni manufacturing. The other major category pertains to basic research in improved technology — how we may produce better quality products.

The teaching activity has been increasing in scope. Brochures have been prepared describing our graduate research program. In the area of public relations, we are never quite certain whether we solve or create problems; however, we do attempt to answer inquiries that arise and to assist groups of people to understand the nature of durum and macaroni products.

Plant Breeding

The role of the plant breeder is associated fundamentally with agronomic quality:
Yield per Acre

(Continued on Page 18)

Durum Research—

(Continued from Page 17)

Strength of Straw
Adaptability
Spring vs Winter
Soil
Climate
Maturing Time
Plant Disease

"Quality is an elusive term. What is 'quality' to one person may not be 'quality' to someone else. Consequently, the plant breeder's concern of 'quality' refers to the various agronomic properties, relative to agronomic quality.

You may ask, "Why do we state these points to a group that is concerned not with production of grain but with utilization?"

You may recall that just six years ago, the variety Langdon was introduced as a new durum variety resistant to certain types of plant rust. In the 1963 crop Langdon has shown severe tendency for plant rust. It is essentially on its way out as a major factor in durum production. In the year 1963, about 60 per cent of the crop consisted of the varieties Wells and Lakota which were not even on the scene when Langdon was introduced only six years ago. It is important that this type of research be continued because this year some fields of Wells and Lakota showed some tendency toward rusting. However, the future looks bright as two new varieties are on the horizon. To dispel a point which may be confusing, we should like to indicate that the wheat varieties do not lose their rust resistance after they have been planted for several seasons. New races and new plant diseases are continually arising. Consequently, the plant scientist must search continually for better varieties having new sources of plant disease resistance and at the same time possessing acceptable industrial properties.

Kernel Quality

While the primary area of concern for the plant breeder is agronomic quality, the cereal technologist is concerned about kernel quality, milling quality, physical dough properties, processing properties and macaroni quality. Let us consider the significant points in each of these areas.

Kernel Quality

Test Weight (Grade)
Vitreous Kernel Content
1000 Kernel Weight
Kernel Size
Protein Content
Enzymes

Test weight fundamentally reflects the potential marketing grade of the

wheat and this may directly affect the selling price of the grain at the market place. The vitreous kernel content is used as a measure of hardness of the grain and reflects, to some degree, protein quality. The 1000 kernel weight has become a factor of increasing importance, particularly in international trade inasmuch as it gives an indication of the relative amounts of endosperm and bran. These factors are related also to kernel size; whereas the 1000 kernel weight may be determined conveniently on an electronic counter, the kernel size may be determined directly on a screen or sieving device. Both of these tests will measure similar types of properties in the kernel. The protein content is a potential measure of the type of product that might be produced. Excessive or insufficient protein is considered to be undesirable in durum. If the protein content is inappropriately low, the macaroni would lack the potential of staying on the rods and would have improper absorption properties. Both extremely high and extremely low protein contents may introduce serious processing problems.

The final category in kernel quality relates to the enzyme content. In the event that the grain is harvested under the normal conditions, one would not normally find any difficulty from the proteolytic or amylolytic enzymes. However, if the grain has been subjected to sprouting particularly, this may increase the enzyme activity to such an extent that the material will not gelatinize and might produce a dough which will be sticky and runny. Again, excessive enzyme activity would be undesirable. The role of enzymes in macaroni quality is not completely known but it is very probable that a low level of enzyme activity might be desirable in producing quality products because the enzymes convert the starch to sugar and the proteins to their smaller chain products. A certain element of this type of conversion may be potentially helpful.

Milling Quality

Milling quality is another factor of concern.

Flour or Semolina Yields
Conditioning Properties
Ease of Milling
Ash Content
Protein Content
Speck Count

Flour and semolina yield are significant factors in determining the amount of product that can be produced from a given amount of raw material. Obviously, if too much raw material is required to produce a given amount of semolina or flour, this could increase the cost of production and would be an undesirable

economic factor to both the miller and to the macaroni processor. Similar economic conditions would be considered when one tests the conditioning properties of the grain, the ease of milling, and the ash content. If these properties are unusual, they may increase the potential cost of production. Protein content in the milled product must be within acceptable limits and, of course, the speck count should be very low.

Dough Properties

The physical dough properties such as the farinogram, amylogram, extensogram, particle size and color must also be considered in the evaluations performed by the cereal technologists. None of these measurements alone are particularly useful indexes of quality. When taken together, however, they assist the technologist in evaluating the particular physical properties which dough systems possess.

Farinogram—Absorption
Amylogram—Sprout Damage
Extensogram—Heat Damage
Color

Particle Size

The farinogram fundamentally gives one an indication of the water absorption and the gluten quality; the amylogram enables one to assess the potential sprout damage and, indirectly, the activity of enzymes on starch. The extensogram is a useful measure of heat damage. The color and particle size, of course, can be potentially useful tests for assisting the purchaser to draw up specifications for the raw material that is used in the macaroni processing plant.

Processing Properties

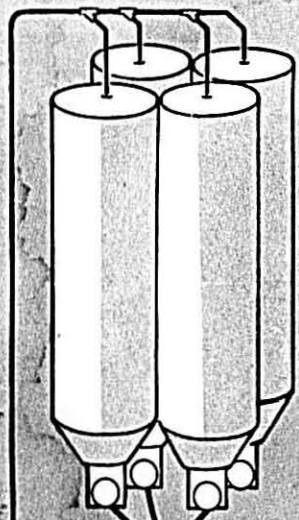
Macaroni processing properties, likewise must be considered in effecting an evaluation by the cereal technologist. Absorption, mixing, kneading, extrusion, and drying must be considered to be within appropriate limits for reasonable processing characteristics. In evaluating new durum wheat varieties, if excessive amounts of water need be incorporated with the semolina to produce doughs of proper consistence, these excessive amounts of water would have to be removed in the drying process. Such varieties would be faulted and considered not particularly desirable. For tests involving the processing properties, our laboratory uses batch process techniques. This is due to the fact that we are limited in the amount of semolina which may be available for a given test. The batch process technique enables one to compare under rigidly controlled conditions the relative processing properties by various types and samples of semolina; the

(Continued on Page 22)

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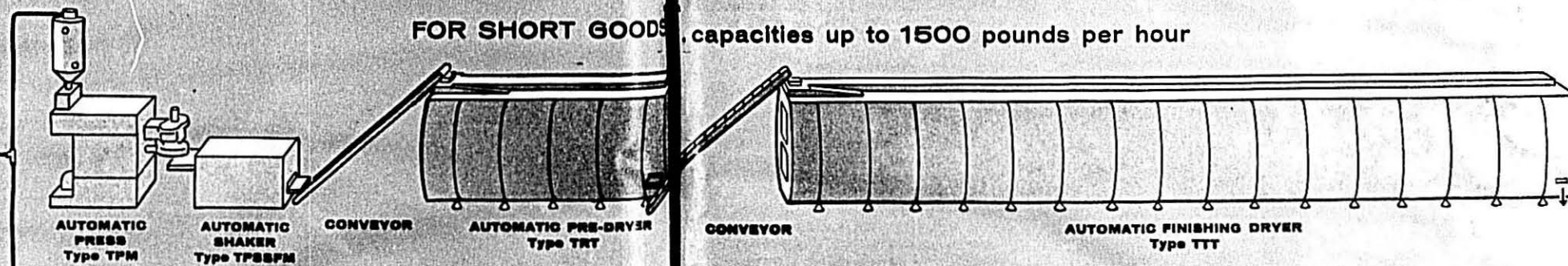
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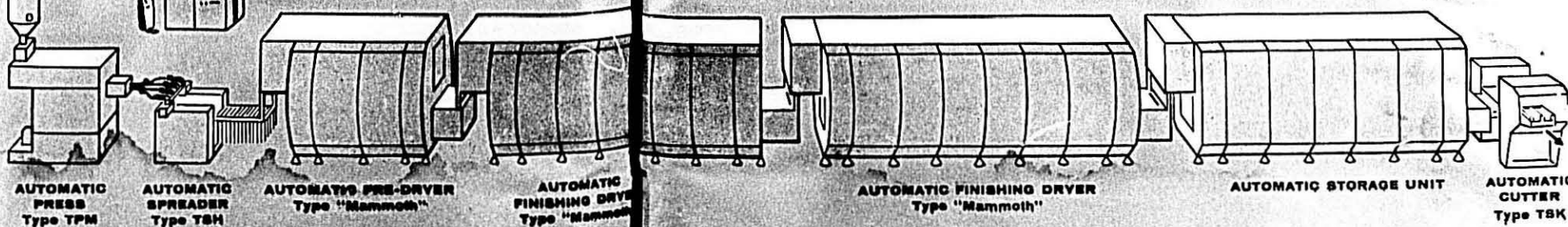
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Durum Research—

(Continued from Page 18)

technique is valuable for comparative purposes. From these comparisons, conclusions may be drawn relative to the potential processing properties of test samples which may ultimately be used in the continuous macaroni processing equipment.

Macaroni Quality

The final series of tests pertain to the evaluation of macaroni quality.

Color
Appearance
Checking
White Spots
Cooking
Weight
Residue
Tenderness
Appearance
Slime

Color

There are three major areas of concern to the cereal technologist, that of color, appearance and cooking quality. While to some processors color apparently is not of major importance, in the plant breeding process only those samples possessing desirable color are permitted to stay in the program. Consequently, when farmers produce new types of durum wheat, these wheats will have a good potential to give an acceptable color.

Appearance

Appearance of macaroni is perhaps one of the major marketing factors. Ordinarily samples evaluated in the Cereal Technology laboratory will be graded for checking and the presence of white spots. After the macaroni has been evaluated for color and appearance factors, the final test of macaroni quality lies in cooking. Normally five factors are considered: weight, residue, tenderness, appearance, and slime. The increase in weight is related to water absorption and must be well within reasonable limits. The residue is the material that is sloughed off during the cooking process and may be collected by centrifugation of the cooking water. A high residue value is considered undesirable and usually is associated with soft-coar or turbidity development in the cooking water. The tenderness of the cooked product may be evaluated by means of a Compressimeter. This is a device which applies a gradually increasing pressure to a strand of cooked macaroni. Simultaneously with the application of pressure, one plots the change in diameter of the cooked macaroni. By this means, it is possible to mathematically express tenderness of

macaroni as a single number. The appearance of the cooked product is a subjective measurement which is evaluated by trained technical personnel.

Cooking Quality

The final factor of cooking quality is the factor called slime. At the present time, this is a rather ill-defined term which is currently being studied by a technical committee of the American Association of Cereal Chemists. The exact composition and nature of slime as well as means of expressing useful indexes for this factor may become realities in the near future when the technical committee completes its work. At the present time, our laboratory does not use a slime index factor.

Basic Research

In the area of basic research, there are several projects which we are currently undertaking. At the summer meeting of the National Macaroni Manufacturers Association, a fellowship was approved to support a graduate research assistant to work on the biochemical factors which may affect macaroni quality. This is the first opportunity that we have had to express our gratitude to the association for this action and we trust that it will initiate certain facts and reports which may be used by the association for the betterment of the entire macaroni industry. This evidence of interest by this industry has assisted us in up-grading a staff position. We have engaged the service of another professional staff member, Dr. Darrell Medcalf, who will devote a considerable portion of his time to research activities and to the supervision of graduate students. Consequently, it is anticipated that our research activity will be increased in the near future. There are two major areas for our immediate consideration. One pertains to the studies of the carbohydrates of durum and durum products; the other pertains to studies of the lipids of durum.

Lipids

Studies on lipids have been underway for approximately two years and at the forthcoming annual meeting of the American Association of Cereal Chemists, a report of the technical aspects of this program will be presented. In general, we have found, using new techniques, significant differences between the composition of the lipids of various types of wheats can be shown and can be measured. The testing techniques are rather complicated at this stage. Semolina may be separated into five major biochemical components: lipids, starch, proteins, water solubles and sludge fractions. The process per-

mits the chemists to study materials which are of a relatively pure nature. However, it must be emphasized that there is a considerable inter-relationship shown in complex dough systems between proteins and the lipids, the lipids and the starch, and the starch and the proteins. A scheme such as diagrammed is important to the person preparing the various materials so that these materials may be studied in a relatively pure form. However, considerable time must be spent in reconstructing the original dough systems to make certain that the studies have not been performed on materials that were created in the laboratory and do not exist in the original semolina.

The work on the lipids has progressed to the point where we shall begin to publish information in technical journals and the significant findings will be summarized for the forthcoming association meetings.

Carbohydrates

The work on carbohydrates was initiated about a year ago. Initial studies employed an amylograph. This device may be familiar to many of you because it enables the chemists to measure the gelatinization properties of starch. You will recall that as starch is heated in the presence of water, at approximately 145° F. the starch swells and forms a thick paste. In part, this is the type of change that occurs when macaroni is cooked in boiling water.

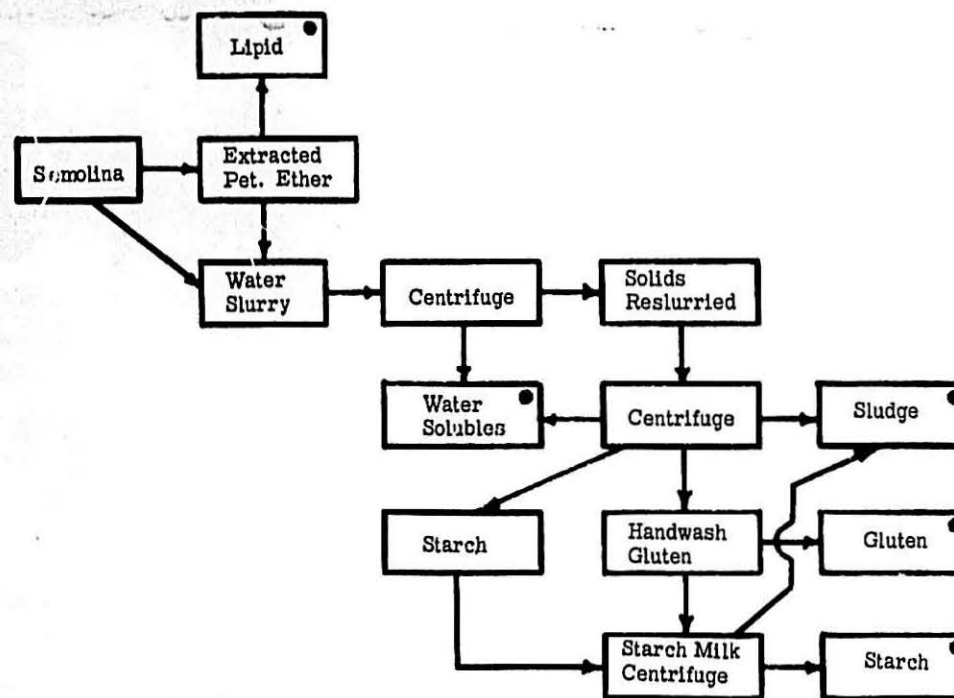
Gelatinization

A study was undertaken to show whether it would be possible to predict gelatinization properties of macaroni by studying the gelatinization properties of semolina. Comparisons between gelatinization properties of macaroni were linear (1). Consequently, a relationship does appear to exist. Moreover, different varieties of durum wheat appear to possess specific gelatinization properties in the cooking process. To assist in the technical calculations, mathematical relationships were established to compare the amylograph viscosity of semolina, after 10 and 30 minute cooking periods, against the maximum viscosity of the uncooked semolina. Such data might potentially become useful for comparative purposes and possibly enable the buyer and seller of semolina to establish a relatively simple amylograph procedure to assist in establishing specifications of raw materials.

(1) Literature Cited: W. C. Shuey and K. A. Gilles. Evaluation of Durum Wheat and Durum Products. I. Studies on Semolina and Macaroni with the Amylograph. *Cereal Chemistry* 41: 33-38 (1964).

Durum Research—

(Continued from Page 22)



Interrelationships of biochemical components in the study of lipids have been diagrammed.

Information for Industry

WHERE do new ideas in macaroni manufacture come from? And how does this information reach the men who produce the nation's macaroni products?

There are few laboratories in the world where research is being conducted in macaroni technology. One of the largest and best known is the Buhler Research Center at Uzwil, Switzerland.

Here, skilled chemists and other scientists are constantly seeking ways to help you produce better products and do so more efficiently.

Some of their discoveries are made available to the industry in the form of improved equipment. Many others, however, are in the form of ideas and knowledge which are offered free to all as Buhler's contribution to the advancement of the industry.

This information reaches you through a number of channels.

Much of it has been published in *Macaroni Journal*. It has also appeared in other leading trade journals. An example of the latter is the paper on "Improved Method For Testing Macaroni Products" by Dr. Adolf Holliger in the

May, 1963 issue of *Cereal Chemistry*. Buhler's own company publications are also used to keep the industry informed of new techniques.

One such publication is the quarterly *Buhler Diagram* which reported the results of important research showing how a manufacturer can reduce color loss during manufacture (Diagram 32). The current issue (Diagram 36) contains the first of a series on the behavior

of macaroni products during the cooking process. In this article, Dr. Holliger discusses the influence of starch and gluten on water absorption, cooking loss, and stretch tests.

Macaroni News is distributed six times a year to macaroni manufacturers in the United States and Canada. In addition to news of Buhler research, *Macaroni News* also brings information on improved equipment and production techniques.

(Continued on Page 25)



In the Buhler Laboratory, macaroni products are tested, analyzed and recommendations discussed.

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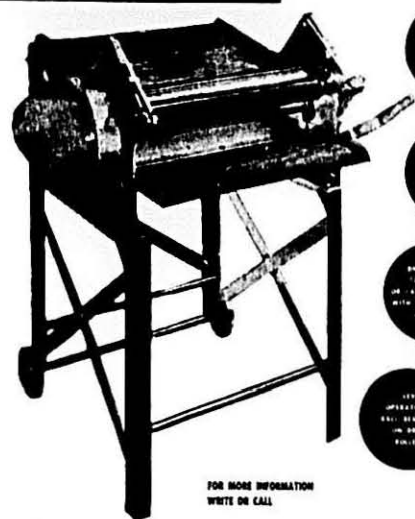
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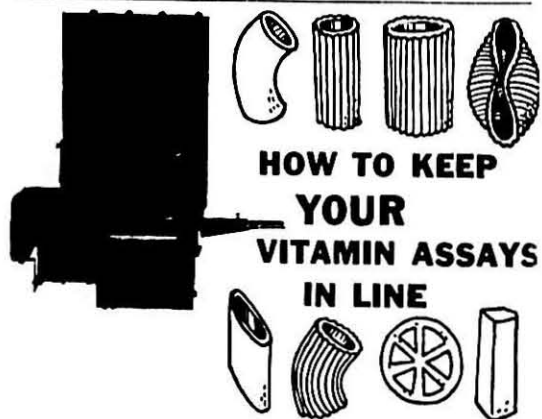
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Information for Industry

(Continued from Page 23)

Any qualified manufacturer of macaroni products can receive a free subscription to the Buhler Diagram and Macaroni News upon request to the Buhler Corporation, Minneapolis, Minnesota 55426.

Industry is further informed of new developments by the visits of experienced engineers and macaroni specialists.

Four such Buhler-trained specialists are based in Minneapolis and New York. They call on an average of seventy U. S. and Canadian plants a year. During these visits they combine their knowledge of macaroni production with up-to-date engineering know-how to help the manufacturer work out any problems he might have in automation, quality control, sanitation, or engineering.

College Course

Another unique service offered by Buhler is the Swiss Macaroni "College" held at St. Gall, Switzerland.

Since it was founded in 1958, seven classes have been graduated from this advanced school. The intensive four-week curriculum combines theoretical studies in the classroom with practical work in the laboratory. The program for the November 25-December 20, 1963 courses included the following subjects:

Physics: Thermodynamics, measuring techniques.

Electricity: Basic electricity, safety laws, wiring diagrams, trouble-shooting.

Cereal Chemistry: Various cereal types, gluten, quality, appearance, and apparent degeneration.

Milling: Basic study of milling with special emphasis on the processing of durum and on conveying.

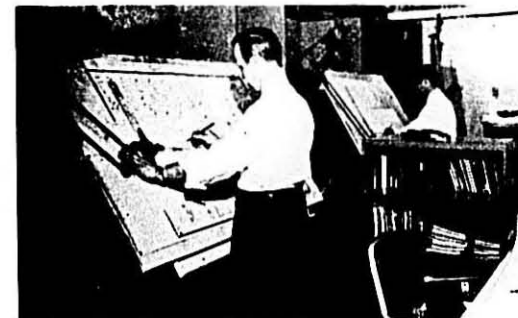
Eggs: Preservation, use when manufacturing macaroni with eggs.

Nutrition: Role of macaroni in human nutrition throughout the world, cereal history, statistics, reasons for loss of nutrients.

Machinery: Design and operation of machines, especially continuous presses and dryers, and packing machines.

Laboratory Work included analysis of different types of wheat, and the determination of moisture, acid and ash content. Tests for quality also include cooking tests, measurements of color, hardness, stretching, gluten, and egg content. Instruction in operation of equipment included test runs and drying, calculation of equipment capacity, operation of climate controls and wiring diagrams.

Visits to important Swiss and other European macaroni plants were also included in the program.



Project engineers are adapting Swiss-built macaroni machinery to meet specific needs of a U. S. customer.

To permit individual instruction, only 15-20 students are accepted for each course. Since the school was inaugurated in 1958, students have been sent by companies located in the following countries:

Countries	Students
Germany	27
Switzerland	20
France	12
Austria	7
Italy	5
Belgium	2
Morocco	2
Luxemburg	1
Netherlands	1
Norway	1
Sweden	1

These are generally managers and technicians from leading macaroni plants who come to St. Gall for advanced training. The large German manufacturer, Birkel & Sohne has sent a total of eleven from its various plants to attend the school.

Equipment Improvement

Buhler research also benefits the industry when it results in the development of improved equipment. Such improvements may give it longer life, make it easier to operate, improve the sanitation, or permit closer control of quality.

Buhler is proud of its presses. Broken and frozen extrusion screws are virtually unheard of. Wear between screw and cylinder has been reduced to a point where it is almost negligible. A recent test showed that after six months of continuous operation, wear on the screw was barely measurable.

All Buhler equipment sold in the United States is supplied with U.S. motors and controls.

In the dryers, it is claimed aluminum alloy drying belts are far stronger and more sanitary than the conventional wire on nylon screen belts offered by other manufacturers. Swing-out panels give easy access for cleaning.

Buhler has built continuous long goods dryers since 1950. The newest design, Type TDC, was introduced in 1962. The transfer mechanism positively guides the sticks from one level to another. It is already in use in a number of major macaroni plants throughout the world, including the world's largest, Barilla in Parma, Italy.

Quality machines and quality service has been reflected in sales throughout the world. Especially rapid increases have been made in South America and Japan. It has been interesting to observe the increased acceptance of Buhler machines in Italy. The increase in the United States is largely due to the emphasis which the manufacturers in this country place on sturdiness and high quality of product.

Buhler is proud of this success and is looking ahead to a future of continued leadership where its active research program will continue to supply the industry with both information and equipment.

Build a Good Public Image

James Nance, chairman of the National Livestock and Meat Board, recently warned meat packers that "all of the hue and cry, reaching a state of frenzy at times, about animal calories, obesity, food faddism, food and feed additives can and will have its effect on meat consumption."

"In the months and years ahead, somebody (and that somebody is the entire industry) does not continue to exert every possible effort to maintain and build a good and a sound public image for meat, then beef, pork, veal and lamb could suffer—and suffer drastically in the market place."

"Regardless of how much they eat meat, many people could be scared away from it by the sensational misinformation which is being disseminated by food faddists and professional 'scare' writers."

Doughboy Modernizes Mill

ON the same picturesque site where a grist mill was started by pioneer settlers more than a century ago, Doughboy Industries of New Richmond, Wisconsin, has just added finishing touches to one of the most modern semolina mills in America.

It was a real study in contrasts when the company took its final step in a long range, \$350,000 modernization program and installed new machinery and equipment which transformed the operation into a completely pneumatic mill.

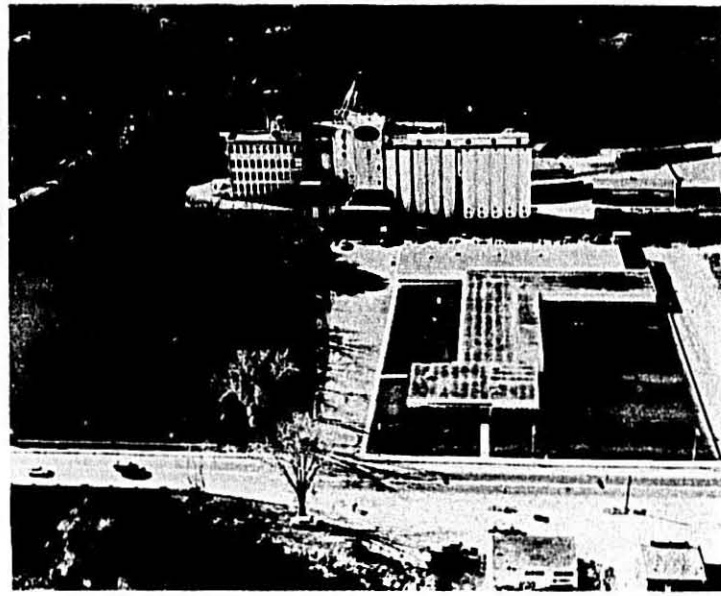
In those early days back around 1856, the self-trained "millers" used a small water powered wheel to grind the grain they brought in from the land they had helped clear and their production was limited to the small colony of families.

