

**THE
MACARONI
JOURNAL**

**Volume 40
No. 12**

April, 1959

Macaroni Journal

OFFICIAL PUBLICATION
OF THE
NATIONAL
MACARONI MANUFACTURERS
ASSOCIATION



APRIL, 1959



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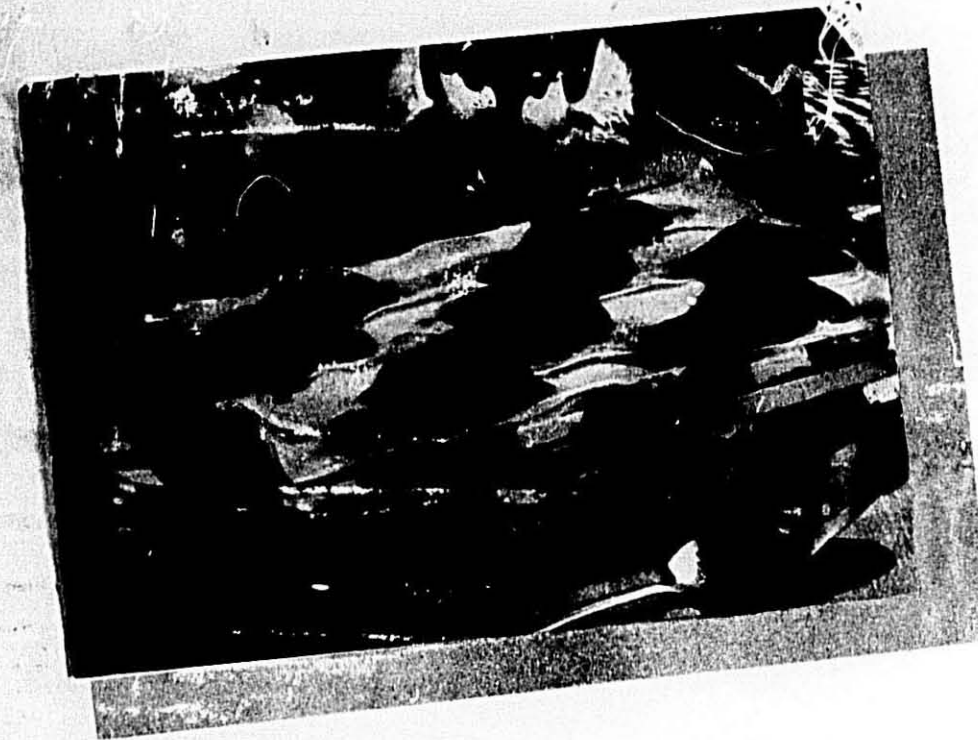
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THE MACARONI JOURNAL

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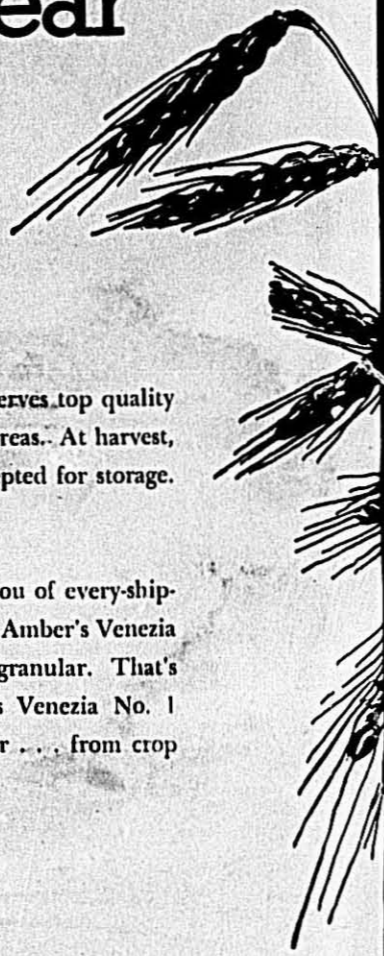
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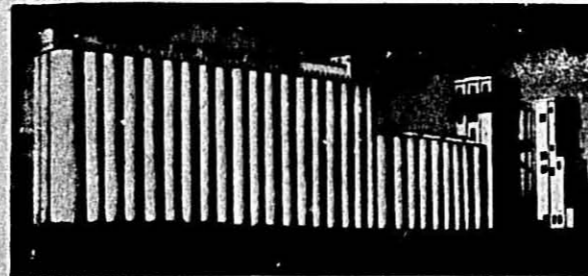
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April, 1959
Volume 40, No. 12