The water from that early milling operation came from the Willow River which flows through the city of New Richmond, and today the big, modern mill of Doughboy Industries stands beside the mill-pond formed by the water of that same river.

Capacity Increased

By completing a program which was launched back in the mid-1950's, Doughboy Industries gave its Milling Division a more efficient mill, increased capacity 25 per cent, and further improved a semolina product already famed for its high quality.

To provide space for additional equipment and machinery needed to increase the capacity and improve the product all elevator legs were removed. Long



Here is an aerial view of the Doughboy Industries semolina mill. The building in the foreground is the home office and the nerve center of the company's far-flung operations.

before the move was made there was a careful study of floor plans, a blueprint of the proposed new, enlarged operation, of the improvements, a cost analysis and a look at new markets for the additional semolina to be turned out.

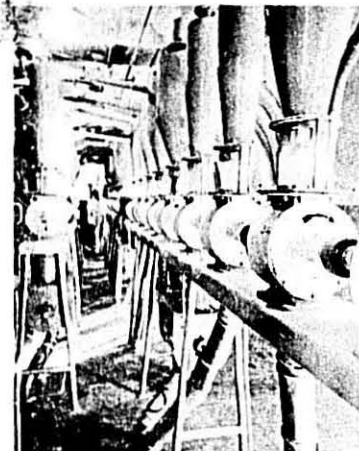
Raymond R. Wentzel, Vice President of the Milling Division, who planned and directed the long-range improvement program, worked in close cooperation with engineers of the Buhler Company from which Doughboy acquired the new units for the mill.

All details of the proposed new installations were studied and discussed with Mr. Wentzel's staff at the mill and

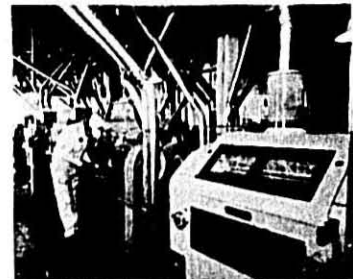
long before the new equipment arrived they were confident of top efficiency because of their advance planning and knowledge of the new machinery.

The elevator legs in the plant were replaced with pneumatic lifts. The company also installed additional grinding equipment, new purifiers, and additional cleaning machinery for handling

(Continued on Page 32)



This is part of the newly installed pneumatic suction conveying system. Here the product is separated from the air and spouted to the sifters and purifiers on other floors of the mill.

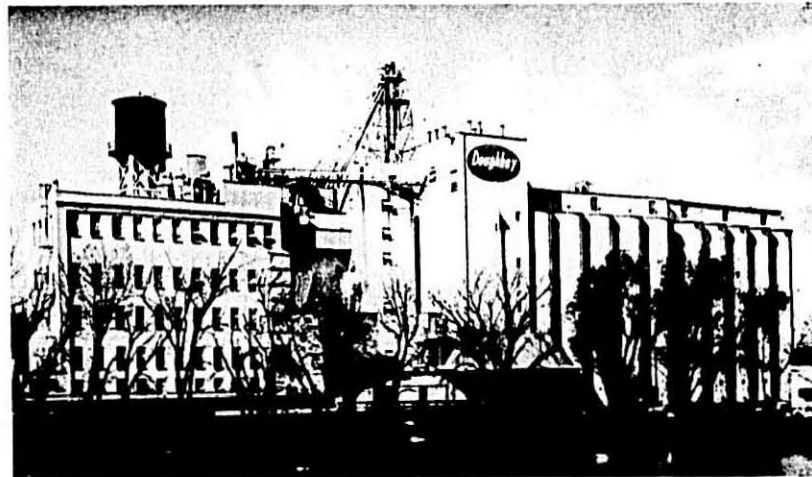


In the foreground is a new Buhler roller mill. Earl Marsh, a miller, is checking the product. Additional light and space was gained by installation of a network of prefabricated metal spouts.

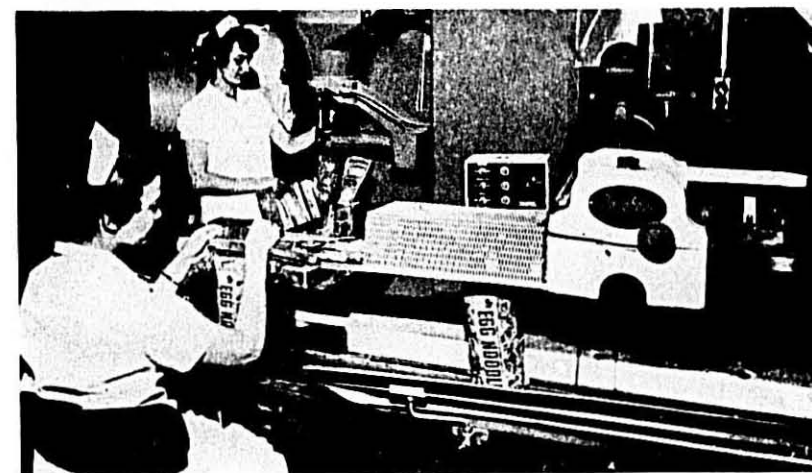


Here are some of the Buhler triple deck purifiers which help maintain a standard of quality and uniformity of Doughboy semolina. Fritz Asplund, miller, is inspecting one of the units.

The best macaroni, spaghetti and egg noodles . . .



. . . are made from Doughboy semolina and flours . . .



. . . . and kept fresh with Doughboy heatsealing.

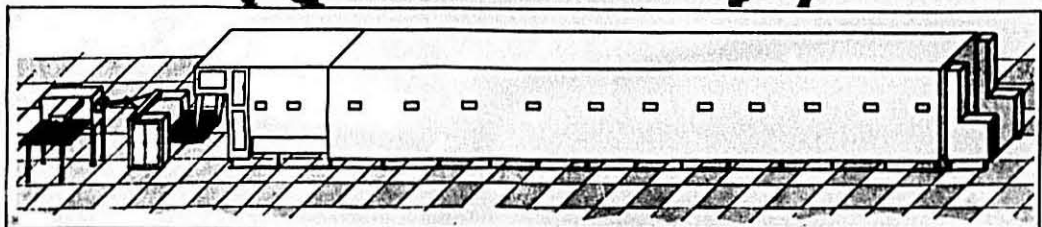
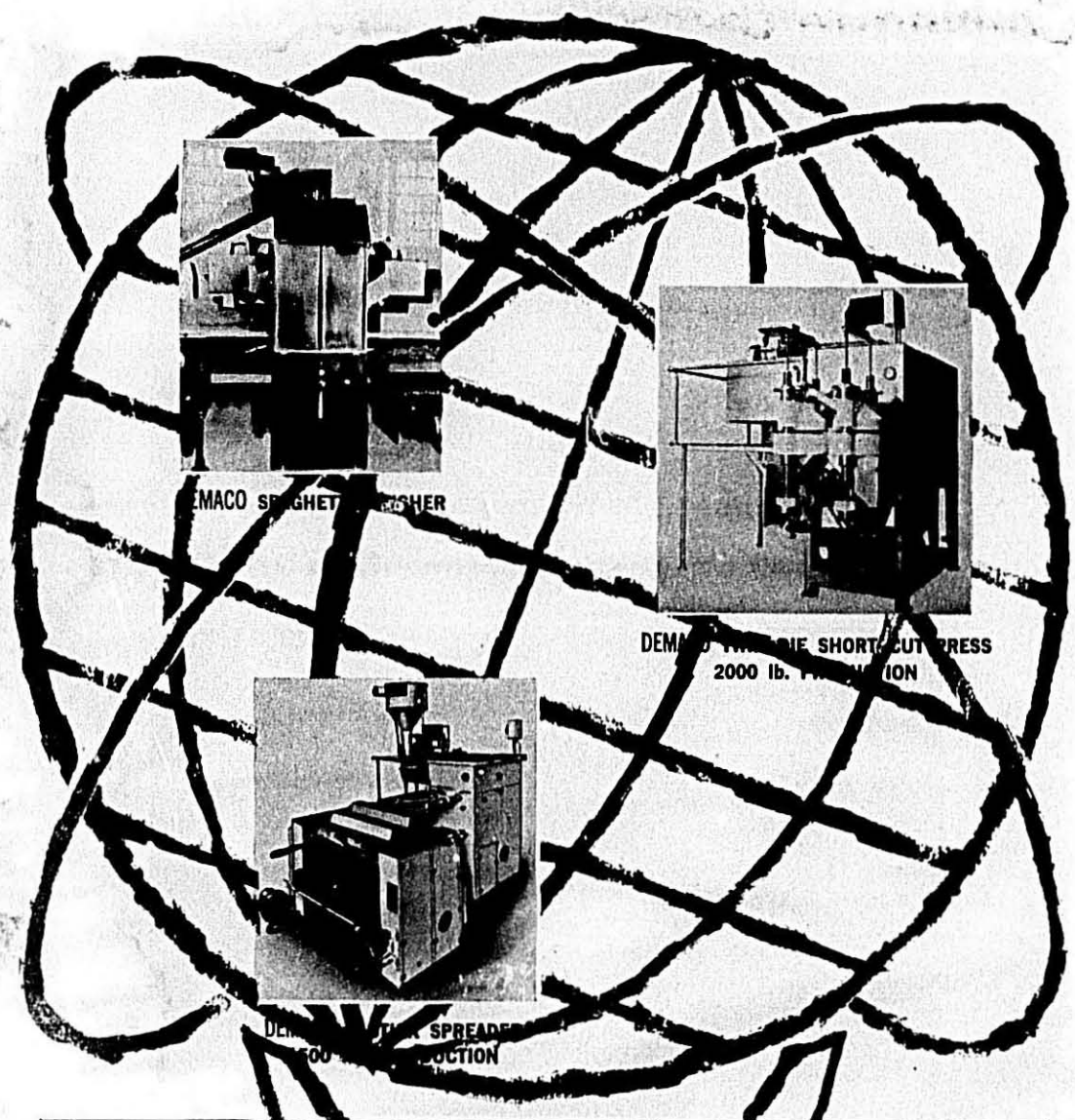
BOTH come from Doughboy Industries, Inc.
at New Richmond, Wis.



(Ask ANY manufacturer of quality famous macaroni products!)

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NEW DEMACO LONG GOODS CONTINUOUS PRESS WITH CONTINUOUS DRYER, ACCUMULATOR, STRIPPING AND AUTOMATIC SPAGHETTI WEIGHER — 1500 lbs. per hour PRODUCTION

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While you are here you may want to see our new equipment . . . The Demaco long goods continuous line . . . The fully automatic line that takes semolina and water, extrudes the mix under full mixer vacuum, preliminary dries the product, then goes through the new Demaco revolutionary one tier finish dryer, to an accumulator, to a stripper and finally to Demaco's amazing spaghetti weigher. All at 1500 lbs. per hour (based on dried product).

The new Demaco 4 stick spreader with a production of 1500 lbs. per hour (based on dried product).

The new Demaco twin die short cut press with a production of 2000 lbs. per hour (based on dried product).

The new Demaco long goods weigher.

The new Demaco die cleaner.

* and transportation to the Fair too!

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DeMaco Makes Advances

De Francisco Machinery Corporation of Brooklyn, New York boasts of broadly diversified engineers, technical skill, facilities and over 50 years of experience in macaroni extrusion and drying in serving their customers. Today, DeMaco claims placement of their equipment in nine out of eleven top macaroni manufacturers in America as well as in many countries of the world.

Of their continuous line, they say that 1500 pounds per hour, 36,000 pounds per 24-hour day is guaranteed. This is of dried .075 inch spaghetti with eleven per cent moisture; no checks; no mould; ready to pack.

One mixer man is required, and one man can take care of more than one continuous line. The full 36,000 pounds of daily production is stripped and weighed in an eight-hour shift by one man on the stripper and two girls on the Demaco long goods weighing machine.

Easy Cleaning

When the dryer is empty it is completely open for cleaning. Every part is accessible and within easy reach for cleaning with a vacuum cleaner and with soap and water. The dryer has its floor raised off the building floor and is supported independently on jacks.

The finish dryer has only one stick pick up and one stick exit, and offers one tier finish drying. The product enters the finish dryer in four tiers with an elevator picking up four sticks and loads one stick on each tier. Thus, each drying tier receives one stick out of every four and all four tiers move forward together in the same straight line. The sticks move through the entire finish dryer and storage unit, never changing tiers. This makes for a minimum of stick jam-ups.

Close Control

This straight line drying system offers an advantage in maintaining control of humidity because all four tiers move together from one control section to the next. The problem of dry product mixing with wet is eliminated. There is a three-zone control design with each zone having independent temperature and humidity controllers.

An automatic stick return and stick storage unit is included with the dryer. A full complement of 80 inch long heavy extruded aluminum sticks is supplied.

Finished goods are stored for 16 hours during the night and are ready for stripping during an 8-hour shift during the day.

An automatic spreader is designed with a new cast steel extrusion head that extrudes a nearly perfect pattern.



Demaco engineers left to right: Nat DeFrancisci, Nat Bontempi, Leonard DeFrancisci.

Dies can be changed and removed in minutes. The rear extrusion press has DeMaco's "trade approved" single mixer that is easy to clean with a minimum of down-time. Vacuum is applied over the entire mixer.

Cut Downtime

In the macaroni industry, down-time is an expensive proposition. In developing this completely automatic long goods line, DeMaco has all but eliminated the human element. The drying sequence is not controlled by any operator; it is all completely automatic. Component parts are supplied by top firms and all parts for the long goods line are kept in stock. Any case of failure has a minimum of down-time.

The new DeMaco four-stick spreader

is said to be an American standard. With production of 1500 pounds per hour, 750 each from two cast steel extrusion heads, long goods have superior color and texture. The extrusion pattern is excellent and has a minimum of trim.

A twin die short cut press with a production rate of 2000 pounds per hour is said to be the answer to the macaroni manufacturer who wants to double his present 1000 pound capacity machine with no more floor space than that required for present equipment.

Increased efficiencies in air circulation and instrumentation result in smaller short cut dryers using less floor space and increasing production. Custom designs works out individual space problems for the most satisfactory solutions. Sanitation has been greatly improved with the claim made that you can now get into the dryer for cleaning.

Long Goods Weigher

The long goods weigher claims speed and accuracy, attached to any cartoning machine. With speeds of over 45 per minute for each double headed machine, it will handle the full range of dried long goods, straight, curved, hooked and short ends with no jamming or stopping. Accuracy is maintained by DeMaco's unique strand per strand dribble mechanism. Final weight is insured by highly sensitive optical-electrical principle of friction less weight indication and cut off.



TODAY IN CONNECTICUT heard the story of semolina and the development of the macaroni industry when Dom J. Mingolla, Vice-President of V. La Rosa & Sons, Inc., was a recent guest on WHNB-TV, West Hartford. Mr. Mingolla (center) was interviewed by Joyce Hodgman, hostess of the show, and Marc Jennings.

Doughboy Modernizes Mill—

(Continued from Page 28)

the durum wheat. All of the units fitted right into the pattern planned a long time ago.

Earlier in the modernization program the company installed new sifters, purifiers, metal spouting and other equipment. Another phase of the project was completed two years ago with the construction of ten additional concrete storage silos, each with a capacity of 10,000 bushels of grain. This gave the company a total grain storage capacity of 250,000 bushels.

Proud Heritage

Doughboy Industries is proud of its milling heritage as it swings into a new era with an enlarged, more efficient mill and the news that there will be a 25 per cent increase in capacity has pleased those using the Doughboy product for macaroni, noodles and spaghetti.

In line with the company's policy of producing a diversified line of products, the Doughboy Milling Division has a complete program which embraces grain specialists for selecting grain, a quality control laboratory, and a far reaching quality control program.

The original grist mill in New Richmond came into existence after a small sawmill had produced logs and lumber for the homes of early settlers. That was the beginning of milling in the area. Doughboy Industries is the outgrowth of a country flour mill established in 1899.

Over the years, the mill produced many brands of flour, one of which was named "Doughboy." That is how the present company got its name. Back in 1936 the company was known as Doughboy Mills and the present name was adopted after World War II.

There are still quite a few oldtimers in New Richmond and the surrounding area who recall the early days of milling and they chuckle as they recall how flour was delivered with horse and wagon in a market area covering only a few miles.

Modern Techniques

Today durum is brought to the mill from the wheat fields of North Dakota and South Dakota in railroad cars which move along sidings beside the big mill and other loads come in trucks and trailers. The finished product goes out in bulk airside cars.

Mr. Wentzel described the final phase of the improvement project as another big move forward in the company's growth program. Expansion, he points out, has been on a sound, carefully planned basis and this has placed

Doughboy in its present strategic position.

"There has been wide acceptance of our semolina because of its fine quality," Mr. Wentzel said. "Now it will be even better. And with the 25 per cent increase in capacity, we can take care of the needs of more manufacturers around the nation."

And so a new era in milling has begun.

Appropriately enough, the old millpond can be used as a mirror to show the progress which has been made. For in its clear water is reflected the modern mill which carries the Doughboy name. And nearby is the dam which provided the power for one of the early milling operations.

A few blocks away in the same city stands the bustling factory of the Doughboy Packaging Machinery Division. This plant produces packaging machines and equipment used by many firms for the packaging of noodles and macaroni.

In addition to producing semolina, Doughboy Industries manufactures a diversified line of agricultural, industrial, recreational and electronic products.

Peavey Operates in Durum Country

Vern Kolkind is the manager of the northeastern North Dakota division of the Peavey Company operating some 44 open elevators with a storage or handling capacity of 5,500,000 bushels.

The East Grand Forks, Minnesota service center operates as a regular country elevator, buying and offering storage for all classes of grain raised by local farm customers.

A 120,000 bushel sub-terminal was built in 1961 to handle barley. The elevator also purchases carloads of oats, dark northern spring wheat and durum on tracks at the Grand Forks, North Dakota hold point.

Grain from the area is sold in the Minneapolis-Duluth market by Peavey merchandisers.

Complex Business

Years ago, the life of an elevator man was relatively uncomplicated, Kolkind explains. He was known as an agent, and his job consisted mainly of buying grain and selling coal. Grading factors affecting the price of grain were simple: the Minneapolis office set the buying basis and told him what to pay.

Today, the situation is vastly different. Since the government has entered into the grain business via the Commodity Credit Corporation, a good share of what the station handles consists of

grain on which farm customers took government loans, either in elevator storage or on the farm, and later surrendered to the CCC.

"Our men are responsible for the grade, weight and condition of this grain until loading orders are issued and the grain is shipped. To be eligible to handle government grain, our men must comply with many strict regulations."

Competition for the remaining cash grain crop is tougher than ever, Kolkind says. Users such as millers, malsters and brewers are more selective, and have introduced several new and complicated grading factors which affect the price received for grain.

Good housekeeping practices are another requirement for today's elevator manager. In recent years, the U. S. Department of Agriculture through the Food and Drug Administration started a grain inspection program. Managers are held responsible for keeping their plants in top condition, and must check incoming grain carefully and refuse to accept grain with contamination.

"All this adds up to the fact that a modern-day manager must be self-reliant and a specialist in several fields: an expert on grain, an agronomist, salesman, credit man, accountant and public relations man," says Vern Kolkind. "He must be able to adapt quickly to ever-changing competitive situations and constantly make on-the-spot decisions in his daily operations."

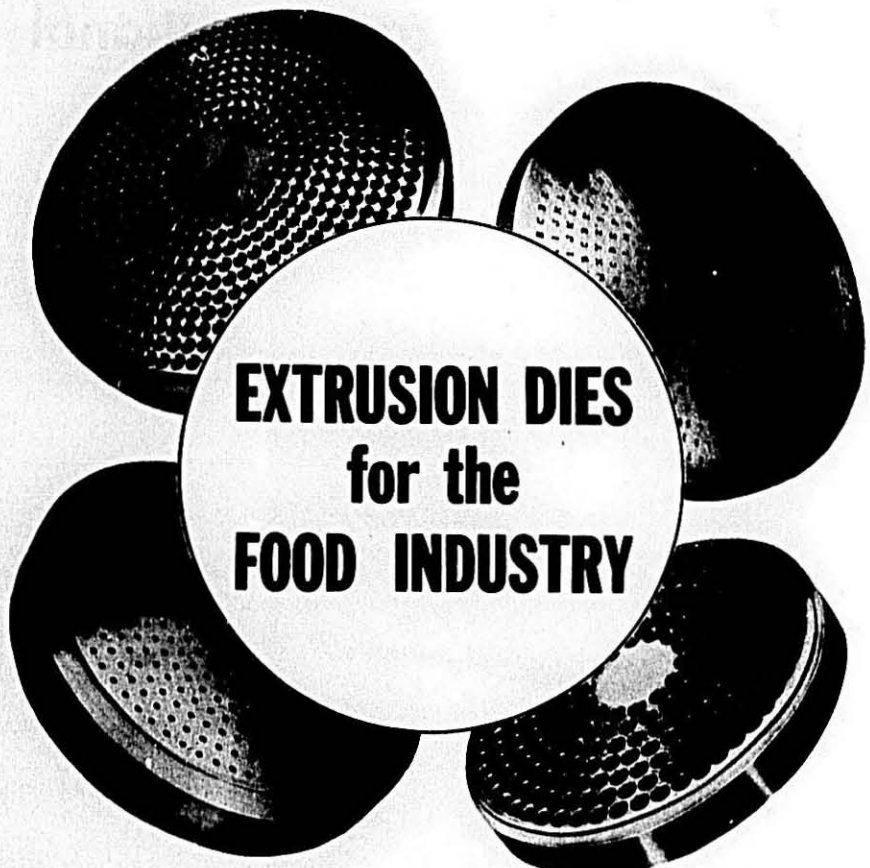
Durum Triangle

This area was once covered by a glacier and later by a huge body of water known as Lake Agassiz. Today it is the durum capital of the world with the durum triangle centered in Towner, Ramsey and Cavalier counties of North Dakota. The triangle produces from 80 to 90 per cent of the total durum crop grown in the United States.

The soil, temperature, rainfall and other climatic conditions in the triangle are better suited for growing durum than other crops, although barley accounts for about a third of the small grains produced. Much hard spring wheat, some rye and considerable oats are grown throughout the area. Flax is scattered, but concentrated mainly in the central and southwest area.

Langdon, located in the heart of the triangle, is the site of the annual U. S. Durum Show sponsored by the Local Chamber of Commerce, Durum Growers Association, grain and millers including Peavey.

Much of the durum grown in the triangle goes to Peavey's Superior, Wisconsin which devotes exclusively to the production of and durum flour.



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Quality Control at International



Quality control of durum products for International Milling Company is supervised by Robert J. Bruning, shown here weighing a sample of semolina to analyze it for ash content.

ROBERT J. Bruning makes macaroni products, but on a much smaller scale than most men in the industry—sometimes a single strand at a time.

His title is durum products quality control manager for International Milling Company, but he really works for macaroni products manufacturers as part of International's extensive quality control program that has helped give the firm a reputation for high quality in the industry.

At the company's central research laboratory in Minneapolis, International actually manufactures finished macaroni products on a small macaroni press, thus providing a micro-method quality check on the company's durum products. The only certain way to learn how durum flour or semolina will per-

form in a macaroni plant, the company feels, is to actually test the end product.

Continually Testing

But testing finished macaroni products is, of course, only a small part of International's quality control program.

The firm's durum mills are all served by well equipped mill labs where skilled technicians run daily tests to judge color and granulation, and continuously analyze the moisture, ash and protein content of semolina or durum flour. Nevertheless, the Minneapolis laboratory rechecks the quality of all durum flour and semolina produced at these mills.

Tests are also run on samples taken from every car of durum wheat which the company purchases. This way the company makes sure that the durum

wheat which it uses will measure up to its rigid quality standards.

International's quality control program is, however, only one of the many reasons why it has assumed a position of leadership in the industry.

Constantly Modernizing

Its mills are constantly being modernized as new and better milling equipment comes on the market. The extensive plant improvement program now in progress at its B mill in St. Paul, Minnesota is an example of the steps International is taking to retain the confidence of its durum products customers.

Ten new purifiers, three new sifters, and two new roll stands at the mill are being installed. Although a slight increase in capacity may result, the primary reason for the installation of this new equipment is International's desire to further improve a product already well known for its high quality.

International has made a number of other improvements at its durum mills recently. Pneumatic bulk truck loading equipment was installed at its St. Paul B mill and a pneumatic by-products loading system was installed at the St. Paul A mill. Its mill at Baldwinville, New York had previously been equipped with bulk equipment. The result is that all of International's durum mills are now able to handle loading of both trucks and railroad cars.

International was a pioneer in the development of bulk flour handling and was one of the first durum millers to ship semolina in bulk.

Sales Reorganized

Durum products sales activities of the company were recently reorganized so that durum products are now sold direct to the macaroni industry by a separate sales organization. Heading that organization is Anthony L. DePasquale, U. S. durum products sales manager.

The firm's eastern durum products region is headed by Sal Maritato, who headquarters in New York City. The central states are headed by George Hackbush, who works out of International's Chicago office.

One of the world's largest flour milling companies, International Milling operates 24 flour mills, 17 formula feed plants, and a number of terminal elevators, loading docks, warehouses and sales offices in the United States, Canada, Venezuela and Ecuador.

Record Supply of Durum

THE Agricultural Marketing Service of the United States Department of Agriculture released its semi-annual report which read as follows:

United States durum wheat production in 1963 was estimated by the Crop Reporting Board at 49,800,000 bushels—29 per cent less than in 1962, when nearly 70,000,000 bushels were produced. The growing season was favorable until July when hot, dry weather hastened maturity and resulted in lower yields. The 1963-crop was harvested from 1,936,000 acres—18 per cent less than in 1962. Per acre yields were down from 1.5 to six bushels from last year. Montana yields dropped the least while South Dakota showed the greatest reduction in output per acre. Scab damage was rather severe in South Dakota and this, along with hot, dry weather, cut yields and quality. Eighty-five per cent of this year's production was in North Dakota where the average yield was 26.5 bushels per acre. Abundant supplies were assured the trade since the carryover on July 1 was estimated at 46,200,000 bushels. This would provide a record supply of 96,000,000 bushels for the season.

Exports

On July 10, the USDA announced that export payment rates would be determined on a bid basis with Payment-in-Kind, in order that exporters might maintain a competitive position with other exporting countries. The first bid was accepted on August 10. It covered 75,000 bushels at a payment rate of 54 cents per bushel. Subsidy rates since that date through December, range from 54-59 cents. Exporters have not been too successful in capturing a large share of the market. Only 3,108,000 bushels have been shipped the first six months of this season—which compares favorably with last year when 3,042,000 bushels were sent overseas.

CCC Activities

The 1963 durum crop is supported, like other wheat, at a basic rate of \$1.82 per bushel at the farm, with an additional 18 cents per bushel paid to producers on complying farms. Termi-

nal loan rate at Minneapolis, Duluth and Superior, Wisconsin is \$2.16 per bushel with a premium of 10 cents for Amber and 25 cents for Hard Amber.

On January 2, Commodity Credit Corporation announced sale of 12,900,000 bushels of No. 2 Amber durum for export. Export payment rate was 72-73 cents, East Coast. Principally, because of the extremely large quantities involved in this sale, the bids were accepted at higher rates than the previous acceptance at 58 cents per bushel two weeks earlier. The 12,900,000 bushels will make a sizeable reduction in the durum surplus, which proportionally is larger than for any other class of wheat. The export of 13,000,000 bushels of durum wheat will reduce the heavy surplus of this class of wheat by about one-fourth below earlier estimates of 50 to 56,000,000 bushels next July 1, which were about a two year's supply at the domestic consumption rate of 28,000,000 bushels. Only twice in the past decade have durum exports been above 10,000,000 bushels.

Durum Stocks

Total stocks on January 1 were reported at 70,200,000 bushels by the Crop Reporting Board. There were 39,100,000 bushels on farms, 26,900,000 bushels in mills, warehouses and elevators, and 4,200,000 bushels in CCC-owned or controlled bins. Public regular elevators at Duluth held 5,400,000 bushels and those in Minneapolis-St. Paul 3,300,000 bushels.

Mill Activity

During the first six months of 1963-64 crop year, United States mills ground 12,872,000 bushels of durum wheat. This grind compares with 9,881,000 bushels ground in the July-December period of 1962. Domestic mills ground an average of 20,700,000 bushels each season during the 5-year period—1958-59 through 1962-63. Durum mills had 4,011,000 bushels on hand January 1.

Canadian Situation

Visible supply of durum wheat in Canada at the end of December, 1963,

totalled 28,700,000 bushels, 10,000,000 more than a year ago when 18,500,000 bushels were reported in all Canadian positions. Commercial disappearance amounted to 14,800,000 bushels August 1 through December, against 12,800,000 bushels the same period a year ago. Overseas exports accounted for most of the increased disappearance this year. Thirteen million bushels had been exported through December. The Dominion Bureau of Statistics in their November report, said indications at mid-October were for a 1963-crop of 53,400,000 bushels. This would be 19 per cent below last year's all-time record durum crop. Thirty-seven per cent fewer acres were devoted to durum production this year than last. Supplies in Canada are considered rather large and reports indicate that Canadian farmers were being advised to reduce their acreage in 1964.

Questionnaire for Growers

The Marketing Committee of the Durum Growers Association has prepared a questionnaire to determine what attitudes they will have on anticipated actions on a wheat bill in Washington.

They have expressed concern over rumors out of Washington that the Department of Agriculture may be preparing to abandon its grain resale loan program on farms after the 1963-64 season. Durum Growers Association has long advocated that Commodity Credit Corporation stocks should be held on farms and will oppose such a move vigorously. This resale abandonment study is mainly based on the fact that off-farm storage is now adequate to handle grains under loan. This would be a folly to compound a folly, they say.

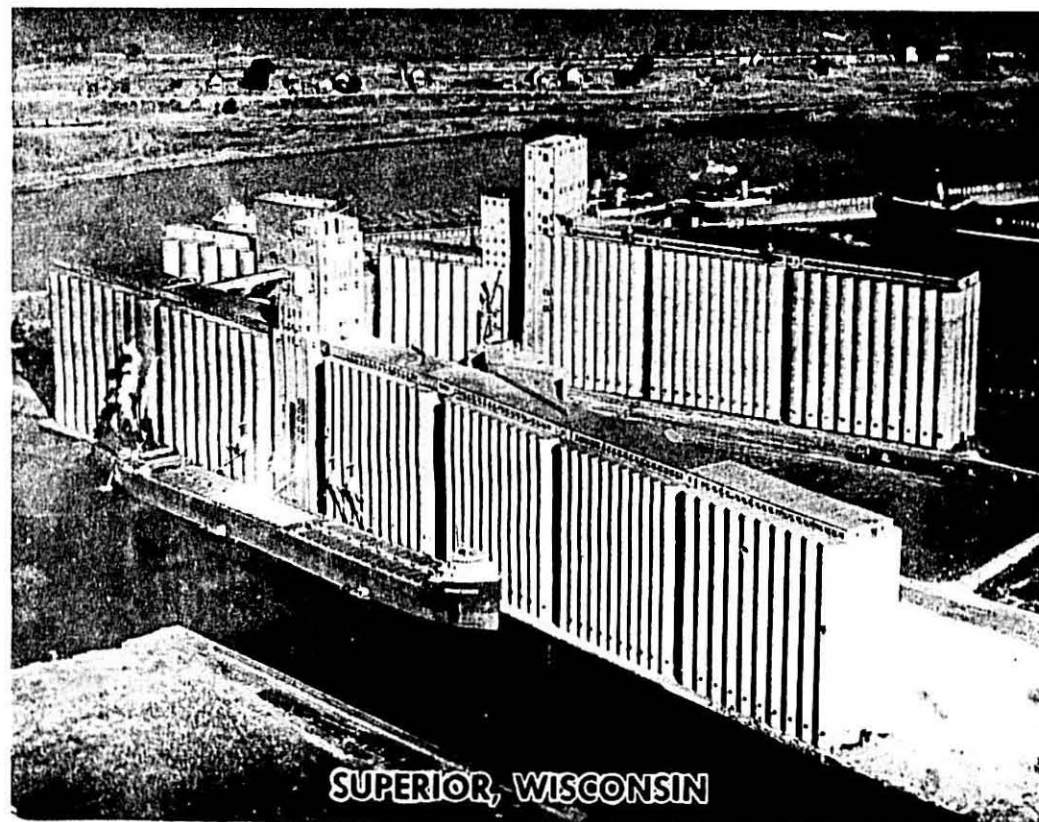
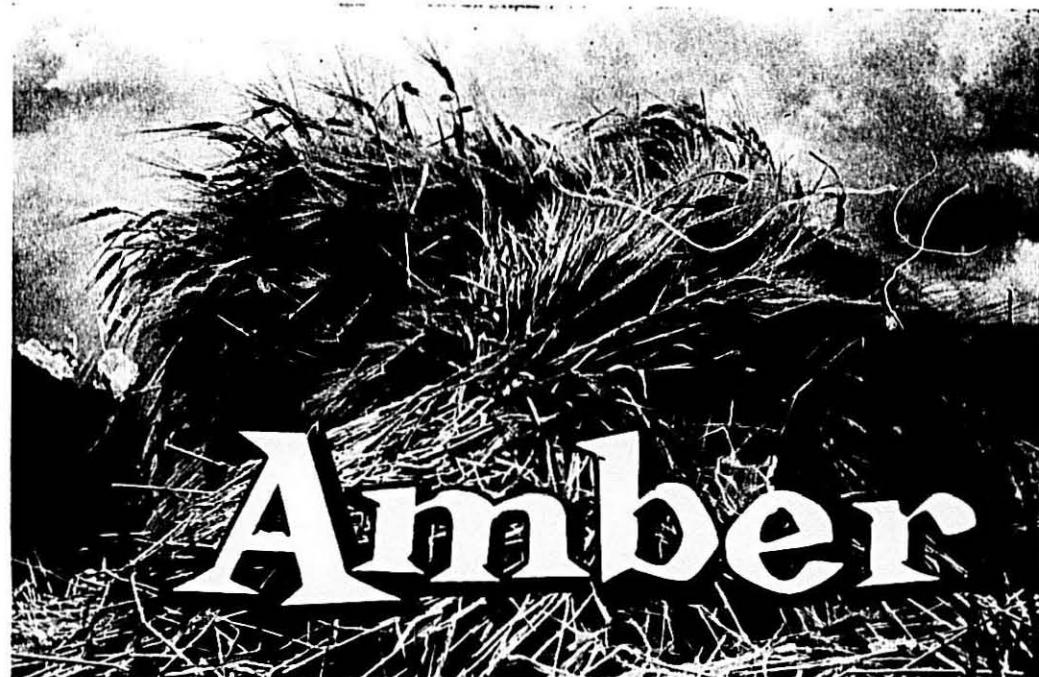
The questions are as follows:

1. Is governmental participation in a wheat program necessary?
2. Should a new wheat program be on a voluntary basis?
3. Do you favor a two-price system for wheat, with a higher price for domestic consumption and a lower price for export and other uses?
4. Should a wheat program take into consideration different wheat classes such as durum or hard red spring with reference to quality and usage?
5. Do you favor support prices at a relatively high level (85 to 100 per cent) as compared to a lower level at about the world price?

(Continued on Page 38)

1962 Durum Wheat Delivered to CCC as of June 30, 1963

State	Warehouse Stored	Farm Stored	Purchase Agreement
Minnesota	339,740	269,611	28,284
Montana	341,526	477,427	215,276
North Dakota	10,312,944	8,745,379	3,450,520
South Dakota	374,489	278,474	72,776
Washington	5,716	3,750	2,022
Total	11,374,425	9,774,641	3,768,878



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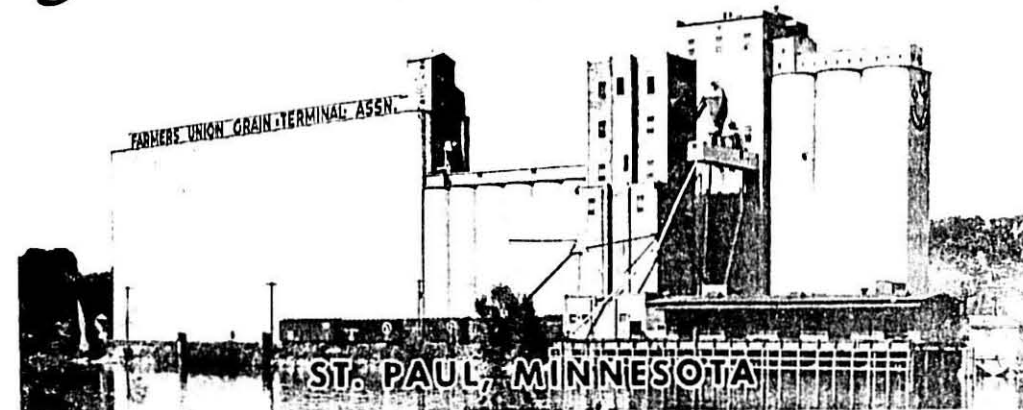
Every Shipment from Amber Milling has the unmistakable amber color that identifies top quality Semolina and Durum Granular. When you find top quality, it is the same color as Amber Venezia No. 1 Semolina and Imperia Durum Granular. Protect your brand name—specify Amber... uniform color, granulation and quality.

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Questionnaire for Growers—

(Continued from Page ??)

6. Do you feel that the government can control production in line with demand and yet provide adequate farm income?
7. Have past programs been fair to the North Dakota wheat farmer?
8. If you feel that the American wheat farmer must be subsidized, do you favor it being done through high support prices rather than through direct compensation payments?
9. American domestic requirements for wheat have leveled off at about 600,000,000 bushels annually, with about the same figure possibly going into export channels in 1963. This will leave us with a July 1, 1964 estimated carry over at about 800,000,000. Which of the following figures do you feel should be a realistic and safe national carry over to aim for? 400,000,000 - 800,000,000 or 1,200,000,000 bushels.
10. Do you feel that we could get by with less red tape in a farm program?
11. Do you feel that the long range objective should be for less government participation in agriculture?
12. Are you in favor of extending the present soil bank program to allow farms now in soil bank to remain as such?
13. In a land retirement program, should (a) the entire farm be retired if desired; (b) only a portion of total farm be retired; or (c) there be no retirement program at all.
14. Do you feel that payments for conservation practices such as stubble mulch, trashy fallow and drainage are necessary?
15. Do you feel that conservation payments for tree planting are advisable?
16. Should on-the-farm storage be given preference to other types of storage?
17. Should government bin-site storage be eliminated?

Goodbye, Small Farmer

This is a digest of ideas from "Farms and Farming in an Urban Age" by Edward Higbee, Ph.D., professor of land utilization at the University of Rhode Island and former employee of the U.S. Department of Agriculture.

The farm subsidy program—underwriting crop prices, controlling acreage planted, and taking land out of production—costs the U. S. taxpayer five bil-

lion dollars a year, and is a colossal failure.

The program cannot succeed because it fails to come to grips with the fundamental fact that U. S. agriculture is in the midst of a technological revolution. This revolution is rapidly transforming farming into big business, requiring large capital, extensive acreage, expensive machinery, and astute business management. The impact is making the traditional small farm obsolete and eliminating the need for a subsidy program.

What Is a Farmer?

What is a farmer? By definition in the last census year (1959) there were 800,000 farms marketing commodities worth anywhere from \$10,000 to \$500,000 or more annually. They are the successful farms. They make up only 22 per cent of the total number of farms, but they produce 72 per cent of all the crops and livestock, and they get the lion's share of subsidy payments.

The next group has about 1,300,000 farms—35 per cent of the total—marketing commodities worth from \$2500 to \$10,000 a year. The operators of these farms are largely depressed and as a group are already more than halfway out of farming.

The last group includes 1,600,000 farms—43 per cent of the total—which market produce "worth more than \$50 but less than \$2500 a year." Their whole output is barely more than five per cent of the national total. The majority of these farmers are part-timers, retired men, or hobbyists; others are impoverished rural people who if they were in the cities would be on welfare. To class this group with real farmers is like lumping children's lemonade stands in with supermarkets: on that basis the whole grocery business would look so sick that even the A & P would qualify for federal aid.

Subsidies cannot save them. They produce such a small part of the national output that crop price supports add little to their income. The technological revolution has made them obsolete as farmers.

What Is the Solution?

What then is the solution? First, we must end all programs of agricultural price supports, price fixing, parity incomes, production subsidies and the soil bank. This would restore the free market to farm operations.

Second, we must help marginal farmers prepare for jobs in industry; this means we must encourage industrial growth so that there will be jobs for them. Truly, the most critical problem of our time is a deficiency of city jobs, not of surplus of farm production.



BOOK REVIEWS

"Man and the Grasses"

Robert Froman is the author of "Man and the Grasses" which Lippincott recently published.

Mr. Froman describes his book as the story of the domestication of cereal grains by man and vice versa. The author traces the history of grain from around 8000 B.C. when someone in the fertile land between the Tigris and Euphrates rivers discovered that wheat and other grains could be planted and grown. This discovery enabled man to forego his nomadic life and to settle down to farming. Villages, towns and cities followed.

Mr. Froman points out the parts that food from grasses have played in the civilization of man. He describes also the modern methods of baking and the various uses of grain for purposes other than food.

Chapter 5 on "The Nourishing Paste" starts out with the traditional tale of Marco Polo, and comments that the derivation of the word "macaroni" cannot be traced with certainty to its origin.

Pasta's Popularity

Mr. Froman observes that macaroni began growing toward its present popularity in the Western World during the Renaissance in Italy. The enormous increase of interest in the last few decades in this country is because of millions of Italians who came here in the early years of this century. Not so obvious was 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."

He concludes that "the manufacturing process is so simple that it has long since become highly automatic." Commenting on variety, he notes that more than three hundred different sizes and shapes have been counted, but that real

THE MACARONI JOURNAL

pasta lovers prefer to achieve variety by inventing new sauces, "and there probably now are nearly as many different sauces to be served over macaroni, spaghetti, or noodles as there are fillings for sandwiches."

Western Background

Robert Froman, Montana-born, grew up in Idaho. He has been an editorial and a ghost-writer and in 1945 became a free-lance. Previous books include "The Nerve of Some Animals" and "One Million Islands for Sale." He is also the author of more than three hundred magazine articles.

The author and his wife live in what he describes as a "rented ex-chicken-coop on a farm 30 miles up the Hudson River from New York."

"Flour Milling in America"

"Flour Milling in America" was written by Herman Steen, retired executive vice president of the Millers' National Federation. The book has been published by T. S. Denison & Company, Inc., Minneapolis.

Oldest Industry

Flour milling is the world's oldest industry. It is likewise America's oldest industry, and in colonial days it was one of the few manufacturing enterprises that was allowed to operate freely. During the early days of independence, milling became the first automated business.

George Washington was the foremost miller of his time. Others among the nation's great were millers — Thomas Jefferson and Abraham Lincoln, among many.

Nowadays there are only a few more than 200 flour mills in the United States that are of commercial consequence, but they turn out more product than did the 25,000 grist mills of pioneer days. Moreover, they make flour that feeds the hungry to the remotest parts of the earth.

"Flour Milling in America" is an account of milling progress that began to evolve many thousands of years before history was first recorded. It tells of Oliver Evans, the Delaware farm boy who paced the industrial revolution with his automated mill. It tells of the rise to world pre-eminence of Minneapolis. It tells of latter-day changes, one after another, that have taken place in this industry. It includes thumbnail sketches of 408 companies that have played a significant role in American flour milling.

Mid-Western Author

The author acquired an unexcelled fund of milling lore in a third of a century in the business of producing

flour, and this is the heart of the story that he tells here of this great American industry.

Herman Steen was born in Iowa, and was graduated by Iowa State University, Ames. After being engaged in writing and editing for a number of years, he joined the milling industry in 1929 as secretary of the Millers' National Federation, the trade association of the industry. Later he became executive vice president of the organization, retiring in 1959. He is currently writing a column for the Southwestern Miller.

During the third of a century that Steen has been associated intimately with the flour milling industry, he has absorbed milling lore and traditions. These he has supplemented with an exhaustive study of milling history, and the product is "Flour Milling in America," a history of the economic development of flour milling in the United States. The book has 455 pages and sells for \$7.50.

Mr. Steen is married, and has four children and seven grandchildren. He lives in Wheaton, Illinois, a suburb of Chicago.

"Modern Supermarket Operation"

Food retailing as it exists today is thoroughly explored in a new book, "Modern Supermarket Operation," written by Dr. Edward A. Brand and published by the Book Division of Fairchild Publications, Inc.

Quoting the author, "This book is concerned with the men and women in the supermarket organization. The purpose is to provide a clear picture of the services that supermarkets render to the customers, the type of store management required to render those services, the functions of the store man-



Spaghetti Ring with Ham Sauce, an artistic creation.

ager, the merchandising of the grocery, produce and meat departments."

The Author

Dr. Brand, professor of business administration, is assistant dean of the College of Business at Michigan State University. Previously he was director of the Curriculum in Food Distribution. His background includes work in grocery stores, meat markets, a meat packing plant, a canning plant and a hotel while attending college. After service with the Army Air Force, he spent a year with a green coffee broker. In 1948 he joined the faculty of Northeast Missouri State College and two years later left to take charge of the retailing section of the College of Business at Michigan State University.

The 38 chapters in Dr. Brand's book cover in detail every facet of supermarket management — from customer services to store organization, from sources of supply to pricing and promotion, from choosing a store site to day-to-day maintenance.

"Modern Supermarket Operation" contains vital information for everyone associated with or interested in food distribution and supermarket management — decision-making executives, merchandise managers, buyers, office management personnel, as well as trainees and students.

"The Art of Spaghetti Cookery"

Myra Waldo, widely traveled culinary author, has just added an excellent spaghetti cookbook to her collection now numbering well over a baker's dozen.

As the wife of a prominent New York attorney, Robert J. Schwartz, Mrs. Waldo is a charming hostess who delights in keying her gourmet dishes to the personalities and interests of her guests. She has been consultant for Manhattan's colorful Latin American restaurant, La Fonda del Sol, and is the food consultant of Pan American World Airways.

Mouth-watering pasta dishes from virtually every country are presented in her new book—baked lasagna with three cheeses from Italy, Saigon beef noodle soup, Hungarian-style macaroni—almost 400 exotic and familiar recipes. In addition, Miss Waldo includes valuable instructions on how to make perfect spaghetti every time and adds this modern, happy note: "Contrary to popular belief, spaghetti alone is not fattening in fact, it contains half the calories of a similar serving of roast chicken."

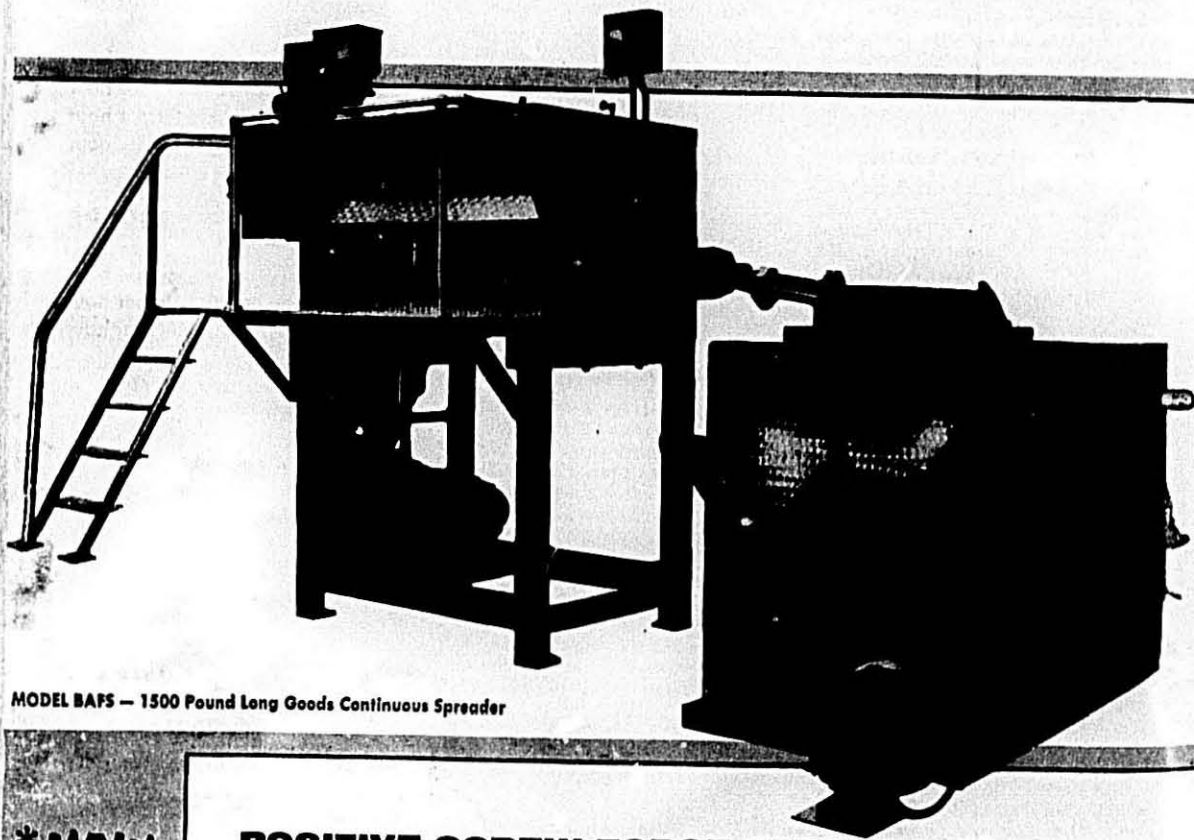
Doubleday & Company, Inc., of Garden City, New York, is the publisher, and the book sells for \$4.50.

Buon Appetito!

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A new concept of extruder construction utilizing tubular steel frames, eliminates those hard-to-clean areas. For the first time a completely sanitary extruder . . . for easier maintenance . . . increased production . . . highest quality. Be sure to check on these efficient space-saving machines.