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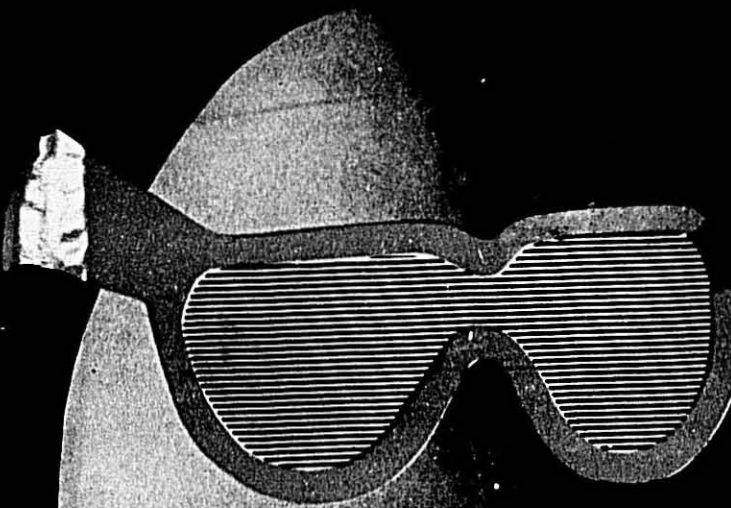
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Cover Photo

Editors M. J. Donna and R. M. Green observe the Fortieth Anniversary of the Macaroni Journal.

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The Passing Parade

Forty years of Macaroni History recorded in the Macaroni Journal



M. J. DONNA

M. J. DONNA of Braidwood, Illinois, was appointed as the first paid Secretary of the National Macaroni Manufacturers Association and editor of the *New Macaroni Journal* in 1919. The *Journal* made its bow with the announcement that: "Its columns are to be the monthly forum of the members of the association whatever may be of interest to this vast trade."

In 1919 a sum in excess of \$50,000 was raised at a meeting of macaroni manufacturers and durum millers to underwrite a campaign to restore macaroni consumption from war-time 3½ pounds per capita to the pre-war 6 pounds. Though the campaign was of short duration "it came at a time when macaroni was a drug on the market, when domestic distribution was at its lowest ebb and foreign export demand just beginning." It filled an important gap.

1920. The National Macaroni Manufacturers Association was incorporated at a special meeting January 15 in Chicago.

A delegation of macaroni manufacturers complained to the Federal Trade Commission about 4 ounce packages selling at a dime. "Honest manufacturers are selling excellent quality macaroni at 15c to 20c a pound in bulk."

Dr. B. R. Jacobs, chemist with the U. S. Bureau of Chemistry, was appointed to establish a laboratory in Washington, D. C. and have charge in matters pertaining to macaroni standards.

1921. Post-war depression and deflation rocked business. "The one redeeming feature is that after starting out with demands at the lowest ebb macaroni business finished with a spurt that indicates the depression has been successfully passed by the surviving firms."

1922. A special convention in Atlantic City adopted a new plan for financing the Association—\$1 for every \$1,000 of business done annually on package goods, and \$1 for every \$1,000 of business done annually in bulk goods, payable quarterly in advance based on the business done the previous year.

1923. The big topic of discussion at the convention at Cedar Point, Ohio, was a proposed cooperative Educational Publicity Campaign.

1924. Referendum on artificial coloring of macaroni products asked the following questions: "Do you favor the continued use of or the entire elimination of added coloring in macaroni products and why? Do you favor or oppose the proposed law prohibiting the use of added coloring in domestic and imported macaroni and why? What changes would you recommend in the proposed law?"

1925. M. J. Donna at the July convention in Atlantic City suggested that every macaroni manufacturer should support and help popularize "Friday—Macaroni Day."

1926. The Association strongly protested against the recently increased maximum moisture limit on flour from 13.5% to 15%, effected by the Joint Committee on Definitions and Standards of the U. S. Department of Agriculture, feeling that this increase in moisture would result in the industry receiving a deteriorated product with more chance of insect infestation.

1927. All products formerly termed as "Alimentary Paste," "Macaroni," "Spaghetti," "Vermicelli," "Noodles" or "Short Cuts," will hereafter be included under the general American term of "Macaroni Products," and every effort should be made to popularize this general name with Government officials, the manufacturing and distributing trade, and the consuming public.