MODEL BAFS — 1500 Pound Long Goods Continuous Spreader

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*NEW
*NEW**

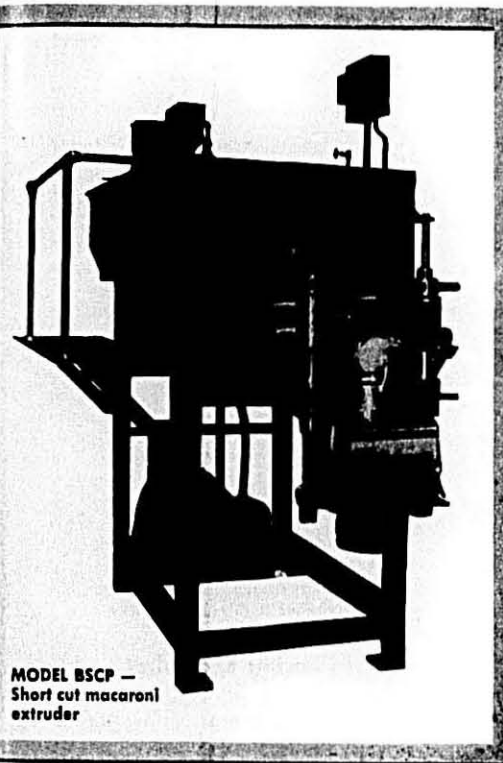
POSITIVE SCREW FORCE FEEDER improves quality and increases production of long goods, short goods and sheet forming continuous extruders.

3 STICK 1500 POUND LONG GOODS SPREADER increases production while occupying the same space as a 2 stick 1000 pound spreader.

1500 POUND EXTRUDERS AND DRYERS LINES now in operation in a number of macaroni-noodle plants, occupying slightly more space than 1000 pound lines.

THESE EXTRUDERS AND DRYERS ARE NOW GIVING EXCELLENT RESULTS THROUGHOUT THE UNITED STATES IN A NUMBER OF PLANTS.

*patent pending
**patented



MODEL BSCP — Short cut macaroni extruder

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SHORT CUT MACARONI EXTRUDERS

Model BSCP 1500 pounds capacity per hour
Model DSCP 1000 pounds capacity per hour
Model SACP 600 pounds capacity per hour
Model LACP 300 pounds capacity per hour

LONG MACARONI SPREADER EXTRUDERS

Model BAFS 1500 pounds capacity per hour
Model DAFS 1000 pounds capacity per hour
Model SAFS 600 pounds capacity per hour

COMBINATION EXTRUDERS

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Three Way Combination

QUALITY..... A controlled dough as soft as desired to enhance texture and appearance.

PRODUCTION... Positive screw feed without any possibility of webbing makes for positive screw delivery for production beyond rated capacities.

CONTROLS..... So fine—so positive that presses run indefinitely without adjustments.

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SINCE 1909

Government to Buy Eggs

Shell eggs, which in February had been declining in price from the high levels reached in late January, suddenly firmed in mid-month when the government announced a new support program.

Secretary of Agriculture Orville L. Freeman stated on February 19 that the Department would soon make available whole egg solids to families receiving foods under the Direct Food Distribution Program. Purchase of egg solids are to be made under section 32 funds.

Said he, "This action is being taken in response to President Johnson's over-all objective of easing the impact of poverty among needy people. The recent substantial decline in egg prices to producers makes a highly nutritious protein food readily available for supplementing the diets of hungry people. A second consideration is that the removal of surplus egg supplies also will stabilize prices to producers during the coming peak season of production."

At the present time, over 5,000,000 persons are being provided with surplus foods in 48 states and 1500 counties. Purchases for needy persons will be whole egg solids, gas packed in 13 ounce tins. First bids were to be let in mid-March. Last year purchases from April through July totaled 8,397,000 pounds costing some \$8,782,000 or an average \$1.045 per pound.

Firmer Prices Expected

The government program is expected to draw eggs from the midwest where drying plants are operated. This will keep the price of eggs firm to breakers even if it does not have a strong effect on the graded egg market.

Current receipts of shell eggs in Chicago dropped about a dime from mid-January to the end of February; from a range of 37¢-38.5¢ to 27¢-30.5¢. Frozen whole eggs at a high of 29.5¢ in January were as low as 25.25¢ in February. A

United States Liquid Egg Production and Disposition, Crop Reporting Board, Washington, D.C.

(Figures in 1,000 pounds)

1963	Whole	Albumen	Yolk	For Freezing	For Drying	Immediate Use	Totals
January	11,654	8,087	5,945	16,045	5,892	3,749	25,686
February	14,103	8,902	6,091	18,743	6,235	4,118	29,096
March	22,485	17,355	12,833	34,376	12,901	5,396	52,673
April	32,745	26,537	20,329	56,794	15,357	7,480	79,611
May	45,735	29,807	21,829	61,403	28,796	7,272	97,471
June	43,471	23,011	17,663	50,729	26,595	6,821	84,145
July	28,723	18,504	13,065	34,260	21,134	4,898	60,292
August	20,628	15,065	10,724	25,350	16,921	4,148	46,417
September	12,837	10,192	7,689	18,129	8,624	3,965	30,718
October	11,542	9,649	7,480	15,827	8,658	4,168	28,651
November	10,839	8,030	5,990	15,156	7,287	2,416	24,859
December	10,867	9,883	6,649	15,979	7,978	3,442	27,399
Total	265,629	185,122	136,267	362,791	166,378	57,849	587,018

couple of cents were shaved on egg whites, with the January high of 17¢. Dried whole eggs were steady on the bottom of the range at \$1.12 per pound. Top figure dropped from \$1.19 to \$1.17. Dried yolks were cheaper at \$1.09 to \$1.14 at the end of February.

Holdings Decrease

Production of liquid egg and liquid egg products (ingredients added) during January 1964 was 27,955,000 pounds—up nine per cent from January 1963 according to the Crop Reporting Board.

Liquid egg used for immediate consumption was 2,841,000 pounds—down 24 per cent from the 3,749,000 pounds used in January 1963. Liquid frozen was 17,790,000 pounds, up 11 per cent from January a year earlier. Storage holdings at the end of January 1964 were 44,728,000 pounds compared with 47,051,000 pounds in storage a year earlier. Holdings decreased 11 million pounds during January compared with 14 million in January 1963. Quantities of liquid egg used for drying were 7,324,000 pounds in January 1964 and 5,892,000 pounds in January 1963.

Solids Production Up

Egg solids production during January was 1,888,000 pounds of which 140,000 pounds were whole egg solids, 542,000

pounds albumen solids, 511,000 pounds yolk solids and 695,000 pounds other solids. In January 1963 production totaled 1,465,000 pounds, consisting of 294,000 pounds of whole egg solids, 446,000 pounds of albumen solids, 559,000 pounds of yolk solids and 166,000 pounds of other solids. The production of "other" egg solids is reported for the first time in this report. "Other" solids are mainly whole, yolk or albumen solids with ingredients added. The production of these "other" solids has grown rapidly during the past several years and now constitutes an important part of all egg solids production. The production of "other" egg solids in 1962 was included under "whole" egg solids.

Free Flowing Egg Solids

Late in 1963, the Federal Food and Drug Administration approved the use of an anti-caking agent in dried yolk and dried whole egg. This led to the development of two new egg products which are of major importance to egg noodle manufacturers: free flowing yolk solids and free flowing whole egg solids, Henningsen Foods, Inc. reports.

Free flowing yolk and whole egg are Standard of Identity products and can be used in egg noodles without any

(Continued on Page 44)

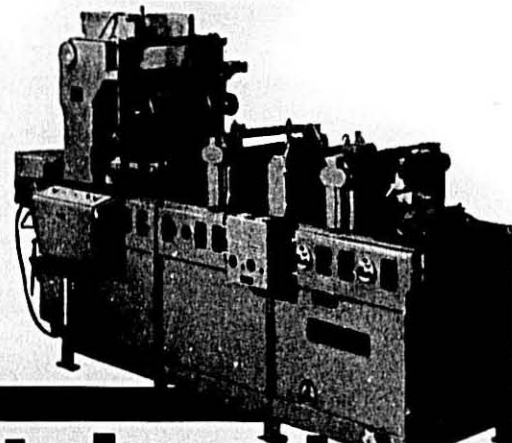
Dried Egg Production in United States, By Months, 1962-63

(Figures in 1,000 pounds)

Month	1962				1963*				Total
	Whole	Albumen	Yolk	Total	Whole	Albumen	Yolk	Other**	
January	727	508	852	2,085	294	446	559	166	1,465
February	911	499	941	2,351	352	423	450	553	1,778
March	1,856	1,142	1,906	4,704	575	847	1,166	714	3,302
April	3,539	986	1,621	6,146	861	999	1,493	623	3,976
May	5,253	1,204	1,311	7,768	1,166	1,584	1,877	1,187	7,675
June	5,318	1,276	1,654	8,248	3,697	955	1,380	936	6,968
July	4,047	1,012	1,411	6,470	2,492	802	1,416	1,041	5,751
August	2,363	808	1,446	4,617	837	1,312	1,117	1,117	4,688
September	1,006	686	880	2,572	250	526	782	1,000	2,548
October	655	575	938	2,168	201	532	1,107	700	2,540
November	590	807	574	1,971	191	481	807	545	2,024
December	657	530	453	1,640	117	637	606	635	1,995
Total	26,722	10,031	13,985	50,738	14,170	8,651	12,672	9,217	44,710

* Revised.
** Data not available prior to 1963. Production of "Other" in 1962 included in whole egg solids production. "Other" egg solids are mainly whole, yolk or albumen solids with ingredients added.

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Simple, compact, automatic: The Triangle-Gaubert. A new concept in long goods weighing and wrapping. New, but proven in many installations. And just look at the package it prepares... strong, tight, right for increased profit. Delivers 6-ounce to 3-pound packages at speeds up to 30 per minute. The machine is interchangeable—uses poly and cellophane with equal efficiency. Change-over for different weights takes only ten minutes.

One secret in the Triangle-Gaubert success: a unique patented weigher. It has only one scale. Bulk is premeasured, discharged to the weigh bucket, then dribble-fed to the correct weight. This basic method of premeasuring the bulk allows one scale to deliver up to 30 accurate discharges per minute—it couldn't be simpler.

Another plus: Triangle makes the installation, and service is always as near as your phone. Offices from coast to coast. For full details write: Triangle Package Machinery Company, 6654 West Diversey Avenue, Chicago, Illinois.

Automatic weighing for cartoning
New Triangle-Gaubert automatic weighers are easily synchronized with both vertical and horizontal cartoning machines for weighing out long goods. Multiple scale installations are made to meet packaging speed demands of your existing cartoning machines. Automatic feed for multiple scale installations is available.

High-Speed Bag Makers
For packaging noodles and short cut macaroni items, Triangle high-speed form, fill, and seal machines are second to none. And utilizing Triangle Elec-Tri-Pak scales or volumetric fillers assures you of the utmost in filling accuracy at all times. Ask for bulletin.

Superior Performance Through Design Simplicity



Free Flowing Egg Solids—

(Continued from Page 42)

special label declarations. They have many advantages over other forms of whole egg and yolk and it is expected that these products will help accelerate the already rapid changeover from frozen egg products to dried egg products in the use of noodles.

Yolks Are Economical

At the present time, egg yolk is cheaper than whole egg on an egg solids basis, and for that reason it is expected that most noodle manufacturers will use egg yolk during the year 1964. Free flowing yolk contains exactly as much yolk solids pound for pound as does standard yolk, as the moisture in standard yolk is replaced by the anti-caking agent, and the egg solid content therefore remains the same. For that reason, the use of free flowing egg yolk will not entail any changes in the preparation of batches, as the noodle manufacturer will simply replace the standard yolk with free flowing yolk without loss of egg solids. Similarly, color is not affected by use of the anti-caking agent.

Advantages

The advantages of free flowing yolk and whole egg over other forms of dried egg products is that they will pour easily and cannot lump. They disperse readily in the batch and rehydrate with no difficulty. With the other advantages of dried egg products over frozen eggs, the added advantage of the free flowing products over standard egg products should accelerate the move towards the use of dried eggs. Among the advantages of egg solids over frozen eggs is the elimination of freezer space, and the cost of dried storage is considerably lower than freezer storage. There is no storing of water. There is no need to thaw out dried eggs, thereby eliminating a time-consuming and messy job. There is also the advantage of greater flexibility in being able to use dried eggs whenever you want them, and production plans can be changed on a moment's notice.

Henningsen calculates that there is a loss of about two per cent of product in using frozen eggs, which clings to the can when dumped. Used can disposal is also a problem which is eliminated when using egg solids. There is no necessity for scraping the thawed eggs from the cans, and the scraping process consumes time and labor and constitutes a source of possible contamination.

They find that the use of egg solids shows greater uniformity and has excellent storage characteristics. They are

bacteriologically controlled to levels that are much lower than are normally found in thawed frozen products and can be offered on a guaranteed Salmonella-free basis. With the U. S. government showing more and more interest in Salmonella in egg noodles, this has accounted for a number of conversions.

Special Pack

Henningsen has developed a special pack for noodle manufacturers which contains 53 pounds of dried egg yolk or whole egg in a polyethylene-lined box. This pack, which is available at the same price as the standard drum pack, has been particularly popular with noodle manufacturers because it eliminates scaling and weighing for batch size, and provides the precise poundage necessary to add to 1,000 pounds of durum flour or semolina.

Henningsen representatives will arrange to send samples and further information on these products on request.

They have prepared a number of bulletins detailing the conversion of frozen to dried eggs utilizing your existing equipment. These include details on storage rates, testing methods for color literature on the use of dry blending analysis and solids analysis, as well as solids on an automatic basis.

New Skinner Package

Skinner Macaroni Co. of Omaha, Nebraska has just introduced its eight ounce lasagne in a four-color lithographed carton.

Marking the fact that this is the first

time it has used a carton for this product, Skinner is aggressively promoting it in its trading area.

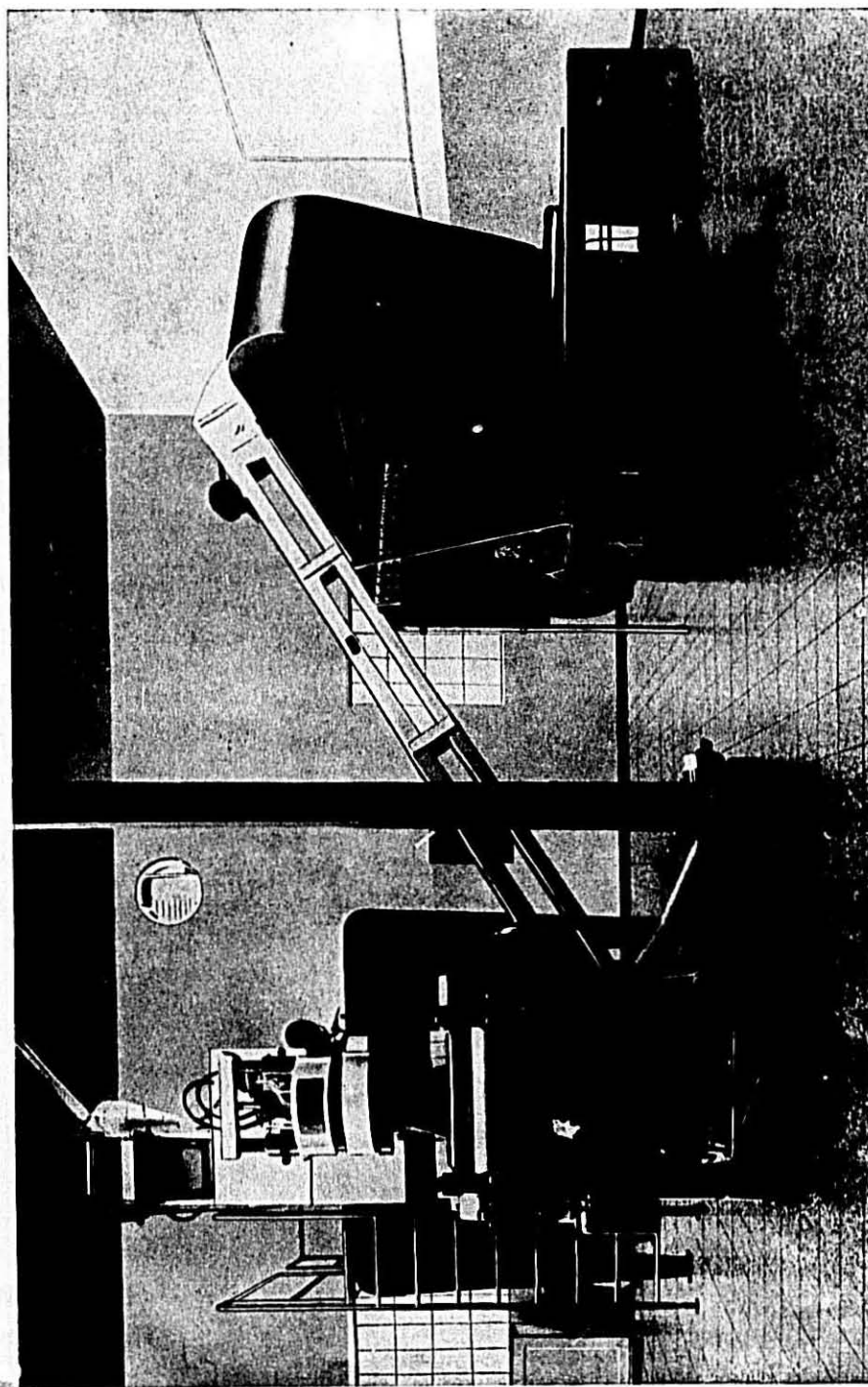
Skinner accepted the development of the redesign program after merchandising analyses with its packaging supplier, Rossotti Lithograph Corp. Company and supplier recognized that this product needed better protection against breakage as well as the sales impetus which color and appetite appeal alone could give it to increase its per capita consumption.

The design takes advantage of the established Skinner logotype utilizing the serrated red plaque as a background for the corporate signature. Because of its franchise value, the logotype appears on all of the panels of the carton. A visual on the main panel of prepared lasagne enhances taste tempting consumer appeal.

Creates Interest

Interest in the new package has been brisk, according to Lloyd E. Skinner, president, and H. Geddes Stanway, executive vice-president. Retailers favor the carton especially because of its easy stackability, protective features and stability. This has been reflected in better distribution, lower handling costs and less returns of damaged merchandise.

In turn, the illustration of the end use of the product, the quality image given it by the carton, the service suggestions for new and traditional style lasagne recipes, and the absence of obviously broken pieces have helped to boost consumer interest as well.



LIHOTZKY AKTIVA 350 Extruder with a Bolognese machine, inclined conveyor, pre-drier for short-cut goods, and automatic rack-sprinkling unit. LIHOTZKY PRESSES since 1908 are unbeaten for strong construction, efficiency and quality.

For information write to EMIL LIHOTZKY MASCHINENFABRIK, 835 Plattling, Germany, Postfach 25.

Long Goods Packaging Equipment

The German equipment manufacturer Fr. Hesser Maschinenfabrik A. G. at Stuttgart-Bad Cannstatt reports that a new high speed packaging machine for long goods is now available. Machine Type CU 3 packages macaroni and spaghetti into single carton units.

This machine feeds set-up cartons which are glued at the long-seam. It opens the cartons, fills them with spaghetti or macaroni and then closes both ends. The filling operation is performed in a fully automatic way. The complete line operates at a speed of up to 180 packages per minute with only two filling machines. The same machine is also available with one filling machine operating at a speed of about 90 packages per minute.

It is well known that many years' efforts have gone into developing an accurate, fully automatic filling machine for long goods. The Hesser filling machine type Hessotron NT with electronic weigher claims high speed up to 90 deposits per minute with extremely accurate weights and dependability.

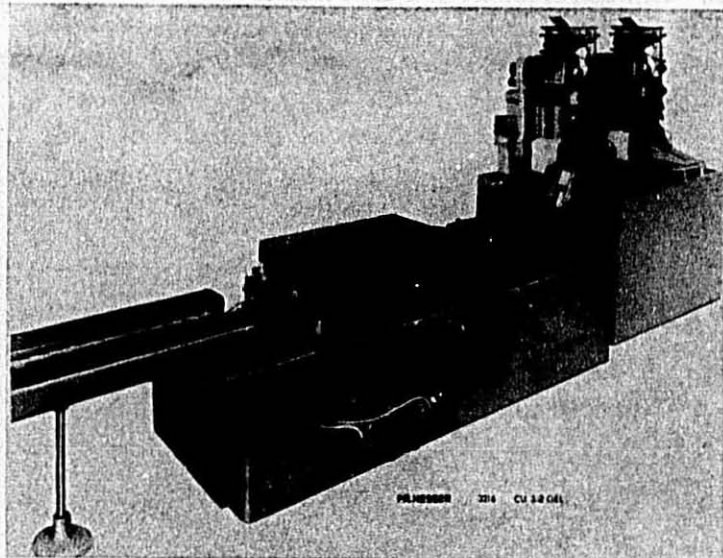
Heat Sealed Packages

A second machine heat-seals cellulose film. Automatic packaging machine type WMC packages macaroni or spaghetti in the following manner: the machine takes the cellulose film from a pre-printed reel with the cut-off register by means of a photo-electric eye. The film is cut to the correct length and then put into the buckets of a transporting chain which conveys the cut-off cellophane label to the filling station. There the macaroni or spaghetti is filled automatically by the electronic filling machine Messatron NT. On the following stations the long-seam is folded and heat-sealed and then the ends are also closed by heat-sealing. The tightly closed packages are discharged onto a conveyor belt. This machine which operates fully automatically throughout runs at a speed of about 70 packages per minute.

Monark on the Move

Monark Egg Corporation of Kansas City is keeping up-to-the-minute with the very latest innovations and newest, most modern equipment in the egg breaking industry.

These modern facilities and continued research by Monark, combined with service and constructive new ideas, assure customers of highest quality possible, most competitive prices, and fastest and best service anywhere today. Our claim: Product is now instantly filled after breaking to enhance



Hesser high-speed automatic long goods packer CU3.

quality, pasteurized if customer desires, and expeditiously frozen or dried as the case may be.

Today a greater number of noodle manufacturers are switching to dried egg solids, whole and yolk, but dark color frozen yolk is still in good demand. M. E. Krigel, vice president and sales manager of Monark, states that the major part of the buying still takes place during the spring months, to be certain of dark color, since year around feeding programs do not produce sufficient dark yolks to supply the noodle industry.

Cold Storage Holdings

U. S. cold storage holdings as of January 1, 1964, showed shell eggs at 67,000 cases, about half the quantity of the previous year and five-year average. Frozen stocks were below average and demand was brisk for egg solids stocks.



Type WMC for heatsealing cellophane packages.

Ballas Accolade

Ballas Egg Products Corporation of Zanesville, Ohio was recently awarded a special plaque by their local chamber of commerce as a recognition award to manufacturers.

It read: "This award is given in special recognition of distinguished service to the Zanesville Area. Your enthusiastic and cooperative contribution to economic, civic, cultural and humanitarian projects has inspired the individual lives of our citizens, and stimulated increased pride in our community. We of the Zanesville Area Chamber of Commerce take pride in saluting you on the occasion of our 1964 Annual Meetings."

Benincasa Expands

A new building with modern technique egg-drying equipment has just been completed by the V. Jas. Benincasa Company at their Farina, Illinois location.

These facilities will now give the firm a more rounded operation, enabling them to better serve the needs of the trade. Up to date pasteurizing equipment and sanitary methods of handling eggs in the Benincasa plants make it possible to meet the most critical customer specifications.

Seven more automatic egg breaking machines have been added to the fifteen machines already in use, making the Benincasa operations one of the largest in the industry, with plants being located in the rich, natural dark color area to especially serve the noodle trade.

Pan for Gold

at the Broadmoor Bonanza, Colorado Springs,

June 21-24, 60th Annual Meeting

National Macaroni Manufacturers Association

Program plans in next month's issue

along with the editorial feature

"Who Profits From Profits?"

Twelve monthly numbers \$5; add \$1.50 for foreign postage.

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ABOUT PACKAGING

Hayssen Pouch Packaging

A new smaller size, smaller cost, vertical form-fill-seal machine that pouch packages at 200 per minute has been added to the Hayssen Manufacturing Company's line of automatic packaging equipment. Since it differs from the firm's well known Expand-O-Matic only in its reduced size, price and bag size range, it's aptly named the Expandette.

Hayssen flatly states that the only performance difference between their two machines is the size of bags they can run. The Expandette has the same output speeds, sealing versatility, product feeds, expansion feature and dependability as the big machine. However, the maximum size bag a two tube model can run at 200 per minute is nine inches by four and three-eighths inches. There is also a single tube, non-expandable version which runs bags up to nine inches by nine inches at 100 per minute.

There are several noticeable differences between the Expandette and other "small" bagging machines. It does not restrict sealing to just cellophane type films but handles polyethylene, plastics, foils, and all films. Instead of slitting one roll, it has separate supply rolls for each tube. Each roll is equipped with a power unwind assist to get higher speeds without putting strain on the film.

Independent Register

When using printed film the Expandette independently registers the film on each tube. This is done with a split sealing die in the single jaw assembly. When the electric eye on each tube indicates the film is in register, the corresponding sealing die retracts independent of the other tube.

The Expandette has the same economical expansion of output feature that Hayssen introduced with the Expand-O-Matic. If 100 per minute output meets present needs, only one tube is required. For expansion to 200 per minute output, a second tube assembly is available in the field.

Hayssen builds and equips the Expandette with their own scale, volumetric, auger and pump feeding systems. Sealing jaws are Hayssen's standard "hercstat" resistance plastic and supported by a "rim-seal" impulse system switching for automatic operation.

Information on the Expandette can be obtained from the Hayssen Manufacturing Company of 1000 Main Street, Waukegan, Illinois.



Hayssen Expandette.

New Clo-Seal Carton

A new, patented carton construction said to minimize sifting and insect infestation problems has just been introduced by Rossotti Lithograph Corp., packaging producers of North Bergen, New Jersey.

The construction will be of particular interest to the macaroni industry as well as to manufacturers of fine granular products such as soap powder, grass seed, bird seed, flour, cornmeal, buckwheat groats, starch, pancake mixes, matzo meal, cracker meal, bread crumbs, potato starch, and whatever other types of products have an inherent siftability or infestation nuisance.

Called, "Rossotti Clo-Seal®," the construction will run on most packaging equipment with very little adjustment, the company's research department states.

Construction Breakthrough

"We think Rossotti Clo-Seal® is a breakthrough in carton constructions," said Charles C. Rossotti, Executive Vice President. "It seems to solve once and for all the nuisance of sifting and infestation. We've tested it with talcum powder and drew an absolute victory on sifting—no problem at all with this usually troublesome material. So far as infestation is concerned, we've obtained documented results which indicate an overwhelming success in eliminating infestation through insect migration.

"For a macaroni manufacturer," Mr. Rossotti continued, "Rossotti Clo-Seal® can mean a reduction in the problem of returned merchandise, loss of good will and waste. It can help to add up to a better profit picture at the end of the

year. For a retailer, it can mean lower labor costs in stocking and cleaning up after spilled merchandise."

There are several other marketing advantages to the construction, said Mr. Rossotti. For one thing, he advised, it holds the carton squarely so that it cannot go on a diagonal. He observed that this can be extremely important on the packaging line to minimize filling problems. In addition, he said, the construction gives a stronger and firmer end without buckling of the top or bottom and without bowing out of the sides when the filled carton is laid on its side.

Interest in the construction has been brisk, company spokesmen said, since its recent introduction.

Rossotti Offers Service

Rossotti Lithograph Corporation of North Bergen, New Jersey has announced new developments in construction in their new Clo-Seal carton and new merchandising concepts in their ad-pack and cu-pack. By keeping up on the latest developments in macaroni manufacturing and researching easier and better ways to package, Rossotti offers customized service.

Sales offices are located in principal cities, and a group of southern offices will open soon.

Alfred Rossotti is president of the corporation, while Charles C. Rossotti is executive vice president and general sales manager.

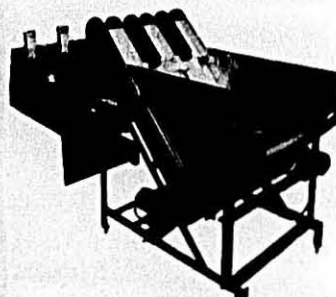
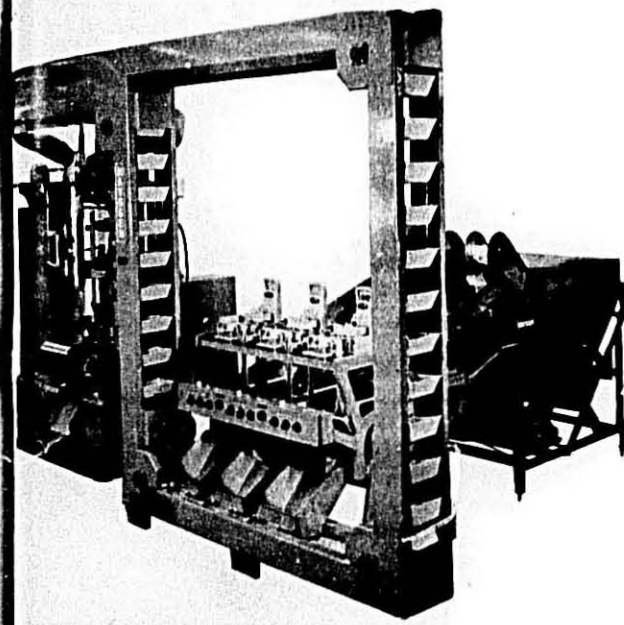
Henningsen Sales Executives

Henningsen Foods, Inc. of New York City have listed their sales representatives on pages 62 and 63. In the home office John T. Henningsen is executive vice president of the Sales Department. Roy N. Nevans is vice president for sales; Robert M. Ginnane, assistant sales manager; Ronald H. Banz, area sales representative. Dr. H. M. Slosberg is the technical director in charge of research and production. Dr. Dwight Bergquist is director of the central laboratories in Springfield, Missouri.

In Memoriam

Ennis P. Whitley of Setauket, Long Island, New York, passed away on February 14 after a brief illness. He was seventy years old.

He was a former vice president for distribution of the Dobeckmun Company, a division of the Dow Chemical Company for nine and one half years. He retired after sixteen years of service in October, 1960. He was a popular speaker at macaroni conventions.



New scale feed with individual pin-belt conveyors developed by Hayssen

PACKAGING

NEWS

NOODLES AND MACARONI

NEW SYSTEM PACKAGES NOODLES AT SPEEDS UP TO 60 BAGS PER MINUTE

The development of a new, high speed packaging system for macaroni manufacturers has been announced by the Hayssen Manufacturing Company. A special scale feed, that incorporates individual pin-belt conveyors, and the new EXPAND-O-MATIC form-fill-seal packaging machine make up the new system. Hayssen claims this combination solves the industry's long standing problem of slow packaging speeds.

Noodles are tough to feed

The macaroni industry has never been able to utilize the full potential output of automatic packaging equipment when running fine, medium and broad noodles. These products could just not be accurately fed to a packaging machine at high speeds. They tend to clump and bunch together. They would flood or over-feed one scale head while starving another.

Standard feeds aren't the answer

Hayssen engineers say that nobody really faced up to the problem. Everybody, including Hayssen, tried to feed noodles with some sort of modification of a standard scale feed. So the Hayssen people set to work to develop a feed just for noodles.

New scale feed developed

They knew higher speeds and accuracies would be possible only if they could provide better control of the flow of noodles through the scale system. And that's just what they did. They did it by designing a scale feed with two major differences in principle of operation.

First, they separated the flow of noodles to each scale head starting from the time they went into a large floor hopper right up to the instant they were weighed.

Second, they developed devices that measured the amount of product in each separate pan feeding each scale head. These devices operate to automatically control the flow of noodles — starting it as noodles move forward and out of a pan . . . stopping it as noodles build up.

Combined with EXPAND-O-MATIC

Not many months before this, Hayssen had introduced the EXPAND-O-MATIC, a new form-fill-seal packaging machine that had the speed and versatility needed to match this new feed. The two new machines were combined and tested. They reported even the toughest to handle noodles run consistently at speeds up to 60 bags per minute. A few installations are already running in plants, and several more are on the way.

HERE'S HOW THIS NEW FEED DELIVERS A CONTINUOUS, EVEN FLOW OF NOODLES AT HIGHER SPEEDS

Hayssen's new scale feed starts with a large floor mounted hopper to which the bulk noodles are delivered. Mounted in this common hopper are a number of separate pin-belt conveyors. Each of these conveyors feeds noodles to a series of four feed pans which in turn move the noodles ahead to be weighed on one scale head. A feed system with three scale heads or weighing devices will have three separate conveyors and three separate series of feed pans.

Noodle flow is separated

This separation of the noodles before they even get to the feed pans overcomes the number one cause of slow speed and inaccuracies. No longer can you get too many noodles piling up in the pans feeding one scale head, while right next to it a scale head is starving for product.

Noodle flow is controlled

However, separation alone was not the final answer. You still could have too much or too little product flowing through all of the separate systems. So Hayssen built into each conveyor-feed pan combination a series of devices that automatically control the flow of noodles. These devices measure the amount of product in each feed pan. If the noodles are moving ahead smoothly, they call for more product. If noodles start to build up, they stop the flow of product until it is needed again.

HAYSSE
AUTOMATIC PACKAGING EQUIPMENT

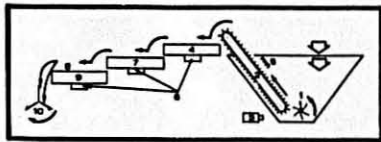
Aseco's Trace-A-Veyor

Each pan controls its own feed

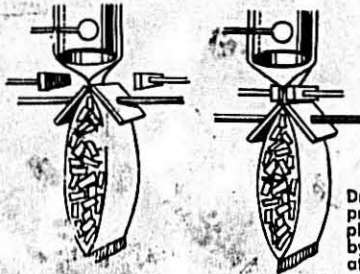
Actual control is accomplished by automatically engaging or disengaging the drive on the pin-belt conveyor and the vibrator installed under each feed pan. The operation of the vibrator on each feed pan is controlled by the product level measuring device in the pan just ahead of it . . . In other words, the pan it feeds. The drive on the conveyor is controlled by the device in the pan it feeds into.

High speed and accuracy

With a separate conveyor and a separate series of feed pans feeding each scale head, and with the flow through each of these systems individually controlled, Hayssen engineers knew they could now run higher speeds and accuracies. Tests and actual production runs of noodles have proved they were more than right to right, that Hayssen is the only manufacturer guaranteeing weighing accuracy on 100% of bags filled.



- Continuously rotating spoke arms in bottom of hopper (1) separate and lift noodles on to the pin belt conveyor (2).
- Conveyor's drive motor (3) is engaged and product delivered upon signal from product measuring device in high level feed pan (4). When device indicates "full" condition, drive is disengaged.
- While conveyor angle of operation acts to string-out and separate the noodles, special overhead rakes (5) are installed to break up and stop large clumps so they can't get into the feed pan.
- Vibrators (6) move noodles forward in pans. Their operation is also controlled by product measuring devices located in the rear (7), bulk (8) and dribble (9) feed pans.
- For speed, both bulk and dribble feed the weight bucket (10) to a point just short of final weight. For accuracy, special devices instantly weigh the final pieces added by the dribble to overcome errors of estimation.



HAYSEN SAYS NEW PRODUCT SETTLERS SAVE FILM AND GIVE BETTER END SEALS

Drawing shows how product settlers operate to provide tighter bags with no product in the end seal area to cause leakage. At top of jaw stroke, settler plates close and mechanically strip noodles down into formed bag being held by auxiliary brake. Plates remain closed during the sealing cycle. They open at bottom of jaw's stroke to release sealed bag.

HAYSEN MANUFACTURING COMPANY SHEBOYGAN, WISCONSIN

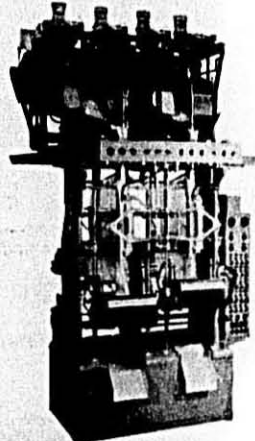
AUTOMATIC PACKAGING EQUIPMENT

SEE COLOR FILM OF NEW SYSTEM

Hayssen Representatives have available a full color film of this new system in operation. Just call your nearest Hayssen office to get it (listed in the Yellow Pages in many cities). Or write us here in Sheboygan, we'll get it to you pronto.

EXPAND-O-MATIC® for automatic bag packaging of both noodles and macaroni

A twin tube EXPAND-O-MATIC packages noodles at speeds up to 60 bags per minute . . . equipped to feed macaroni, it will deliver up to 120 bags per minute. For maximum versatility, several twin tube machines have been equipped to feed and package noodles on one tube and macaroni on the other.



Expand output as needed

The equipment's unique expandable feature makes good business sense to many macaroni manufacturers. They can reduce investment by ordering a single tube model which will handle their present production. This single tube EXPAND-O-MATIC has the same frame as a twin tube model, and the second tube can be installed at any time right in the owner's plant. Packaging capacity can be economically doubled when needed.

Saves packaging material

Hayssen's exclusive "trim-seal" for poly and their new product settlers combine to save up to 10% on film used for a bag. Hayssen seals poly type films right at the end with no wasted film after the seal. Special product settlers work to shorten bag length and provide better seals by gently settling bulky products like noodles before end seals are made.

Seals all films

The EXPAND-O-MATIC has quickly interchangeable sealing systems. Impulse for poly and other unsupported films, resistance for cellophane type materials. It can be equipped with one or both systems or the second system can be installed in owner's plant at a later date.

Any size bag

There are over 30 different size forming tubes for the machine that are standard Hayssen equipment. Special sizes are built to handle extraordinary size requirements.

In keeping with the policy of "lower costs with increased efficiency through machines and systems," Aseco Corporation has recently announced their "Trace-A-Veyor" which they claim to be another first for the macaroni industry.

According to "Steve" D. D. Brodte, director of sales of Aseco, the Trace-A-Veyor was developed to meet a specific need, this need being to automatically take up the 'surge' between dryer discharge and packaging.

Surge Changes Constantly

This surge is a constantly changing thing; therefore it is not possible to directly time a dryer to a packaging line. Surge conditions will vary in direct proportion to the pounds per hour delivered from the dryers and the pounds per hour required by packaging. When packing five to eight ounce units there could be overproduction, while when packing a one pound or over unit there could be underproduction. In addition there is the normal surge that occurs each time a packaging machine is halted, be it only momentarily or for a prolonged period, plus the usual stops for rest or lunch breaks. Also in some plants it becomes necessary to store back for three hours or more in order to have sufficient product ahead of dryer output to maintain the maximum production of the packaging lines.

Due to these "beyond control" conditions, it becomes necessary to have a man in constant attendance, observing these irregularities when they happen and either storing the surge in totes or boxes, palletizing them and moving the pallets out of the area or bringing the pallets back and emptying the product back into the packaging machine hopper.

This double handling has several disadvantages:

- Spillage and breakage—both taking out and emptying back;
- Totes or boxes, empty or full occupy valuable floor space;
- Direct labor cost plus the usual human element;
- Loss of quality control due to excessive breakage;
- Planning and scheduling of production.

The Trace-A-Veyor is designed to do the thinking, to anticipate the surges, to provide storage for the surplus, or to re-introduce the stored back surplus as it is demanded by packaging. It does all this automatically without breakage, spillage or flooding and with no attendant required. In addition, Trace-A-Veyor provides a controlled even flow of product into the packaging machine

hopper, which assures a better uniformity of weights.

In the Middle

The Trace-A-Veyor is in the middle between the dryer discharge and the packing machine hopper. It is both a surge and storage—moving conveyor, that senses every condition. Product such as noodles, rigatoni, large shells, and the like, that will not flow through any stationary hopper can be handled in a Trace-A-Veyor.

Trace-A-Veyor is made up of two units:

- (1) A tracer conveyor—a travelling conveyor with a sensing probe and leveler mounted on the discharge end and a small receiving hopper to pick up the product from the dryer.
- (2) A moving storage conveyor unit. This is the surge and storage unit with the Aseco draper belt being the front wall. This patented draper is designed to control the flow from the moving storage unit without breakage or bridging of product. The movement of this unit is controlled by the packaging machine hopper. The travelling tracer conveyor is mounted on tracks above this unit.

Fully Automatic

The sequence of operation has the Trace-A-Veyor receiving the product

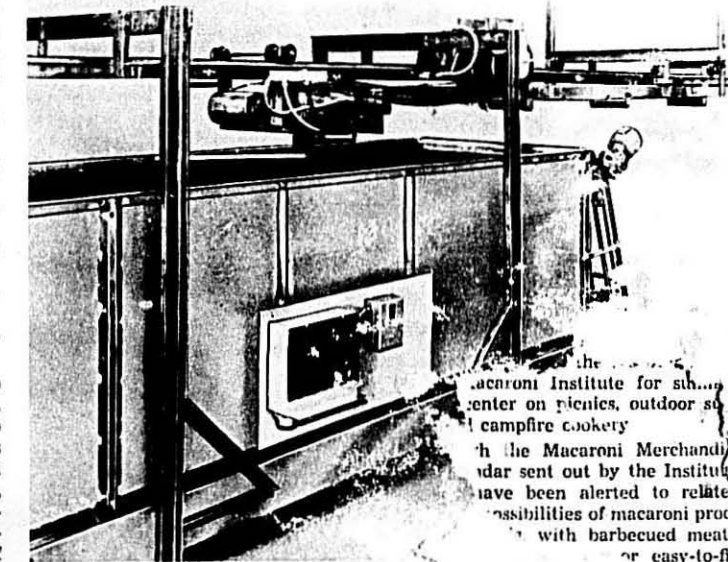
directly from the dryer always depositing it behind the existing product in the moving storage unit. The probe or sensing device on the travelling tracer conveyor will always follow the movement of product in the moving storage unit. Thus when packaging is halted, product from the dryer continues to fill the moving storage unit from front to rear. However, as product is being discharged from the moving storage unit faster than it is being delivered, the travelling tracer conveyor will follow the load, discharging directly behind the trailing end of product in the moving storage unit—a fully automatic operation.

The size of a Trace-A-Veyor is in direct ratio to the maximum poundage of storage required by the individual plant.

No Floor Space

According to Aseco, Trace-A-Veyor does not take floor space; it actually occupies less floor area than is needed for totes or boxes. It is a planned system, tailored to the physical arrangement of the individual plant. Trace-A-Veyors can be floor or ceiling mounted, either in line or at 90 degrees to the dryers.

It is pointed out that this system should not be confused with the conventional Aseco Stor-A-Veyor systems which are made up of multiple of moving storage units to handle 24 hour production while packaging off in eight hours.



TRACE

Macaroni Products Stretch Food Dollar

from The American Grocer Magazine



Here are just a few of the many varieties of macaroni sizes and shapes on the market. Reading clockwise: contelli, medium egg noodles, lasagna, manicotti, folded fine egg noodles, margherita, farfalle, fancy egg rings, rigatoni, spaghetti, egg bows, curly lasagna, elbow macaroni, occhi di lupo and cresio di gallo.

MACARONI products is the general term used to include such foods as macaroni, spaghetti, and noodles. These foods provide food energy at low cost. Since we seldom serve them alone, they carry nutrients provided by other foods with which they are combined. Macaroni foods team well with meat, fish, shellfish, poultry, eggs, cheese, and vegetables. They serve to extend more expensive foods and so help stretch the food dollar.

About 150 varieties of macaroni products are made, and they differ in size or shape. At one metropolitan supermarket recently, 47 different varieties of macaroni, spaghetti, and noodles were counted.

Federal Standards

Definitions and standards of identity exist for macaroni and noodle products under the Federal Food, Drug, and Cosmetic Act. Macaroni is hollow and is defined as a tube-shaped macaroni product, from 2/11 to 0.27 inch in diameter. Spaghetti is solid and may be tube-shaped or coiled-shaped and from 0.06 to 0.11 inch in diameter, according to the legal definition.

You can give familiar dishes a new look merely by using some of the unusual macaroni product shapes. For example, serve fusilli (spaghetti twists) or linguine (flat spaghetti) with tomato sauce instead of ordinary spaghetti.

Macaroni and spaghetti are made from a mixture of flour and water. Best quality products are made from semolina, a coarse grind of flour made from the heart of durum wheat. Durum wheat is relatively high in protein and low in starch; semolina has an amber yellow color to the products made from it.

Macaroni and spaghetti may also include durum flour (the finely ground portion resulting from the manufacture of semolina) or farina (a coarse granulation of any wheat other than durum). When shortages of the durum wheat crop occur, more of these special flour types are used in the production of macaroni products.

Noodles Have Egg

Noodles are made from the same mixture of semolina or durum wheat flour and water as macaroni products, but in addition they must contain egg. At least 5.5 per cent by weight of the total solids of noodles must be added egg solids, according to the standards of identity for noodle products under the Federal Food, Drug, and Cosmetic Act. Egg solids may be added in fresh, powdered, or frozen form.

Vegetables, such as tomatoes, artichokes, beets, carrots, parsley, or spinach, may be added to macaroni products. The vegetable used may be fresh, canned, dried, or in the form of puree or paste. When added, at least three per cent by weight of the finished product must be vegetable, according to the standard of identity. The name of the product becomes the name of the vegetable followed by the type of macaroni product, such as spinach egg noodles.

Large Production

The United States leads in the world production of macaroni products because North and South Dakota, Minnesota, and Montana have ideal soil and weather conditions for raising hard durum wheat. In 1958 semolina and durum flour accounted for 90 per cent of the wheat flour used in the manufacture of macaroni products. In contrast, in 1954, when the durum crop was short, semolina and durum flour accounted for only two-thirds of the wheat flour used; farina and other wheat flour made up the remaining third. The durum crop in 1961 was relatively small because of drought, and considerable substitution of the wheats

used in making macaroni products occurred. But the durum wheat crop for 1962 was estimated to be three and one-half times larger than 1961, so higher proportions of semolina were again used in the manufacture of macaroni products.

Editor's note: The above statement was probably gleaned from U.S. Department of Agriculture releases. Italy produces almost twice as much macaroni as the U. S. (see page 11). Industry sources estimate U. S. production in 1963 at about 1,675,000,000 pounds or 837,500,000 tons.

Interesting Facts

About 80 per cent of the macaroni foods produced in this country is enriched with iron and some of B vitamins to meet the federal enrichment standards. The standards specifies how much of which nutrients may be added to macaronis. Enriched macaroni products must be labeled "enriched" and list the added nutrients on the package.

Noodles cost about a third more than spaghetti and macaroni because they contain eggs. For example, at one metropolitan supermarket recently, noodles were selling for 40 cents a pound and spaghetti and macaroni were 27 cents a pound.

Many macaroni and spaghetti shapes cost the same amount, but some fancy shapes are more costly. To illustrate, a pound of one brand of macaroni elbows, shells, ziti (large lengths) or tufoli (extra wide) cost 23 cents, but a pound of mostaccioli (large, cut on diagonal) and cavatelli (shells) of the same brand cost 29 cents, and 10 ounces of manicotti cost 39 cents, as noted in the supermarket survey.

Count on at least one ounce of uncooked macaroni for an average 1/2-cup serving, but allow for extra for second helpings.

Macaroni, spaghetti, and noodles swell to about twice their size when cooked. One pound of macaroni measures about four to five cups before cooking and 2 1/4 quarts after cooking; of noodles, about six to eight cups before and 2 1/4 quarts after cooking; and of spaghetti, about four to five cups before and 2 1/2 quarts after cooking.

Macaroni, spaghetti, and noodles are interchangeable in most recipes. Substitute uncooked macaroni foods by weight rather than by volume. Cup measurements of uncooked macaroni

foods may not be accurate because of the variety of shapes and differences in air space between pieces. However, cup measurements of cooked macaroni foods are satisfactory.

Read the package label carefully before cooking macaroni foods, and follow label directions as to cooking time. The manufacturer adapts directions for the proper preparation of the product specifically to the type of flour used.

Increasing Consumption

Our use of macaroni products has averaged about five pounds per person for a number of years. Macaroni and spaghetti comprise about 85 per cent of our use of these foods, and noodles, the remaining 15 per cent.

Our relatively stable use of macaroni foods over the years has been contrary to the downward trend in our use of wheat products. In the past, the stability in our use of these foods was in part attributed to the attempt of immigrants to retain their native dietary habits. More recently it is attributed to our increased interest in foreign foods and the appearance of new product forms on the market. Many complete meals are now available, combining macaroni products with meat, cheese, or other foods in canned or frozen ready-cooked dishes.

Editor's note: Again, the above idea seems to stem from the U. S. Department of Agriculture. Industry statistics show per capita consumption rising from the plateau during the durum shortage of the early 1950's of about six pounds per person to better than 8.5 pounds in 1963.

Saucy Copy—

"What kind of a woman are you, anyway?" asks the caption of a Lawry's Spaghetti Sauce Mix ad in McCall's magazine.

The gorgeous creature, draped with a feathered boa, stands out against a red background as the copy continues: "Dare to wear feathers in place of fur? Fly your own plane? Take off for Hong Kong? You're adventurous. And here we got an adventure for you! Lawry's Spaghetti Sauce Mix. One mix that lets a cook express herself. It's a basic classic Italian sauce mix (full of exotic herbs, spices, olives, imported mushrooms, heady cheeses — goodies you'd never collect yourself), to which you add the tomatoes, red wines, chicken broth, peppery sausages, or almost anything that tempts you. Give our mix a personality all your own. How's that for adventurous?"

Spectacolor Newspaper Ads

The John B. Canepa Company, makers of Red Cross Macaroni and Spaghetti products, are presently leading the way as the first spaghetti manufacturer to use the magic of Spectacolor in their colorful winter campaign. This ad running in Spectacolor in Louisville is also running in ROP color in Chicago and Indianapolis.

Canepa is one of the first advertisers to use this exciting innovation in newspaper advertising. The superior reproduction of Spectacolor does full justice to the "Via Canepa" ad which also marks the initial use of spaghetti specialties in Canepa's newspaper campaigns. Lilienfeld & Company handles the Canepa account out of their Chicago office.