1928. The *Journal* commented editorially: "The really big problem in the industry appears to be the equalization of production throughout the year," and suggests the answer to this problem lies in "the education of the manufacturers" and "the enlightenment of the consumer."

1929. With the macaroni industry having fallen into a high risk class of compensation insurance with resultant excessive rates, a Macaroni Insurance Committee was formed to survey the industry and suggest ways of bringing about a better rating of plants and lower rates.

1930. Quotation from the leading official of one of the industry's most successful firms: "Business might have been worse, but not the prices."

1931. The severity of the general business depression caused the collapse of the

four-year national Cooperative Advertising and Merchandising Campaign.

1932. Said Alfonso Gioia, NMMA president, in an open letter to *Journal* readers: "President Hoover and President-elect Roosevelt have agreed all along that the one big job that affects most of the people and calls for the strongest support of leadership is 'Economic Recovery.'... The Macaroni Industry, like all other trades will benefit by the 'new deal' in the way of a clearer understanding of our respective rights and closer cooperation in activities aimed at general trade betterment and individual prosperity."

1933. For seven months of this year the entire industry patiently awaited the adoption of the Macaroni Code to eliminate unfair competitive practices, while prices went lower, quality of product became inferior in many cases, artificial coloring again appeared in noodles, and dishonest labeling was apparent.

1934. Concerning the Code Year (the Macaroni Code was adopted on February 8), Editor Donna made this analysis: "Under the Macaroni Code, the new law of the industry, there has been a decided tendency to change from the excessively individualistic operations of years gone forever to the most considerate cooperative era planned by the sponsors of the New Deal, with all its promised advantages. Also in attempting to assume those advantages, macaroni-noodle manufacturers are expected to willingly assume certain responsibilities that are inherent in the rights and advantages offered by the Macaroni Code."

1935. With the end of the Code of Fair Competition in May, was marked by extremes in price and quality competition with great disregard for even the most common rules governing fair trade practices and very little was accomplished in the way of progressive action.



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GET CONSISTENTLY UNIFORM ENRICHMENT WITH

B-E-T-S

(The original food enrichment tablet)

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(Brand of food-enrichment mixture)

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Both enrich macaroni products to conform with federal standards of identity

THE RETAILER knows that enriched macaroni products have more sales appeal—move faster—give him the turnover he wants.

That's because more and more housewives today insist on foods that are enriched, knowing that they offer the best dollar value for they contain the most nutrition value.

All this adds up to increased sales, more profits for you when you enrich your macaroni products. And the profits grow even larger when you use Sterwin's modern enrichment methods. For enrichment by Sterwin is more economical... assures you of maximum accuracy at minimum cost.

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1936. Semolina at \$10 a barrel did not seem an impossibility, and durum prices kept going up. The cost of living increased more than 20% since the depression low in 1933, but macaroni prices dragged with some fairly good macaroni retailing as low as 8c a pound in bulk, and in packages as low as 6 packages for 25c.

1937. Historic action was taken at NMMA's annual convention in June when members took a progressive stand and approved a greatly expanded budget to allow for the many new activities taken over by the Association. Dues were trebled. Among the new activities was the organization of the National Macaroni Institute.

Determination marked 1938 as the macaroni-noodle industry was the first trade of major importance in the food field to police itself against unfair trade practices. The resultant code of trade practice rules was tentatively approved by greatly enlarged and more powerful Federal Trade Commission.

The country's first national "Wages and Hours Law" went into effect in October and was met with general acceptance.

1939. The start of World War II in Europe caused macaroni business to perk up after the long years of depression and slow recovery. Macaroni manufacturers worked around the clock supplying increased demands.

1940. NMMA worked on one of its most vexing problems so far—the elimination of what the Government designated as "defective" or "misleading" package. Through loss of surveys, conferences, and hard work, solutions were reached in mutual benefit of the government, the manufacturer and the consumer.

1941. War inspired export business kept macaroni business going. Fair and reasonable standards of identity were proposed by the Federal Food and Drug Association.

1942. Macaroni-noodle manufacturers were privileged to "Help Feed America." Choice meats were sent to American fighters everywhere, while the finest extenders were abundantly available to the rationed folks at home.