At Wallace & Tiernan

At their March 5 meeting, the Board of Directors of Wallace & Tiernan approved the creation of the post of Vice President, Operations and elected Mr. Charles H. Rybolt to that position. Mr. Rybolt and Mr. Robert J. Brockmann, Vice President, Finance, will be directly responsible to Mr. Robert T. Browning, President, who was also designated Chief Executive Officer. Mr. Robert M. Jackson will continue as Chairman.

Mr. Nels E. Sylvander was elected Vice President, Chemical Divisions, to fill the post formerly held by Mr. Rybolt. All changes are to be effective immediately.

Wallace & Tiernan Inc. is a diversified manufacturer of Chemicals, Industrial Equipment and Pharmaceuticals.

PAN FOR GOLD
60TH ANNUAL MEETING NMMA
JUNE 21-24—BROADMOOR BONANZA
Colorado Springs, Colorado



Outdoor eating at its best—Barbecued Lamb with Spaghetti.

New Post for Lohman

William A. Lohman, Jr., vice-president of General Mills and director of sales for the flour division, has been named director of customer and trade relations for the flour division.

"Mr. Lohman's many years of experience in all aspects of sales and in bakery association work give him an unequalled background for this position aimed at increasing our stature in the flour and bakery mix business," said W. R. Humphrey, Jr., vice-president and general manager of the flour division.

William B. Deatrick, who previously reported to Mr. Lohman, will continue as manager of bakery sales, with direct responsibility to Mr. Humphrey. He has held that post since July, 1962, and previously was assistant to Mr. Lohman.

Mr. Lohman joined Washburn Crosby Company, predecessor of General Mills, in 1919 as secretary to the New York manager. Two years later he went into special sales and broker contact. When General Mills was formed in 1928, he became manager of New York bakery sales activities. In 1939 he was appointed manager of the New York district office, a position he held until 1954. In that year he was transferred to Minneapolis as director of sales for the flour division and was named a corporate vice-president in 1956.

One of the most widely known bakery allied tradesmen, Mr. Lohman is a past president of the Allied Trades of the Baking Industry. He is a former vice-president of the Bakers' Club of New York, and a past president of the New York Association of Flour Distributors. He served on the board of the Minnesota Bakers' Club and the Virginia Bakery Promotion Council. He is a member of the Wheat Flour Institute Committee of the Millers' National Federation, and a past chairman of the Durum Wheat Institute. A frequent attendant at macaroni conventions, he is well known to macaroni manufacturers around the country.

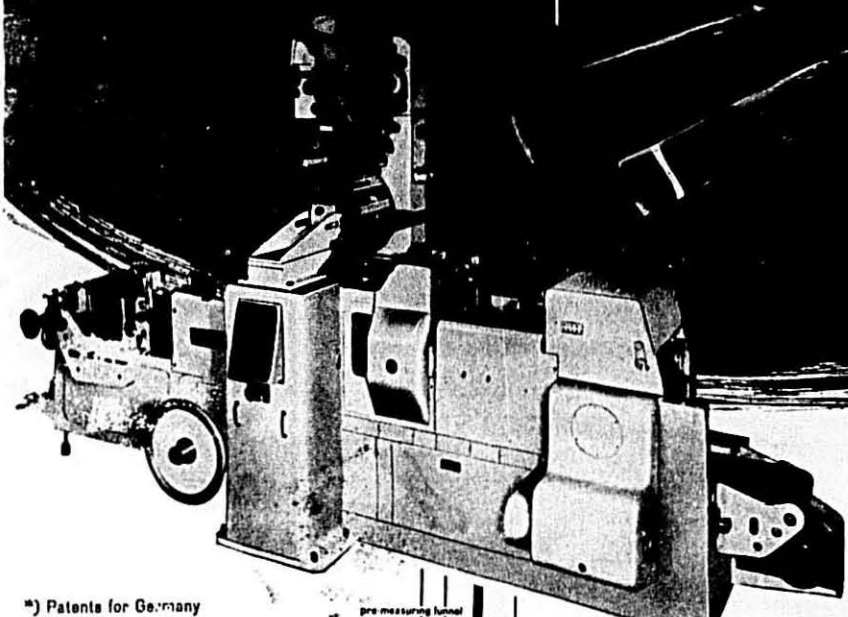
Macaroni Goes Out-of-Doors

Macaroni, spaghetti, and egg noodles go out-of-doors when warm weather starts. Promotional themes of the National Macaroni Institute for summer selling center on picnics, outdoor suppers and campfire cookery.

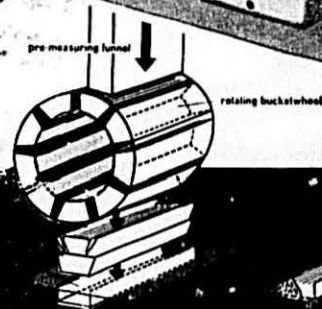
Through the Macaroni Merchandising Calendar sent out by the Institute, grocers have been alerted to related item sale possibilities of macaroni products in salads, with barbecued meats, top-of-the-stove dishes, or easy-to-fix casseroles.

HESSOTRON-NT*

HESSOTRON-NT*



* Patents for Germany and other countries already granted resp. applied for.



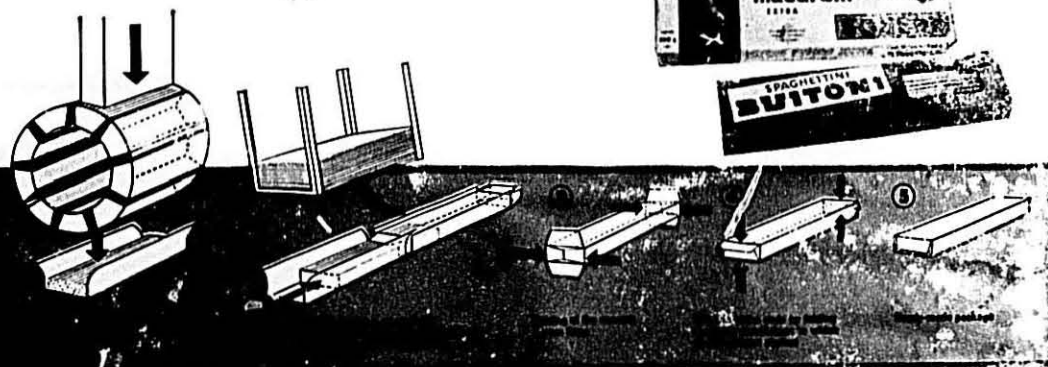
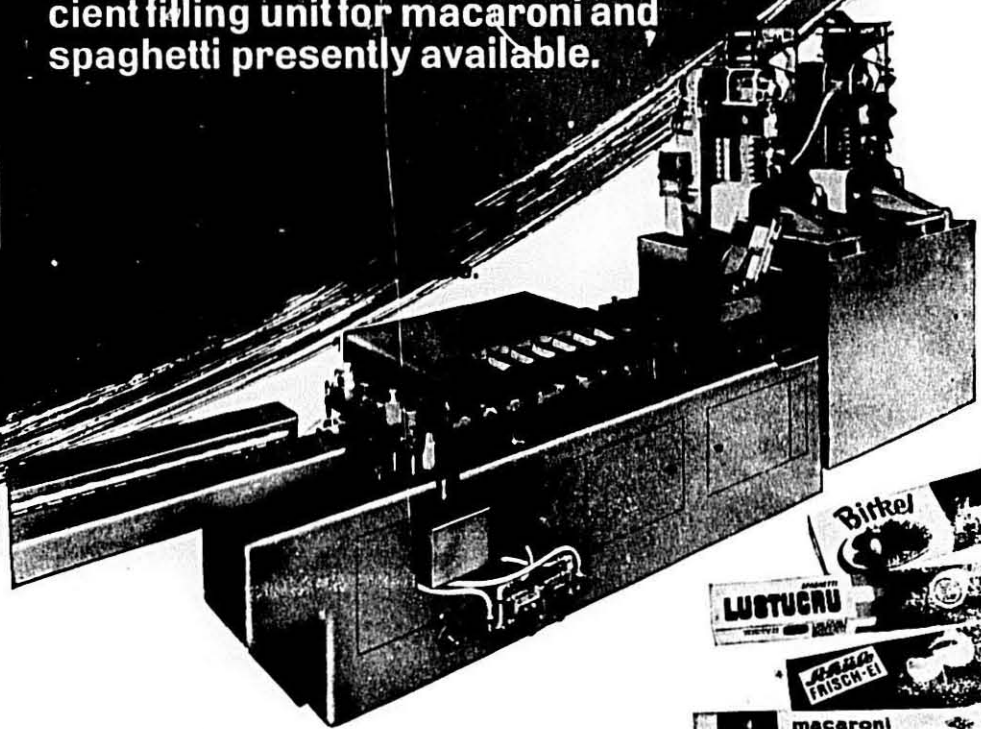
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HESSER

one
two

HESSOTRON-NT is the most efficient filling unit for macaroni and spaghetti presently available.



Please feel free to contact us for further specific information on these new designs

FR. HESSER MASCHINENFABRIK AKTIENGESELLSCHAFT · STUTTGART-BAD CANNSTATT · FOUNDED 1861

Fidelini Specialist



Armond Seavedra, Plant General Manager (right) and Charles Moulton of Lehara Corp. at the new La Rinascente Macaroni Co. plant in New Jersey.

LA RINASCENTE Macaroni Company was started in the 1940's by a Mr. Leido on premises located at 155 East 160 Street, Bronx, New York. The original equipment consisted of two hydraulic presses, a small band dryer and a set of drying drawers for short cuts, and a few room dryers for long goods. In 1951, John A. Natali, from Corsica, Napoleon's Country, assumed full control of the company. With considerable foresight, he decided to concentrate all of his company's activities on the production of "fidelini" or coiled vermicelli for which he had a ready market. To achieve his purpose, Mr. Natali, in 1952, purchased his company's first automatic press and single coiling machine from Braibanti, the world famous macaroni equipment manufacturer in Milan, Italy. This was followed in 1956-57 by the purchase of a second press and double coiling machine to meet the ever increasing volume of business.

New Moonachie Plant

In 1961, Mr. Natali decided that the premises in the Bronx were too small for any further expansion or modernization, consequently plans were drawn up for the installation of a new plant in Moonachie, New Jersey about ten miles from the George Washington Bridge. This site was chosen because of its proximity to the company's customers in the Bronx, and the availability of land at a reasonable price. In any event, zoning restrictions made it impossible for the company to re-locate in the Bronx.

This plant consists of a single floor with offices situated on a split second floor in the front section of the building which is 150 feet long by 50 feet wide. There is ample space for further expansion and, in case of need, an exten-

sion can be added to the building at a moderate cost. High ceilings in the machinery room insure plenty of ventilation and the easy installation of the largest equipment.

Install Automatic Line

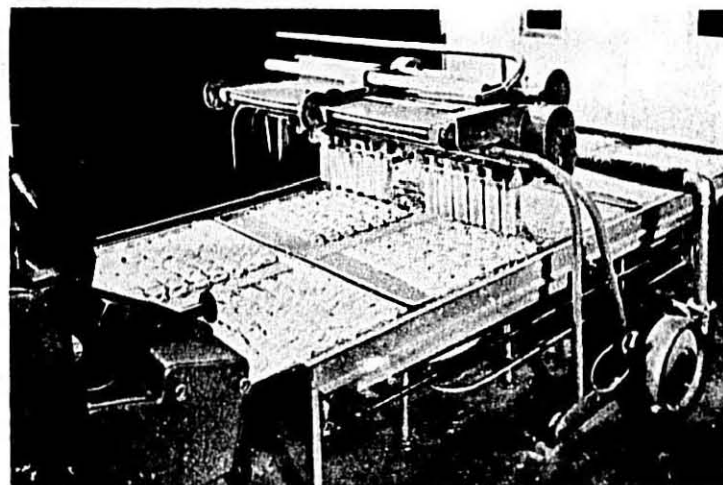
Once the decision was made to erect a new plant, the company felt that its production schedules could only be satisfied by the installation of the latest and most modern equipment, consequently it chose the continuous, automatic line for the production of coiled and folded good of all types, manufactured by Braibanti of Milan. This automatic line consists of the following elements:

- One pneumatic flour feeding system which insures a perfect dosing of the semolina-flour to the press.

All-In-One Operation

These trays pass through the coiling or nesting machine where they are loaded with the products and then proceed to the elevator which serves also as preliminary drying section of the tray tunnel. After a strong preliminary drying, the trays are conveyed, through the "bridge" located over the press, into the dryer itself. The trays pass backwards and forward from one to the other of the 52 passages of the final drying section. During this motion the trays are passing through fanning and sweating zones. Humidity conditions are perfectly controlled by means of special automatic devices, thus ensuring the perfect drying of the products. After having completed the drying cycle the trays exit at the bottom of the dryer where the products are automatically discharged by a tilting device into receptacles or on a belt conveyor for

(Continued on Page 58)



Details of coiling machine, nesting device (not in operation) and loaded trays entering the elevator preliminary dryer at La Rinascente.

- One GIBRA/M press with two extrusion screws and two die-heads operating with mushroom devices for the even distribution of the macaroni strands when producing fidelini. For folded noodles these devices are not required.

- One double Plurimat coiling and folding machine for the production of both extruded and sheet goods.

- One preliminary and final dryer model GM 700 provided with 730 special trays with bottoms in nylon netting suitable for the drying of coiled or nest-shaped products.

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ARCHER DANIELS MIDLAND COMPANY DURUM DEPARTMENT MINNEAPOLIS KANSAS CITY



Fidelini Specialist—

(Continued from Page 56)

transportation to the packing room. The empty trays then return automatically to the colling machine to be re-introduced in the production cycle. On the way, between the front section of the dryer and the press, the trays pass through an automatic cleaning device before being re-loaded. In front of the colling machine can be seen the nest-making device which, of course, is not operating during the production of fidelini.

With the installation of this completely automatic line, La Rinascente's output has more than doubled compared to the old operation of room dryers. Drying time has been reduced from an average of 40 hours to 18, even less for sheeted goods. Maintenance has been reduced to two men per shift to supervise the entire operation. The quality and color of the product have not only been greatly improved, but are maintained at a constant high level due to automation.

The plant's operation is managed by Armand Saavedra who has been with the company since its re-organization under John A. Natall. He is assisted by John Natall, Jr., who is a graduate of Fordham University.

Braibanti of Milano

The Braibanti Company, begun in 1922, has a vast store of knowledge of technical developments and a tradition of experience in the macaroni industry.

The engineering brothers Mario and Giuseppe Braibanti claim credit for the invention of the first continuous automatic press in 1933. This machine laid the cornerstone for transforming the production of macaroni from an art to an industrial science. In 1947 the Braibanti Company marketed the first continuous automatic line for the production of short cuts. In 1950 the first continuous automatic line for the production of long goods was put into operation. In 1952, after experimenting for five years, the vacuum system was introduced. Modified in its application but not in its concept, this is now used on all continuous automatic presses. In 1955 Braibanti constructed the first continuous automatic dryer for the production of coiled and nested goods.

The Braibanti organization has gathered about it some of the finest technicians in the world vested in technological knowledge of macaroni production. As a result of its activities and the

confidence placed in it by macaroni manufacturers, Braibanti claims to produce 65 per cent of the world's output of equipment for the production of macaroni products. As a result Braibanti machines are found wherever macaroni products are made and eaten: from Canada to the Argentine, from Finland to South Africa, from Japan to Australia.

New Developments

Far from resting on its laurels, Braibanti continues its studies and has developed continuous automatic lines of great capacity. The model "Cobra" utilizes double compression elements. Installations have been made in Europe, Japan and the United States. These production lines are completely automatic from the flour feeding into the press to the packaged product ready for sale. The hourly productive capacity of the "Cobra" press is up to 2700 pounds for short cut goods; 1500 to 2000 pounds of long goods. While the production follows a continuous automatic cycle, the packaging operation of the produced shapes is confined to one daily shift. Storage silos for the dry products form an integral part of the long goods line. These silos are capable of storing 18 hours production, for the time the packaging department is not in operation, and to discharge the dried shapes onto conveyors which transport them automatically to the automatic weighing and packing machines.

The new Braibanti lines do not require any manual labor but only supervision which is limited to one operator employed on the press, one accustomed to the supervision of the drying cycle and a third one for the weighing machine.



Dr. Mario Braibanti (far right) shows Don Maldari, Angelo and Emanuele Ronzoni, Jr., installations at the San Giorgio plant, Lebanon, Pennsylvania.

The Braibanti Prize

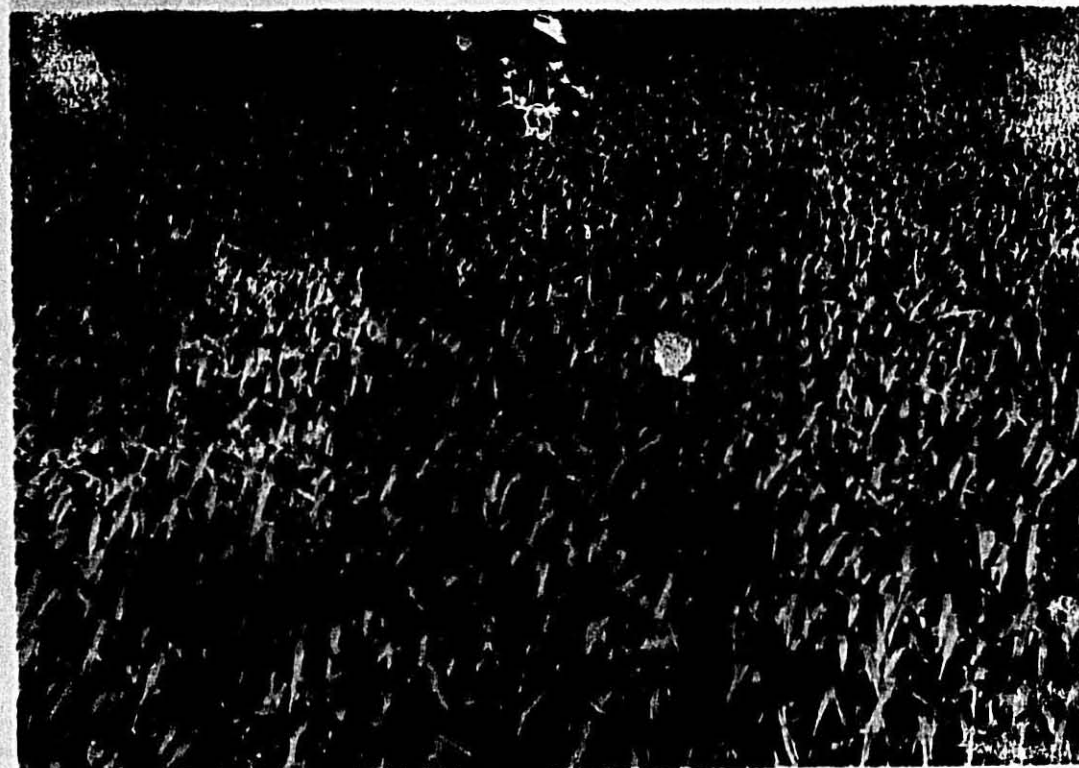
The Braibanti Company, quite apart from the research carried on by its own technicians, has for several years awarded the Braibanti Prize for tangible contributions to the progress of the macaroni industry for solutions to various technical and technological problems. This Braibanti Prize is under the auspices of the Nutrition Department of the Ministry of Agriculture in Italy. It is awarded to the best article or scientific study concerning the macaroni industry edited each year. The prize for 1963 is about \$8000 and will be awarded to the author of the best article describing a practical method of detecting the presence of soft wheat flour in macaroni products claimed to be made from hard wheat.

Braibanti has set up a technical center where technical problems of macaroni production are considered. This service is offered to any macaroni manufacturer anywhere in the world whether they are Braibanti customers or not. The consultations are free and without obligation. Many manufacturers availing themselves of this service have thanked Braibanti for helping them make improvements in their methods and operations.

Constant study and research enables Braibanti to keep up-to-date and maintain its enviable position in the macaroni field.

The Eyes Have It—

An eye can threaten like a loaded and leveled gun, or can insult like hissing or kicking; or, in its altered mood, by beams of kindness, it can make the heart dance with joy.—Emerson.



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Should your macaroni products start here, too? With durum products from the North Dakota Mill and Elevator?

Our products made from Dakota durum are: Dakota #1 Semolina, Perfecto Durum Granular and Excello Fancy Durum Patent Flour.



North Dakota Mill and Elevator

"IN THE HEART OF THE DURUM BELT"

GRAND FORGE, NORTH DAKOTA



Sanitation and Your Responsibility

by James J. Winston, Director of Research, N.M.M.A.

A REVIEW of the Food and Drug Administration's activities for 1963 reveals the following:

Industries inspected by the FDA voluntarily completed 2,047 corrective actions to improve consumer protection. These included 319 plant improvements at a total cost of \$16,760,828 for food and drug manufacture.

The Food Industry voluntarily destroyed or converted to animal food 23,950,888 pounds of food in 1,281 separate actions where the products were found to have become unfit for human consumption. More than 63,000 inspections were made of food, drug and cosmetic establishments.

Criminal prosecutions filed in federal courts totaled 214. Of these, 67 involved adulterated or mis-branded foods. Eleven injunctions were requested from the federal courts during the calendar year to prohibit shipments of illegal items. Food seized in 465 federal court actions totaled 6,996 tons of products.

An Essential Program

The above report emphasizes the necessity for management to make a concerted effort to formulate and maintain an effective sanitation program. The following steps constitute an important guide to a complete sanitation program:

1. The sanitation program should be supervised either by an executive of the firm or a trained sanitarian, supplemented periodically by advice from a professional sanitation consultant, based on his periodic surveys of the plant.
2. A detailed report as a result of a sanitary survey should point the way for management to carry out the necessary improvements so as to comply with sanitation regulations. The plant should be made structurally immune from either insect or rodent harborage. Open spaces in walls around pipes, static corners, ceilings and wall-floor junctions should be properly sealed, using either a filling compound, plaster, silicon, cement mortar or sheet metal, as the case may be. Doors should be repaired to come flush with the ground to preclude mice.
3. Machinery should be thoroughly cleaned with caustic to avoid accumulation of a sticky and grime, particularly in dead spaces.
4. Incoming cars of farinaceous materials should be thoroughly examined before unloading. It is suggested that



James J. Winston

hatches of cars be opened about eight to 16 hours after cars have arrived in order to determine whether there is present insect life. Cars showing infestation should be rejected.

5. All raw materials and finished goods should be stored on skids at least 12 inches from walls to prevent harborage of pests.

It is urgently recommended that wooden equipment be replaced by metallic ones, preferably seamless and of stainless steel construction.

6. Arrangements should be made to employ a competent exterminator on a regular basis who should cooperate closely with the sanitation leader. Careful attention should be given to all vulnerable and critical areas.

7. Non-toxic insectant should be used to supplement the work done by the hired exterminator.

Management should be advised as to the relative merits of different insecticides—their toxicity and limitations.

Use of toxic poisons should be discouraged in a food plant to avoid possible contamination.

8. Periodic micro-analysis of raw materials and finished products should be made to determine the sanitation index. The findings in the end product should parallel those in the farinaceous material.

9. Good housekeeping is a prime essential. You must insist upon "wide awake" porter service and not delegate the job to elderly retired men whose vision and activities are limited. Port-

ers should be directed by the sanitation leader to do a thorough cleaning job using as an important tool a good vacuum cleaner. It is often a good idea to map out a special sanitation program for porters on a day to day basis, and to direct them to clean both under and behind equipment to prevent the possibility of insect breeding in flour dust.

Factory Inspections

Under the factory inspection amendment to the FDA regulations, the duties of an FDA inspector follow this pattern:

- a. To make an inspection of the premises.
- b. To inspect the equipment used in flour handling, manufacturing, packaging.
- c. To inspect the raw materials and storage areas.
- d. To examine and inspect the finished products.
- e. To take samples of either, or both, raw materials and finished products.

The inspector will, at this point, render a receipt for any merchandise he takes, and the results of the analysis will be forwarded by the FDA after a reasonable time has elapsed.

The inspector may use ultra-violet equipment to aid him in the course of his inspection.

Invoices of inter-state shipments may be submitted to the inspector at his request.

In regard to photographs during the course of inspection, I have been informed by legal experts that there is no provision in the regulations which gives the inspector the right to take photographs, unless he is given permission by the management of the plant.

Protection against insect infestation of food going into a storage period must start with the raw material and be continued through the processing, packaging, handling, transportation and storage. Once an insect, dead or alive, is present in a processed commodity, the food may be considered contaminated.

Spaghetti

Some cut it up in little lengths,
Some wind it round and round,
Some seize one end and suck it in,
With a peculiar sound.
Some eat it piecemeal bit by bit,
Some down large portions wholly,
Some enjoy with it, some sit and stare,
Some order ravioli.

—Richard Armour

THE MACARONI JOURNAL

JACOBS-WINSTON LABORATORIES, INC.

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New York 7, N.Y.

It is with pride that we call your attention to the fact that our organization established in 1920, has throughout its 44 years in operation concerned itself primarily with macaroni and noodle products.

The objective of our organization, has been to render better service to our clients by specializing in all matters involving the examination, production, labeling of macaroni, noodle and egg products, and the farinaceous ingredients that enter into their manufacture. As specialists in this field, solutions are more readily available to the many problems affecting our clients.

We are happy to say that, after 44 years of serving this industry, we shall continue to explore ways and means of improving our types of activities to meet your requirements, and help you progress with your business.

James J. Winston

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The Value of Defatted Wheat Germ in Macaroni

by Louis E. Kovacs, president, Vitamins, Inc.

AT the outset, I should state that our product, Vitinc Defatted Wheat Germ Type L is now being used successfully on a limited scale in some macaroni products. It is an approved optional ingredient under the Federal Standards of Identity for Enriched Macaroni, used at the rate of up to five per cent.

What It Is

Defatted wheat germ, a food ingredient, is at once old and new. It is old in that it has long been recognized by nutrition experts as a protein of high quality. It is new in that the defatted wheat germ which my company offers the industry is an economical, bland ingredient of uniformly dependable quality, available in desired quantity.

Wheat germ is a natural component of wheat before it is milled into the flour used in making macaroni products. Of the wheat kernel, about 83 per cent represents the endosperm which is the source of white flour. About 15 per cent is bran and other materials which are largely used in animal feeds.

Only about two to two and one-half per cent of the kernel is the germ. This germ is removed during milling operations.

One of the important activities of my company is to process freshly produced wheat germ as it is separated in the mills throughout the year. Only that germ originating from mills meeting our high sanitary standards of quality is selected. Shipments are made to us in cars packed in order to protect the perishable germ from spoilage. Much of the spoilage to which wheat germ is subject is owing to the development of rancidity of the unsaturated oils which it contains in relative abundance. These oils are removed in our modern extraction plant. The method of manufacture has been developed with due regard to the necessity of avoiding any food contamination problems.

The defatted wheat germ is supplied in the form of a powder, or flour, packed in drums, and in bulk. This product thus provides a stable economical, high quality protein ingredient.

High Protein

Several years ago, research work by Dr. Fred Stare and Osborne, at Yale University, found on experimental animals

that wheat germ provided a high biological protein. About 25 years ago research men at Pillsbury Research Laboratory, after detailed animal studies, advocated increased use of wheat germ to improve the American diet. At almost the same time, Dr. Fred Stare at Harvard, using humans as well as animals showed that the high biological value of wheat germ compared favorably with meat. Now recently, at the Rockefeller Institute, Dr. Schneider has shown that the protein of wheat germ has the effect of inhibiting certain types of infections.

Type L

This defatted wheat germ to which we refer as Type L, which is recommended for use in macaroni products, has been processed so that there will be no off-color to the macaroni. Its particle size is similar to that of most flours used for macaroni and thus helps prevent stratification and lack of uniform distribution of the defatted wheat germ mixed with the flour. In addition, this Type L product provides outstanding flavor and desirable functional qualities.

Perhaps the most interesting and important attribute of Vitinc defatted wheat germ in macaroni products is the added delicately enhanced flavor which has been readily observed by certain leading panels. Also, they report improved flavor, not only in the plain, cooked product, but also a sparkling effective flavor when used with such other combinations as meat sauces, tomato sauces, cheese, and fish. They have noted improved texture, firmness, appetizing odor, excellent color, and absence of slime.

We have had spaghetti samples made by a leading national producer under commercial conditions. These samples are made from No. 1 Semolina containing five per cent of our Defatted Wheat Germ Type L. Test this sample at home, cook it up, and compare it along side your favorite product. I believe you will readily observe the superiority in flavor and in the functionality of it.

Vitinc Defatted Wheat Germ Type L is simple to use. It can be obtained premixed in the flour you buy without any added manufacturing step for you.

The added cost to macaroni of five per cent Vitinc Defatted Wheat Germ Type L is approximately 35 cents per cwt. In the face of rising costs over the past



Louis E. Kovacs

several years, there has been no increased price of our product.

Increase Sales

If one of your company's major problems is increased sales to new and old customers and you believe the sound way to achieve this goal is by increasing the consumption of macaroni products, defatted wheat germ may provide the key solution. We have heard that some housewives have a poor image of macaroni products, having no appealing flavor, being high in calories, and low in nutrition. Effective and proper sales promotion and advertising claims can establish a positive, favorable image to housewives toward products containing five per cent defatted wheat germ. We have witnessed, and some of you have experienced, the effects of promoting such high protein products as the 20 per cent level, the added cost of which is about \$5.00 per cwt., resulting in establishing new and costly production, sales, and other promotional activities to support a premium product. These new activities may even weaken your established major line. In addition, these premium products are generally of darker color and do not have any new, appealing flavor and functional properties. Compare this with an all-out defatted wheat germ protein enrichment program in all your production resulting in new enhanced flavor, improved functional properties, appealing color, and with added cost of approximately only 35 cents per cwt. This added cost can, in some operations, be off-set manifold due to increased sales resulting in lower unit overhead costs.

Summary

In summary, it seems to me that defatted wheat germ might well be considered by the macaroni industry as a means to develop a program for general, overall, industry-wide enhancement of the nutritive value of enriched

(Continued on Page 68)

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Dr. George Y. Brokaw

by Dr. Y. G. Brokaw, Head of the Development Laboratories, Distillation Products Industries, Division of Eastman Kodak Company

THE addition of up to two per cent of monoglycerides improves macaroni products for canning, for institutional use, and for refrigerated storage. The addition also makes macaroni products easier to use in the home. Several temporary permits have been issued to allow the inclusion of monoglycerides for large scale test work. Amendment of the Standards of Identity would permit these improvements to be used broadly and permanently.

Monoglycerides improve macaroni products by giving tolerance to their cooking and subsequent handling. Even with retorting or with subsequent refrigeration, the macaroni product with added monoglyceride does not stick together, it does not develop surface slime, it stays firm and retains a good taste.

Monoglycerides are well known and widely used nutritious food ingredients. Various commercial monoglyceride products have been used in foods for about thirty years. They are classed by the Food and Drug Administration as "Generally Recognized as Safe." As such, they are exempt from the Food Additives Amendment of 1958.

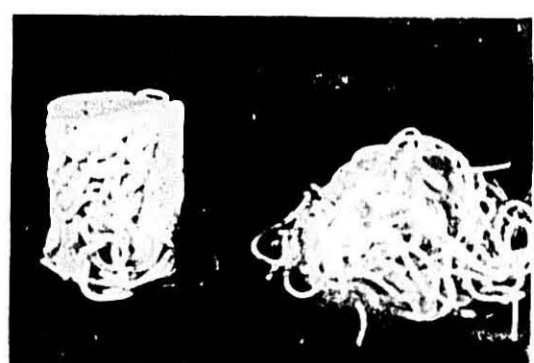


Refrigerated cooked spaghetti: no monoglycerides on the left; added on the right.

Monoglycerides are listed as optional ingredients in the Standards of Identity for bread, frozen desserts, and margarine, and they are also used in many non-standardized foods such as shortening, non-yeast leavened baked goods, cake mixes, dehydrated potatoes, whipped toppings, peanut butter, and other foods. The use of monoglycerides in macaroni products thus far has been in test work in laboratories and in production plants, and several temporary permits have issued for the continuation of these tests on larger scale.

The particular type monoglyceride which has had good effects on macaroni products is prepared from hydrogenated fats and commonly is called "glyceryl monostearate." Myverol® Disilled Monoglycerides Type 18-00 is the specific monoglyceride product used in the tests illustrated below.

Most test work in macaroni products has been with spaghetti. Winston (2) has shown the dry products to be manufactured readily and to be essentially identical to the regular dry products (Continued on Page 68)



Cooled spaghetti (20 minute cook): no monoglycerides on left;



Portrait of an Ultimate Consumer

Here's a picture of an "expert" about to test a macaroni product. He's the fellow you want to please, for he is typical of the thousands of consumers who are the final judges of your product's appeal and acceptance. To win his approval, you start with the finest ingredients and exercise the utmost care in manufacturing to insure a product of which you can be proud.

Likewise, we're proud of the ingredients we supply you and take every care to see that they're the finest milled. Our success, like yours, is meas-

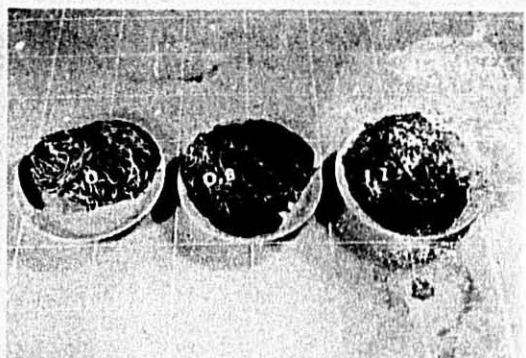
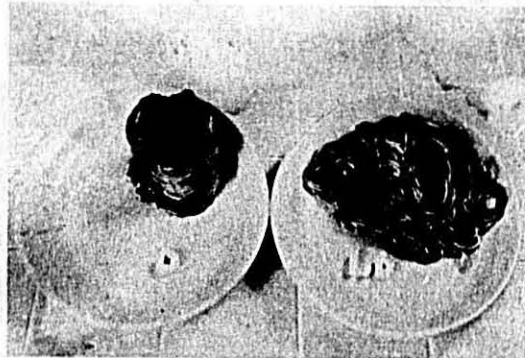
ured by the degree of customer satisfaction your macaroni products deliver.

Let International Quality Durum Products help you please your customers.



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Canned Spaghetti: No monoglycerides; 1.6% added; 0.8% added; 1.2% added. In these illustrations the spaghetti and sauce were removed from the cans without heating. The product with monoglycerides was much firmer, less swollen, and it separated more easily; it more closely resembled a good freshly cooked spaghetti.

Monoglycerides in Macaroni—
(Continued from Page 66)

without added monoglycerides. He also demonstrated the improved qualities of the cooked test spaghetti.

When spaghetti is cooked vigorously, as shown on the right in Figure 1, the presence of monoglycerides reduces foaming.

After cooking an all-durum semolina product for 20 minutes to emphasize the effects, we drained the water and allowed the spaghetti to stand until almost cool. As shown in Figure 2, the monoglyceride is remarkably effective in preventing compacting and in permitting the strands to separate easily.

Using this indicated potential usage for refrigeration, we overcooked and then refrigerated some spaghetti. Figure 3 shows the result with an all-durum semolina product.

Figure 4 shows the result with the same product to which monoglycerides had been added.

There also is an indicated usage in canned spaghetti. Figure 5 illustrates the result of a canning test in one test laboratory.

Figure 6 illustrates the results in a plant test under the supervision of a different test laboratory.

Use in dry spaghetti for home use is not indicated if cooking time can be controlled closely and if serving is immediate. Sometimes this control can not be assured, whereupon the presence of monoglyceride is beneficial. An extreme case, perhaps, of this very real home problem is exemplified by the institutional user where steam tables are required.

Macaroni products other than spaghetti can be improved in similar manner. Figure 7 illustrates a canned Lasagna product with and without monoglycerides.

In noodles (Figure 8) the foam reduction during cooking again is illustrated.

Figure 9 shows the effect of monoglycerides when noodles were cooked, drained, cooled, and then removed from the container.

The results of small and large scale work to date indicate that benefit would accrue both to the macaroni industry and to their consumer customers if up to two per cent of monoglycerides were permitted as an optional ingredient under the Standards of Identity.

References

1. Brokaw, George Y., and Neu, Gerald D., Eliminate Pasty Quality of Many Starch Based Foods, Food Processing (1960)

2. Winston, James J., The Use of Distilled Monoglyceride in Macaroni Products, Macaroni Journal, 43 (1961)
3. Brokaw, George Y., Distilled Monoglycerides for Food Foaming and for Starch Complexing, Canadian Food Industries (1962)

Wheat Germ

(Continued from Page 64)

macaroni and spaghetti, with the view of gaining still wider appreciation and acceptance of these products by consumers. Defatted wheat germ offers macaroni manufacturers an opportunity to develop a product which can support effective, informative claims such as "with added wheat germ to provide new appealing flavor and improved protein quality for better health," in a food which is economical, and well liked.

For Better Fills

Clybourn Machine Corporation of Skokie, Illinois has redesigned their vertical long goods machine to lengthen the filling time three-fold with constant vibration to settle the product. This is claimed to eliminate slack-fill completely. Machine output is maintained by changing filling spouts from round to oval shape.

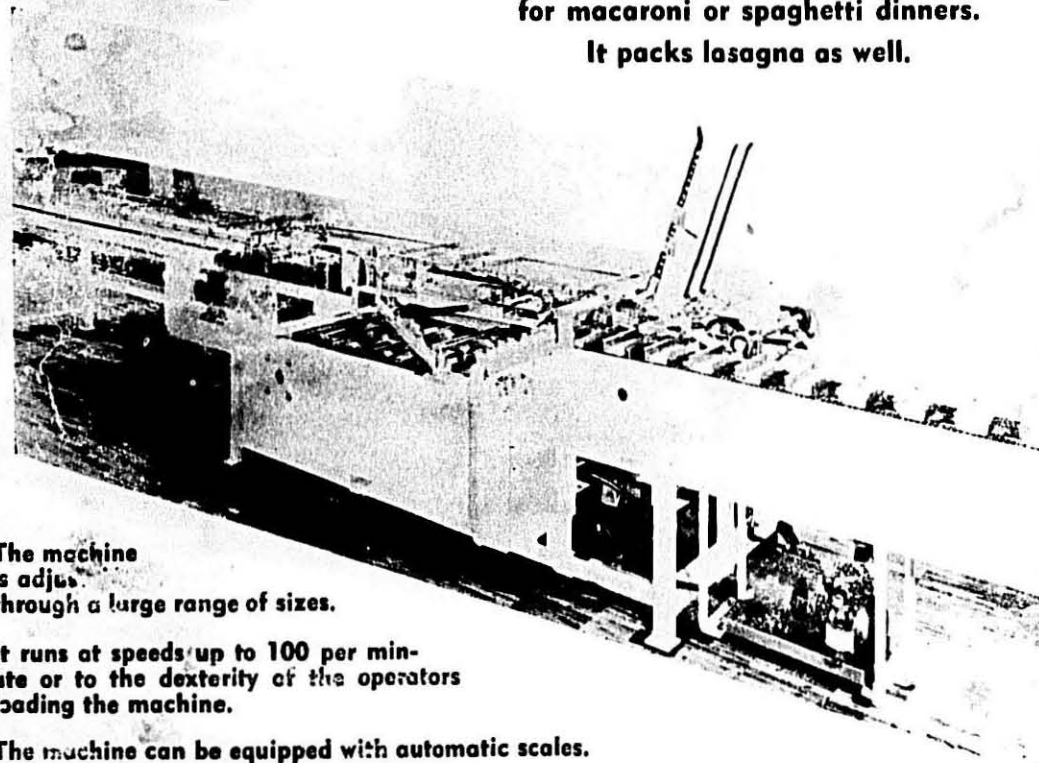


Canned lasagna: No monoglycerides; 0.8% added. Boiling noodles: No monoglycerides; Added. Cooled noodles: No monoglycerides; Added.



Long Goods Automatic Load Horizontal Cartoner

for long goods only, or combination of packets for macaroni or spaghetti dinners. It packs lasagna as well.



The machine is adjustable through a large range of sizes.

It runs at speeds up to 100 per minute or to the dexterity of the operators loading the machine.

The machine can be equipped with automatic scales.

The equipment has sliding product trays which move to the edge of the carton for perfect product insertion without fanning. Product is confined in tray on four sides during insertion by means of an over-head hold-down.

Adhesive application over-all or vertical intaglio pattern.

Available extra features: no product-no carton control; code-dating; counters and the like.



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How Associations Use Market Research

by Verne Churchill, Jr., Vice President, Market Facts, Inc.

MARKET research has been described in different ways. One definition is that market research is the business practice of gathering information in a systematic fashion for the purpose of reducing the risks of marketing decisions. Mind you, we say reduce the risks, not eliminate the risks. Like other management tools, it does not replace decision making, but it can be of significant aid to decision making by management.

The tools of research range from profoundly subjective and psychologically-oriented motivational research usually conducted among small groups of people to highly systematic and completely structured surveys involving literally thousands of people in many areas of the country. It ranges from analysis of sales data and other internal information to the administration of questionnaires in face-to-face interviews via telephone or via mail, store audits, etc.



Verne Churchill, Jr.

5. Measurement of advertisement effectiveness
6. Corporate image research
7. Pricing evaluations
8. Packaging research
9. Tests of market variations on existing products (size, flavor, variety, etc.)
10. Tests of formula change
11. A monitoring device or intelligence system
12. Market segmentation or market identification studies
13. Motivational research
14. Customer satisfaction studies

These, then, are some of the decision making areas in which research has and will continue to make a contribution. They range from highly generalized, long-range decision areas to more specific ones of a much more narrow scope.

All Types of Decisions

This gets closer now to an important distinction between different levels of marketing decision making. Some decisions are very general in nature, affecting the entire product line of a company. They are long run in implication and very sweeping in scope, affecting the profit potential of an entire corporation, perhaps, or involving decisions as to whether to enter entirely new product fields or to make sizable advertising or capital investments.

Then, there are other decisions, ones which are much more limited in their corporate implications. They affect short run operations, or they affect individual product categories or marketing alternatives which, in turn, relate

to individual products. They may be every bit as important as the long run decisions in terms of their influence on profits, but this second category of marketing decisions include those which are much more discrete or specific in nature. Alternatives are much more defined.

Strategic and Tactical

The most meaningful way to distinguish these two levels or categories of decision making is to refer to one as strategic, the other as tactical. Strategic decisions are those which will determine the planning and directing of longer range projects or programs. Tactical decisions involve the execution of a strategy.

The decision by an automobile company as to whether to emphasize the glamorous and exciting aspects of its product or whether to emphasize the safety and reliable performance of its product would be an example of a strategic decision. Once this strategic decision is made, tactical decision making comes into play; should we spend the bulk of our advertising dollars in talking about the performance of our car in recent international road races, or should we talk about our engine options, 4-barrelled carburetors, etc.?

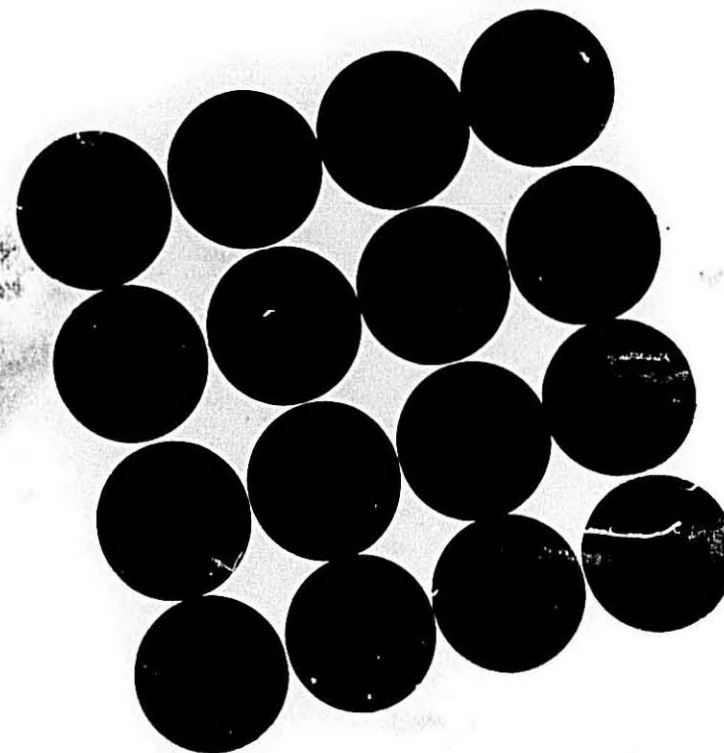
Another example: should Alka-Seltzer be positioned to the consuming public as an effective, reliable remedy for specific ailment problems, in which case any supporting communications efforts would portray headaches, stomachaches, hangovers, etc.—or should Alka-Seltzer be presented in a much more positive framework, as a means of achieving happy relief and complete enjoyment of life? Where should the promotional emphasis be—on problems or relief? This is a strategic decision.

Having made the decision to take the happy, positive, bright approach, the marketers of Alka-Seltzer would then face the decision as to how to communicate this strategy to the consuming public. For instance, should Alka-Seltzer advertising feature real people laughing, enjoying themselves—or should the advertising feature playful, animated cartoon characters? This gets into the area of tactical decision making.

Should a cigarette manufacturer devote most of his promotional expenditures to new varieties of filter cigarettes or should he devote most of it to forgetting about the health issue, non-

(Continued on Page 72)

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U.S. & Canadian Representatives: Lahera Corporation, 60 E

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the best order
then wait the
ers—which is
the whole busin.
• The policy of the National
Manufacturers Association
been "Help the Macaroni In-
Help Itself." If we do not
it not be for want of trying. (line)

Market Research—

(Continued from Page 70)

filtered versions, taking the bull by the horn, emphasizing the bravado or challenge of smoking non-filtered cigarettes? Should he attempt to go both routes with two different brands (in which case he would have to plan the distribution of marketing support for the different products)?

Having made the strategic decision to take the filter approach, he then faces many tactical decisions involving the type and color of filter, feminine vs. masculine packaging, menthol vs. non-menthol, and so forth and so on.

Well, I think you get the point. Decision making relating to marketing strategy is quite different from decision making relating to marketing tactics. Similarly, research aimed at strategy decisions is different from research aimed at tactical decisions. How does this affect us today?

Common Product Promotion

This separation in decision making is what usually distinguishes trade association research from research that is conducted by individual business firms. Individual business firms are constantly faced with both strategic and tactical considerations in marketing their products. Trade associations and organized industry groups with common interests or products, on the other hand, tend to confine their research activity to strategic considerations. The nature of trade associations dictates that the emphasis be on strategic issues. Trade associations are largely comprised of a group of competitors.

When the individual business firm is concerned with the success of its individual brand, the industry collectively, through its association in whatever form this takes, is concerned with the success of the commodity or common product. Trade associations exist to make more efficient the collective efforts of individual firms in the development and promotion of its common product or service.

Opportunities in Promotion

The available area for greater efficiency is other activity through the results in the promotion effort. In the decision making process, it's not what kind of marketing decision is made, but the opportunity and the cost of market research. For instance, and varied. Let's look at the combined marketing opportunity studies exposed except for launching the product performance testing. New York Advertising copy testing

could or should devote its promotional dollars to carrying the promotional burden of the group.

At the other extreme, you have the automobile industry which is the economist's outstanding, classical example of oligopoly—fewer than five firms including one dominating company. Certainly, the automobile industry did not rely on any collective effort in a formal sense to rack up record breaking automobile sales last year.

Collective Efforts

So, logically it would appear as though the opportunity for combined, collective promotion of products through trade associations is greater in industries where there are many smaller firms. Under these circumstances, trade association sponsorship of promotional activity makes more sense. Another condition which leads to formalized, collective efforts of this kind is the existence of a fairly well defined competitive product or service or commodity. Thus, coffee competes with tea—cigars compete with cigarettes and pipes—aluminum competes with steel—plastics compete with paper—gas competes with electricity—private power competes with public power—sugar competes with artificial sweeteners—and how often have we seen one or the other of the protagonists use an association or league or council or other similar organized group as a platform for telling their story.

Let's consider some of these, and the way in which they operate.

The "Go" Group

The dairy industry is characterized by many, many small suppliers and processors. No one, two, three or four members of this industry are large enough to influence through individual efforts the attitudes of all consumers toward dairy products generally, or toward individual categories of basic dairy products, such as whole milk. Since 1950, there has been a real need for some kind of collective effort in order to solve an industry-wide problem—the consumption of whole milk. Whereas per capita consumption of milk tended to be relatively stable prior to 1950, since that time consumption has steadily fallen off. Clearly, a problem exists in U.S. consumption of milk. Because the dairy industry is composed of so many small firms, none of whom individually can hope to make an impact on total consumption of the commodity, the industry formed the Milk Throat. I suspect many of you have heard of the "Go" group—the ads incorporate energetic, active people short run open unique stencils that individual products can provide — they ing alternatives to milk!

The cause for the decline in milk consumption has been researched often by various industry groups. A number of things working to the disadvantage of milk consumption were revealed. In varying degrees, the cholesterol issue, the strontium 90 issue, and lack of weight control were all detrimental to milk consumption. Also, in the course of research, the positive and beneficial appeals of milk were also revealed and these things, then, have served as a basis for a unified communications effort in which milk producers and dairies are trying to reverse the unfavorable trend of milk consumption through the promotion of health, energy-giving qualities of milk. They have framed this product story in some very attractive terms, many people think, and a laudable consumer education program has resulted. I do not know to what extent it has been successful, but the impressive thing is that instead of a situation in which milk promotion is limited to an almost infinite number of small dairies are competing for brand shares of a gradually shrinking market, the dairy industry has succeeded in starting what appears to be a comprehensive and realistic program that will benefit the entire industry.

Egg Consumption Down

I was interested in looking at some figures on egg consumption. Egg run consumption problem of the egg people. Again, we have an industry which is characterized by many, many small suppliers of the basic product. Their market is gradually, but steadily shrinking. For what reasons?

There are probably many reasons, but one of them is no doubt, the very astute, strategic marketing efforts of cereal manufacturers who have succeeded in telling the American housewife that she can get the nutrition and protein and other desirable elements her family needs—and have fun doing it, especially the kids—without worrying about cholesterol and distasteful things like "fat." One could argue that the time has come for egg people to join and develop an effective counter-strategy to regain their share of the breakfast market.