1943. Government agencies bought more macaroni, spaghetti and egg noodles than in all the preceding 150 years of government buying. Rationing only affected macaroni products indirectly, but by the end of the year production went into the doldrums which even winter demand did not uplift. Price ceilings came very close to production costs and in many cases became almost unbearable.

1944. NMMA helped manufacturers plan for the "V-Era" with a set of rules on plant expansion, pledges to workers now overseas, raw material buying, inventories, etc. War Food Administration officials were present at the summer convention in New York to give manufacturers pointers on macaroni production needs and methods in wartime.

1945. Peace once again, but the industry still faced serious problems in the



ROBERT M. GREEN

conversion from wartime regulations to peacetime practices and a slower pace. Most were still buttressed by a large backlog of unfilled orders at the close of the year, but it was time to start thinking. Enrichment was added to the standards of identity.

1946. War Food Order No. 144 compelled manufacturers to use a durum flour of 80 per cent durum extraction so that other hungry nations might be fed. Price ceilings were lifted, 2.8c a pound by OPA in June and then entirely taken off in October.

1947. The Government declared that plant sanitation must become a "Management Must." Wheat prices were high. Macaroni prices were firm with manufacturers' sales at from \$1.90 to \$1.95 per 20 pound box, bulk.

The National Macaroni Institute began a Spaghetti School with classes in various large cities.

1948. "Ten pounds per capita consumption" was the battle cry of the National Macaroni Institute. Contracts were drawn up whereby manufacturers pledged to contribute one cent for every 100 pounds of raw material converted into macaroni products. Lots of publicity was launched with a "National Noodle Contest."

The export market passed from its peak early in 1948 to a mere dribble by mid-year.

1949. The newly appointed Director of Public Relations for the now incorporated National Macaroni Institute, Robert M. Green, was named Secretary of the National Macaroni Manufacturers Association. M. J. Donna became Secretary Emeritus.

Theodore R. Sills & Company was appointed public relations counsel for the National Macaroni Institute.

President Harry S. Truman was presented his portrait done in macaroni.

1950. Despite severe competition in the food industry, macaroni production in 1950 equalled the high level of 1949

with reduced export shipments. Costs skyrocketed. "Industry pricing action was most orderly." A most promising durum crop was severely damaged by a new ice that developed in the last few weeks of the growing season.

The 1951 crop quality was excellent for those few who had planted early. Rooms at harvest time caused heavily sprout damaged crops. The long battle against "pastes" showed signs of concluding in a bulletin stating that the macaroni industry and macaroni products, as such, henceforth would not be referred to as pastes in so far as government references were concerned.

1952. A potato famine gave the macaroni market a needed spurt in production. Inflation warnings increased as food manufacturers saw labor and materials costs skyrocket.

1953. M. J. Donna retires as editor of the Macaroni Journal and Robert M. Green picks up the reins. Merchandising clinics were held around the country.

Six organizations teamed up for Lent, 1954, to advertise a Salmon-Macaroni Dinner. Industry efforts to get gross sales of more durum were expanded. "Some Like 'em Hot Some Like 'em Cold" sold macaroni products through the summer months. This was a golden anniversary year as the National Macaroni Manufacturers Association celebrated its 50th birthday. A Macaroni Festival was held in Devils Lake, North Dakota.

1955. Macaroni, tuna and evaporated milk combined for a prize-winning Lenter promotion on Tuna Macaroni Bake. A report was released by Consultant Franklin C. Bing on the available literature on the composition of macaroni. Macaroni Week Queen was movie starlet Sophia Loren.

1956. Public service television films, "Stag Party" and "Use Your Noodle," were premiered at the annual convention and released in the fall. Durum made a comeback with newly developed ruscacistant varieties producing almost 10,000 bushels.

"Noodles Around the Clock" told the macaroni story for 1957 with special emphasis during National Macaroni Week when noodles were promoted for breakfast, dessert, and snacks as well as lunch and dinner.

"Youth Will Be Served" was the theme in 1958. Trade Practice Rules for the industry were reviewed and revised. New rules were promulgated as of August 1, 1958. A classroom presentation on macaroni at the Waldorf-Astoria impressed delegates to the Food Editors Conference. Consumers ate more macaroni products in 1958 than any year since the war—per capita consumption rose to 7.5 pounds.