Misconception of Sugar

There is an abundance of other evidence of the collective efforts of industry groups and they all serve as examples of desirable utilization of market research. Consider the sugar manufacturers. Through the medium of advertising to consumers, the sugar people are attempting to offset some unfortunate misconceptions about the calorie content of sugar.

Macaroni Study

Well, as you may know, my firm, Market Facts, Inc., has been authorized to conduct a study for the N.M.M.A. This study is a very real sense a motivational study in that we intend to find out what factors are contributing to purchases of macaroni. What are the beliefs and misconceptions about the product which result in the purchase or non-purchase of macaroni products?

The specifications of the study are still evolving, but I would like to illustrate briefly the kinds of findings and possible resultant actions that might grow out of this study. Believe me, I am not saying anything when I show you some of these possible relationships. We are doing this solely to acquaint you with the nature of the information which could evolve, and with the possible relevance of the information to some collective or individual marketing efforts. It is purely hypothetical.

Research findings: acceptance of macaroni products is noticeably lower among young homemakers.

Marketing actions: direct promotional efforts through media which serve younger housewives. Frame promotional efforts in ways which would appeal more to younger groups.

Findings: macaroni is served in main dishes by almost everyone, but very few people use macaroni in side dish.

Action: attempt to develop more frequent dishes, but attempt to expose a group of homemakers to side dish possibilities of macaroni.

Findings: macaroni is relatively unpopular when entertaining guests.

Action: consider programs which build status for macaroni.

Findings: Macaroni is less popular than spaghetti and noodles among teenagers.

Action: Make more intensive investigation as to reasons for lower acceptability. In promotional efforts that are directed to teen-age market development, focus attention on macaroni dishes.

Findings: Relatively few people feel macaroni is a frequent and infrequent servers in their feelings about the nutritional value.

Action: Develop communications effort which offsets beliefs about calorie content of macaroni and build campaign around this point.

Devote minimum attention on nutritional and flavor aspects of macaroni.

Use the Findings

I have ignored the means by which the findings might actually be used by and/or disseminated to members. Certainly, one main use will be by the Ted

Sills organization in their continuing publicity efforts. Beyond this, it must still be resolved whether there will be a committee of review, or just how it might be handled.

By whatever means, the information will be available I am sure to individual members for guidance in individual communication and product development activities.

It would be our recommendation to have a committee established charged with responsibility of gleaning the most meaningful information from the study, reporting it to members, and making recommendations on the ultimate application of research findings.

Specialized Selling

GEORGE N. Kahn, a New York marketing consultant, maintains that food marketing companies need an organized procedure for building new business while a "maintenance" sales force takes care of routine account servicing.

Food manufacturers fail to make the grade if they forget the relationship of their marketing to the distributor. The promotion department is aware of the mass sameness, and the sales staff can rattle off the disruptive retailing influences from private labels to discount houses. But the broker's or sales department's "work load" is left in limbo. The load stems from the number of lines which must be handled and the consequently limited amount of time which the salesmen can and will spend on each.

How does he allot his time? Where he gets the maximum results from the minimum effort; wouldn't you do the same? No salesman fights city hall. Today's marketing complex is so highly specialized that you need a specialized sales force to do the job.

Ten Biggest Mistakes

"The salesman isn't dead, he's different," wrote Mr. Kahn. A successful series which appeared in Sales Management is called: "The Ten Biggest Mistakes Salesmen Make."

1. Rationalizing away sales failures. He may wash away disappointment by convincing himself that—

- His product does not have all the features it should have.
- The prices he must quote are out of range.
- The selection he can offer is limited.
- His company's adve

- Campaign is no good.
- He called on the prospect at the wrong time.
- The prospect isn't interested.

- His competitors are too far out in front.

Three steps to look out of this rut: (a) analyze each selling failure; (b) discuss failures with other salesmen; (c) check with the boss.

2. Coming back with the same old pitch. Salesmen are allowed to make repeat calls because (a) the customer or prospect hopes to learn something new about the product; (b) he hopes to learn something new about his business or industry; (c) he simply expects to enjoy the meeting.

Few people like to sit through the same movie a second time.

3. Giving up too quickly. The 20 per cent of all salesmen who make five calls or more get from 75 per cent to 80 per cent of the business.

4. Being a two-dimensional man. A successful salesman must work hard, but if he single-mindedly excludes all other activities, he fails. He fails himself, his family, his employer and his customer. A "whole man" emits a spark, a zest for living lacking in the dull plodder.

5. Spurning available facts and figures. Be armed—or be vulnerable. Today's sales and marketing technology is taking the guesswork out of selling. The successful salesman today must venture forth into battle armed with facts.

6. Ignoring the customer's customer. Try making every tenth call on the ultimate consumer. Seek suggestions that will produce merchandising and selling tips for your customer. He will be surprised and delighted.

7. Flouting the law of attrition. The wise salesman seeks new customers today, no matter how well things are going, to replace the customer sure to lose tomorrow, next month or next year. It takes time to make a prospect a customer.

8. Forgetting the rest of the team. The motivation of a professional must be larger than self-interest. The professional wins respect and credit.

9. Overlooking the value of "dry-run" calls. Such calls offer practice for the big ones; give a customer a chance to advise; opportunity for

10. Ignoring the "follow-up" call. Selling isn't over until the prospect has been provided with the best order.

then wait the order—which is the whole business.

• The policy of the National Manufacturers Association has been "Help the Macaroni Industry Help Itself." If we do not do it not be for want of trying. Milton



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ANNIVERSARY ITEMS

Last Year

- In "An Interview With a Macaroni Man" Andrew Russo, president of the New Mill Noodle Company of Chicago, said: "Our big problem is to tell more people about our products — we need to do a bigger promotional job, but you've got to make sufficient profit to do this."
- Golden Grain Macaroni Company began building a new plant in Bridgeview, Illinois. This move to the Midwest by the West Coast manufacturer was a step in going national with a new line of macaroni and noodle convenience dinners.
- Benjamin R. Jacobs, long-time technical director of the National Macaroni Manufacturers Association, died February 3, 1963. Appointed director of research in 1920, he played major roles in administering the NRA Code, developing Standards of Identity for macaroni, and as liaison between the industry and Washington.

1962

- "Macaroni products do not make you fat," says the French magazine "Jours de France." They recommend the Italian way as best to prepare macaroni products.
- "The Family of Macaroni From Alphabets to Ziti" was described by Phyllis MacDonald in the February issue of Forecast for Home Economists. Miss MacDonald catalogued many varieties of macaroni, spaghetti and noodles in clear, concise categories.
- Packaging Pointers from the Winter Meeting were given by Vaughn Gregor of Asecco, Joseph DeFrancisci, Jr. of DeFrancisci Machine Corporation, Gerard Ziffer representing Hoeffler & Karg, Walter P. Muskat of Triangle Package Machinery, and Peter Pottetti representing Hesser Maschinenfabrik.

1961

- The twentieth anniversary of enrichment "The Quiet Miracle," was celebrated.
- Skinner Macaroni Company of Omaha broke ground for a new, modern macaroni plant.
- Schneider Brothers of Chicago reported on Project Avian, where a flock of 300,000 chickens were on special feed to produce dark colored yolks for the noodle industry.

1960

- Buhler Brothers of Uzwil, Switzerland, celebrated their centennial.
- San Giorgio Macaroni of Lebanon, Pennsylvania, spent a million dollars on a large new addition and modernizing their macaroni plant.
- Albert J. Bono, Sr. was elected president of the John B. Canepa Company in Chicago.

1959

- "Developing Executive Skills" was the theme of the Winter Meeting. Tom Cuneo, president of Ronco Foods, Memphis, discussed "Sound Organization: Management Keystone."
- New for Lent—Olive-Salmon-Noodle Ring, promoted by the Spanish Green Olive Commission, Salmon Packers, and the National Macaroni Institute.
- "Electronic Heat for Elimination of Internal Insect Infestation" was described by James J. Winston, NMMA Director of Research.

10 Years Ago

- Maurice Ryan of the Association's Durum Committee went to Washington to consult with government officials on increased acreage allotments for durum.
- Ruben Heermann, agronomist and durum plant breeder, led research for rust resistance. He described "Durum Variety Improvement in a Half Century."
- William G. Hoskins presented the computations demonstrating the economies of railroad cars "for flour only."

20 Years Ago

- T-V macaroni campaign was launched to enhance the wartime popularity of macaroni and give added impetus to the popular meat flavor concentrate produced by Wilson & Company.
- Government experiments soy enriched spaghetti as food for peoples being rehabilitated in occupied countries was being watched by still skeptical macaroni manufacturers.
- The Army invading Italy was getting American made spaghetti. Deprived of their traditional mainstay by Nazi raids on wheat supplies, Italian soldiers were eating a million pounds of American spaghetti.
- "The Sellers' Market" was over. Rationing points on meat, tomatoes and cheese had kicked the bottom out of the macaroni market. Salesmen had to hustle.

30 Years Ago

- The eyes of a hopeful industry were centered on the operations of the Macaroni Code. It was resolved to give the New Deal a square deal.
- A completely automated production set-up from press to package was announced by Consolidated Macaroni Machinery Corporation.
- Trademarks registered included black lettering to the left of a picture of a rose for V. LaRosa & Sons. "Filletts" was registered by Porter-Scarpelli Macaroni Company. "Num-Num" was registered as a private trademark of the Noss Pretzel and Cone Company of Cleveland for use on egg noodles and other products.
- An industry conference was scheduled for Chicago in June. The Century of Progress fair was on and a discussion of the Macaroni Code was planned.
- John Ravarino radioed felicitations to listening Rotarians in 73 countries on the occasion of Rotary International's 29th birthday.

40 Years Ago

- Henry Mueller, president of the NMMA, told a fable of the wrapped macaroni manufacturer who didn't believe in advertising. He concluded: "This widely diffused and inadequately financed industry faces one of two unescapable paths, either killing competition without quarter or live-and-let-live cooperation with understanding."
- A national drive for a tariff increase was raising a fund to finance the project. Foreign macaroni selling at six cents a pound was putting the United States...
- Editor M. J. De... offering the birthday of the... "To get out this... job. The mater... and exar... next issue... provided with... the best order... then wait the... of its read... of the whole busi...
- The policy of the National Macaroni Manufacturers Association has ever been "Help the Macaroni Industry to Help Itself." If we do not succeed, let it not be for want of trying.

BUYERS' GUIDE

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

DURUM PRODUCTS

AMBER MILLING DIVISION, Farmers Union Grain Terminal Association, St. Paul 1, Minnesota, Telephone Midway 6-9433. Manufacturers of Venezia No. 1 Semolina, Imperia Durum Granular, Crestal Durum Patent Flour, and Kubanka Durum First Clear Flour. See ad pages 36 and 37.

ARCHER DANIELS MIDLAND COMPANY, Durum Department, P. O. Box 532, Minneapolis 40, Minnesota. Manufacturers of Comet No. 1 Semolina, Romagna Granular, Fancy Durum Patents, Palermo Durum Flour. See ad pages 57.

DOUGHBOY INDUSTRIES, INC., New Richmond, Wisconsin. Manufacturers of Doughboy No. 1 Semolina, Granular and Fancy Durum Patent, and other Durum Flours. See ad page 27.

FISHER FLOURING MILLS COMPANY, 3235 Sixteenth Street, S. W., Seattle 4, Washington.

GENERAL MILLS, INC., 9200 Wayzata Boulevard, Minneapolis 26, Minnesota. Makers of the following for the manufacturers of macaroni foods: Durela Semolina No. 1, Gold Medal Durum Granular, Gold Medal Fancy Durum Patent Flour, Durum First Clear, Soy Flour, Toasted Wheat Germ (low fat), Pro-Vim and Pro-Vit Wheat Gluten. Sales offices in New York, Chicago, Minneapolis, Los Angeles, Oakland, Ogden, Portland, Seattle, Spokane and Oklahoma City. See ad pages 19 and 62.

INTERNATIONAL MILLING COMPANY, INC., Durum Division, Investors Building, Minneapolis 2, Minnesota. Manufacturers of Comet No. 1 Semolina, Capital Durum Granular, Capital Fancy Durum Patent, Ravenna Durum Patent, Benjo Durum Clear. General offices in Minneapolis; Chicago, New York, Pittsburgh, St. Paul, Minneapolis. See ad pages 9 and 67.

NORTH DAKOTA MILLING CORPORATION, Grand Forks, North Dakota. Manufacturers of Durakot

Semolina, Perfecto Durum Granular, Excello Fancy Durum Patent Flour, Nodak Durum Patent Flour, Red River Durum Flour, and Tomahawk Durum Flour. See ad page 59.

PEAVEY COMPANY FLOUR MILLS, 860 Grain Exchange, Minneapolis, Minnesota 55415. Manufacturers of King Midas No. 1 Semolina, King Midas Durum Granular, Gragnano Durum Granular Flour, King Midas Durum Fancy Patent Flour, Kubo Durum Fancy Patent Flour, Durambo Durum Flour. See ad page 16.

FORTIFICATION

HOFFMANN-LA ROCHE, INC., Fine Chemicals Division, Nutley 10, New Jersey. Vitamins for enrichment of macaroni products.

MERCK & COMPANY, Rahway, New Jersey. Suppliers of vitamin ingredients distributed directly to millers for inclusion in semolina and flour mixes.

VITAMINS, INC., 809 West 58th Street, Chicago 21, Illinois. Manufacturers of Vitine Defatted Wheat Germ Type I, especially manufactured to improve the flavor, functionality and nutritional value of macaroni and spaghetti products. It is permitted for use under the Federal Standards of Identity for enriched macaroni and spaghetti products. Sales representatives: East, Louis A. Viviano, Jr., Jersey City; Henderson 4-2788; Midwest, Jack W. Rogers, Chicago; Hudson 3-3900; West, Joseph P. Manson, Beverly Hills.

WALLACE & TIERNAN, INC., 25 Main Street, Belleville 9, New Jersey. "N-RICHMENT-A" gives macaroni-noodle manufacturers a proven product for the enrichment of their products. Available in water or powder form. Water dissolves quickly; W&T Feeders apply the powder form uniformly and dependably. Stocks are maintained in convenient, nationwide locations. See ad page 24.

EGGS

BALLAS EGG PRODUCTS COMPANY, INC., Cold Storage Building, Zanesville, Ohio. Sales office in New York City. Packers of frozen spray dried high color yolks for

the noodle trade. Plants in Zanesville, Ohio; Terre Haute, Indiana.

V. JAS. BENINCASA COMPANY, First National Bank Building, Zanesville, Ohio. Packers of frozen and dried egg products. High color yolks available. Plants in Louisville, Kentucky; Bartow, Florida; and Farina, Illinois. See ad page 65.

HENNINGSEN FOODS, INC., 60 East 42nd Street, New York, New York 10017. Manufacturers of whole egg solids, egg yolk solids and egg albumen solids. Manufacturers of dehydrated beef and dehydrated chicken. Plants in Springfield, Missouri; Omaha, Nebraska; Malvern, Iowa; Norfolk, Nebraska; and Ravenna, Nebraska. See ad pages 62 and 63.

C. KAITI COMPANY, 2043 North Damen Avenue, Chicago 47, Illinois. Distributors of fresh-broken, frozen, and shell eggs. See ad page 80.

MONARK EGG CORPORATION, 601 East Third Street, Kansas City 6, Missouri. Manufacturers and packers of all dried and frozen egg products. Specializing in dark color for the noodle trade. Pasteurization facilities available. Main office located in Kansas City. Brand name: Monark. Drying and breaking plants in Missouri and Kansas. See ad page 47.

WILLIAM H. OLDACH, INC., American and Berks Streets, Philadelphia 22, Pennsylvania. Packers and distributors of frozen and dried egg yolk. Distributed nationally from warehouse stocks located throughout the United States.

SCHNEIDER BROS., INC., Office and plant: 1550 Blue Island Avenue, Chicago 8, Illinois. Birmingham office and plant, P.O. Box 1500, Birmingham, Alabama. Processors of frozen fresh eggs since 1915. Broker and Clearing House member. Chicago Mercantile Exchange.

S. PRODUCE COMPANY, 585 West Fulton Street, Chicago 6, Illinois. Packers of frozen eggs. Broker and Clearing House member. Chicago Mercantile Exchange. Specializing in egg yolks. Color-sorting, pasteurizing, clarifying. See ad page 24.

MANUFACTURING EQUIPMENT

AMBRETTE MACHINERY CORPORATION, 156-116 Sixth Street, Brooklyn 15, New York. Complete line of automatic machinery for the manufacturing and drying of macaroni and noodles. See ad pages 40 and 41.

ASECO CORPORATION, 1830 West Olympic Blvd., Los Angeles 6, California. United States and Canadian representatives for Pavan (Padova, Italy), macaroni manufacturing machinery; United States and Canadian representatives for Garibaldi Ricciarelli (Pistoia, Italy), packaging equipment manufacturers; United States and Canadian representatives for Montoni (Pistoia, Italy), macaroni die manufacturers; manufacturers of Aseco packaging and materials handling equipment; Aseco combination noodle and cut goods packer, fully or semi-automatic; the Stor-A-Veyor noodle storage system; and the Trace-A-Veyor surge and storage system. See ad page 15.

BIANCHI'S MACHINE SHOP, 221 Bay Street, San Francisco 11, California. Western States macaroni factory suppliers and repairing specialists; also manufacturers of ravioli machinery. See ad page 24.

DOTT, INGG M., G. BRAIBANTI & COMPANY, Largo Toscanini 1, Milan, Italy. American representative: Lehara Corporation, 60 East 42nd Street, New York, N.Y. 10017. Manufacturers of completely automatic lines for long, twisted, and short goods. Production lines from 5,000 to 72,000 pounds in 24 hours. Pneumatic flour handling systems. All types of specialty machines, including ravioli and tortellini. Free consultation service for factory layouts and engineering. See ad pages 12 and 13.

THE BUHLER CORPORATION, 8925 Wayzata Boulevard, Minneapolis 26, Minnesota. Planning and engineering of complete macaroni factories; consulting service. Manufacturers of macaroni presses, spreaders, continuous dryers for short and long goods, multi-purpose dryers for short, long and twisted goods, automatic cutters for dry long goods, twisting machines, die cleaners, laboratory equipment. Complete flour and semolina bulk handling systems. Sales offices at 230 Park Avenue, New York, and Buhler Brothers, Ltd., Toronto, Ontario, Canada. See ad pages 20 and 21.

CLERMONT MACHINE COMPANY, INC., 280 Wallabout Street, Brooklyn 6, New York. Manufacturers of a complete line of machinery for the macaroni and noodle trade, including the vacuum process. See ad page 7.

CONSOLIDATED BALING MACHINE COMPANY, Sales Division of N.J. Cavagnaro & Sons Machine Corporation, 406 Third Avenue, Brooklyn 15, New York, Department MJ. Manufacturers of a complete line of all steel, hydraulic Baling Presses for baling all types of waste paper, carton, semolina bags, cans, etc. Also manufacture machinery for producing Chinese type noodles, dough brakes, and cutters. See ad page 24.

DE FRANCISCI MACHINE CORPORATION, 46-45 Metropolitan Avenue, Brooklyn, New York 11237. Manufacturers of DeMaco automatic presses for short cut and long goods continuous lines. Automatic sheet formers, noodle cutters, continuous dryers for short cut and noodles. Automatic long goods finish rooms, new dual type preliminary dryers for long goods. Also a complete line of used hydraulic presses. Exchange system for preliminary dryers, ADS spreader and screw cylinders. Catalog on request. In Italy, manufacturer of DeMaco spreader attachment: Meneghini, Via Scarlatti 20, Milan, Italy. See ad pages 28, 29 and 30.

EMIL LIHOTZKY MASCHINENFABRIK, 835 Plattling, Germany, Postfach 25. Complete line of automatic machinery for the manufacturing and drying of macaroni and noodles, since 1908. See ad page 45.

PAVANI, Galliera Veneta, Padova, Italy. Macaroni manufacturing equipment. Lo-Boy automatic presses; automatic presses, automatic spreaders; pre-dryers for both long and short cut goods; automatic and continuous finish dryers for both long and short cut goods; shaker dryers for cut goods; silo dryers and storage for cut goods. Bow tie machines; nest-making machines and coilers. Pre-dryers and continuous finish dryers for coils (no trays). U.S. and Canadian representatives: Aseco Corporation, 1830 West Olympic Blvd., Los Angeles 6, California. See ad page 5.

ZAMBONI, Via Cimabue 5/5, Bologna, Italy. Coiling machines; ravioli machines; nest-making machines; shearing-folding machines. Cartoning, weighing, and bag-packing machines. Agents in the industrial macaroni

branch: Dott. Ingg. M. G. Braibanti & Company, Milan. Braibanti representatives in the United States and Canada: Lehara Corporation, 60 East 42nd Street, New York, N.Y. 10017. See ad page 71.

DIES

D. MALDARI & SONS, INC., 557 Third Avenue, Brooklyn 15, New York. Complete line of all types of extrusion dies. See ad page 33.

PACKAGING EQUIPMENT

AMACO, INC., 2601 West Peterson Avenue, Chicago 45, Illinois. Designers and distributors of all types of weighing, bag making, filling and cartoning equipment for all branches of the macaroni trade.

CLYBOURN MACHINE CORPORATION, 7515 North Linder Avenue, Skokie, Illinois 60076. Carton filling machinery for the macaroni trade. Volumetric or scale filling. See ad page 69.

DOUGHBOY INDUSTRIES, INC., Mechanical Division, New Richmond, Wisconsin. Heat sealing machines for bag top closures. Model AT rotary sealers for cellophane bags and Model CBS-AB band sealers for polyethylene bags. See ad page 27.

HAYSSEN MANUFACTURING CO., Sheboygan, Wisconsin. Expando-O-Matic automatically forms, fills and seals bags of noodles at over 60 per minute; macaroni products at more than 120 per minute. Clapper accumulators and bundlers, cartoning equipment. Offices in major U.S. cities and around the world. See ad pages 49 and 50.

FR. HESSER Maschinenfabrik AG, Postfach 569 and 583, 7000 Stuttgart-Bad Cannstatt, Germany. Fully automatic packaging equipment for long and short macaroni products; different models available for single carton, carton with inner bag, single or double walled paper, or single or poly bag. Low high speed automatic now available in single carton, with two full automatic bagging machines. Operating speed of 100 per minute. Also available: Type WMC for wrapping macaroni or spaghetti in cellophane, with operating speed of 70 packages per minute, and equipped with automatic weighter. See advertisement on pages 51 and 55.

(Continued on page 69)

MACARONI USA

Betty Crocker Presents Creole Macaroni Ring

Deliciously cool on a
warm summer night,
this peppery Southern
one-dish meal!



CREOLE MACARONI RING

1 pkg. (3 oz.) lemon-flavored gelatin	1/2 tsp. salt
1 1/4 cups hot water	dash of pepper
1 can (8 oz.) tomato sauce	1 pkg. 7 to 8 oz. macaroni (elbow or small shells)
1 tbsp. vinegar	1/2 cup each green pepper, diced, and stuff-1 olives, sliced
few drops each Worcestershire sauce and Tabasco	1/4 cup chopped onion

Dissolve gelatin in hot water. Add tomato sauce, vinegar, salt, Worcestershire, Tabasco and pepper. Chill. While gelatin is setting up cook macaroni, following manufacturer's directions and drain. Rinse with cold running water.

When gelatin has thickened slightly, add rest of ingredients and blend well. Pour into a 9" ring mold. Chill thoroughly until gelatin is set. To serve, unmold Creole Macaroni Ring on large serving plate. Line center with lettuce cups and fill with Shrimp Salad (recipe below).

Shrimp Salad
2 cans (6 oz. each) shrimp (1 1/2 lb. fresh shrimp, cooked)
1 1/2 cups sliced celery
4 hard-boiled eggs, cut up
2 tbsp. lemon juice
1/4 to 1/2 cup mayonnaise

Combine cleaned and cooked shrimp, celery, eggs and lemon juice. Chill. Just before serving, fold in mayonnaise.

Success tips:

1. Macaroni is best when slightly chewy, do not overcook.
2. To unmold macaroni ring, dip mold in hot water on one side, loosen with spatula thrust around edge, turn upside down on plate.
3. Do not combine mayonnaise and shrimp until serving time.
4. Celery that is "thinly" sliced is more attractive than larger slices.

A delicious macaroni aspic ring mold
surrounding fresh shrimp salad
nested in lettuce cups

Once again, General Mills and Betty Crocker offer you and your customers a great new salad creation... this time tuned to the Southern taste. (We do this, in support of the National Macaroni Institute's "A Salute to the 50 States.") *Creole Macaroni Ring* has met the exacting standards of taste-testing in the Betty Crocker Kitchens and in typical homes in the South. It, too, will be another savory example of how your customers can serve macaroni products easily, imaginatively, deliciously.

As a leading producer of the finest Semolina and Durum flours, it is a pleasure to serve the macaroni industry. Look for more recipes from Betty Crocker in our Macaroni U.S.A. program to help you increase your profits through the broadened use of your products.

For more information on this new Betty Crocker recipe program ask your Durum Sales representative or write:

DURUM SALES

MINNEAPOLIS 26, MINNESOTA