1959. Off to a fast start. National Macaroni Institute advertises nutritional benefits of macaroni, spaghetti and egg noodles in "What's New in Home Economics" and in the Journal of the American Medical Association. Record business for the first quarter.

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- Washes dies two to three times faster.
- Washes three round or three rectangular dies simultaneously.
- Eliminates double handling of dies.
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- Features high velocity rinse to penetrate the smallest die holes.
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No maintenance because there are no moving parts, chains, sprockets, moving racks in die cleansing area.

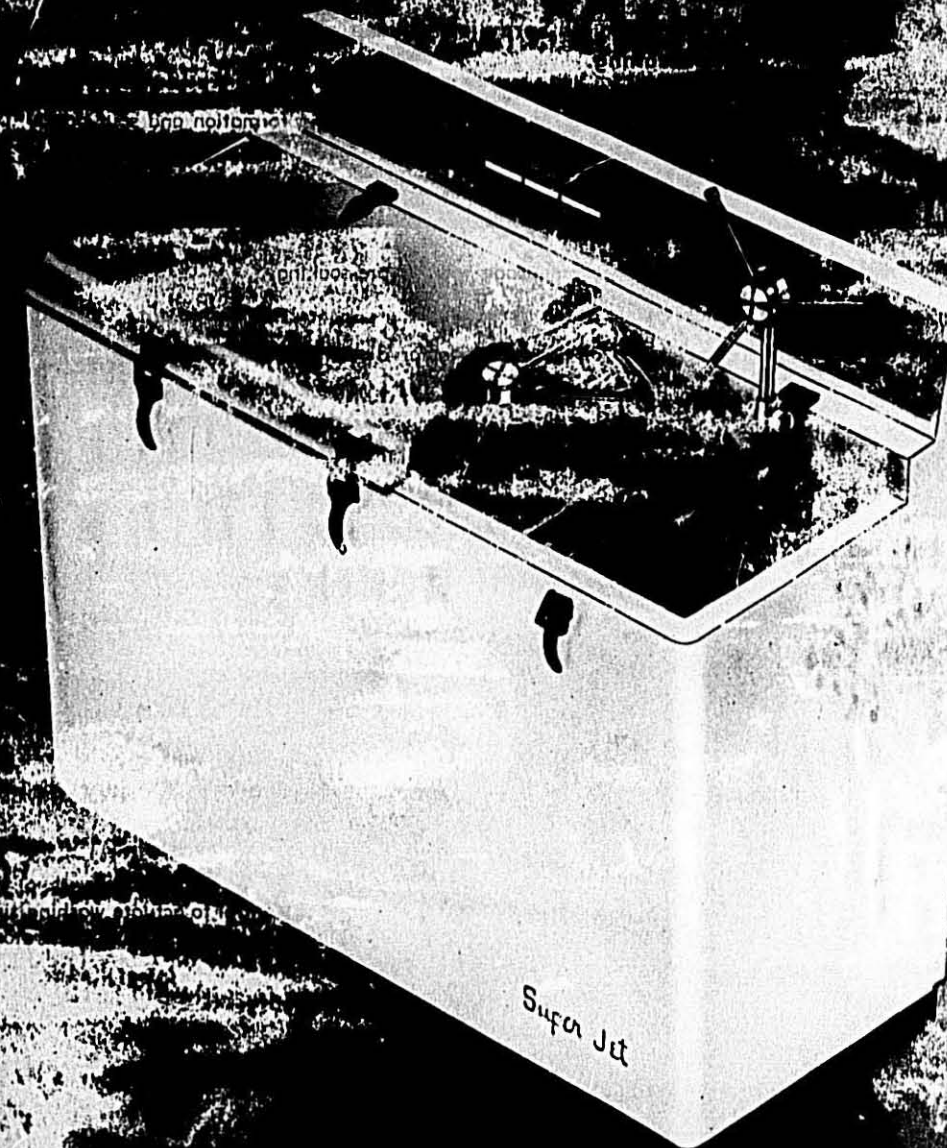
DIALS ON CONTROL PANEL INCLUDE:

Washing instructions for varying die styles. Automatic control to actuate washing time. Push button controls for washing one, two or three dies. Monitor control to tell operator what is taking place during the washing process.

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Durum Division

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Durum Show

COLD weather did not deter record crowds from attending the 21st annual North Dakota State Durum Show held in Langdon in mid-February.

Palmer Dahlgren of Adams was crowned North Dakota Durum King and received the Sweepstakes Trophy from the National Macaroni Manufacturers Association.

Winner of the Reserve Championship and first in the Open Class was Marvin Raknem of Edmore.

Dahlgren, who received the top trophy and another for first in the professional classification, won for the second year in a row. The professional class is made up of winners in previous years' open class competition.

There were 298 entries in the show's open class, 10 in the professional class, and 9 each in 4-H and Future Farmers of America classes.

Macaroni Luncheon

The National Macaroni Manufacturers Association held a pre-show luncheon at the Wagon Wheel Cafe for county agents and Durum Show dignitaries to have a round-table discussion on durum matters. Paramount among the questions asked were whether or not the industry is using all durum; reasons why durum seems to be discounted more quickly than hard red spring wheat when it goes to market; and what are the prospects for increased acreage in 1959.

Macaroni manufacturers were represented by Maurice J. Ryan, chairman of the Durum Relations Committee, and Thomas Feeney of the Minnesota Macaroni Company. Charles Hoskins, industrial consultant, and Association Secretary Robert Green also represented macaroni interests. Ray Wentzel of Doughboy Industries took part in the round-table discussions to bring the benefit of the durum millers' thinking to the problems.

New Organization

A newly formed Durum Growers Association is plugging hard for a State Wheat Commission to promote durum and hard red spring wheat. Richard Crockett, chairman of the new organization, declared, "The durum problem is submerged in the total wheat picture. It must be removed to give it the special consideration it deserves as a specialty crop." He went on to say that the durum business could be increased from the \$70 million volume it enjoys now to more than \$100 million.

North Dakota growers oppose incentive legislation like that of 1956-57 which brought Montana into the picture. They favor the establishment of a board representing macaroni manufacturers, durum millers, and durum growers to

appraise the sales outlook and carryover situation, and then make recommendations to the Secretary of Agriculture for the establishment of quotas which would be apart from the wheat allotment program. Growers raising 100% durum could raise unlimited acreage to meet the quota which would be set annually. This would tend to make the grower a specialist, give him incentives and premiums to buy dryers and other equipment and to produce better quality wheat. It would also keep durum "in its natural home."

Many growers who raised 100% durum for many years before the rust epidemic now grow hard wheat as well as durum. They look at it this way — rust virtually ruined their crop for three years in a row. Then the increased acreage allotment program brought in marginal growers who produced a large quantity of durum and prices dropped. In 1957 the crop was badly hurt by sprout damage, and a great deal of the grower's durum was sold at discount. They have not had these problems with hard wheat, and the new variety Selkirk has yielded almost as much as durum right in the durum area.

It is the opinion of some objective observers that while there will be an increase in the planting of durum this spring, it will be smaller than necessary to supply the full needs of the macaroni industry. For the long run it is essential that macaroni manufacturers, durum millers and durum producers work to solve some of the basic problems of

durum production. Specifically, more money and effort should be put behind the durum breeding program aimed at the development of durum with shorter straw which will not lodge so easily, a greater resistance to sprouting, a greater yield per acre and a shorter growing season. In this program attention should be paid to macaroni-making qualities as well as growing characteristics.

Durum Campaign

A long term campaign should begin immediately to convince governmental officials that durum is a specialty crop and should not be lumped in with wheat in farm legislation. It doesn't make sense to set acreage controls on durum which is in short supply because bread wheat is being over-produced.

The growers have suggested that there should be regular meetings between representatives of the durum mills and macaroni manufacturers along with the durum growers to discuss mutual problems. It is expected that such a program will be set in motion this year.

Spaghetti Lunch

"Spaghetti Lunch," a ready-to-eat canned food item containing spaghetti, meat, beans, and sauce, has been introduced by Castleberry's Food Co., Augusta, Georgia. The line includes 8-ounce and 16-ounce cans, and 6½ pound cans for institutional use. American Can Company supplies the cans; Commercial Printers, Columbus, Georgia, the labels.



Durum Champion—A durum grower from Adams, N. D., Palmer Dahlgren, (left) is North Dakota Durum King for the second straight year. Dahlgren, who is looking at macaroni made from 100 percent durum, won first place in the professional class. At right is Marvin Raknem, Edmore, N. D., winner of first place in the open class, and reserve champion.



More Eye-Appeal in the package!
More Taste-Appeal on the table!

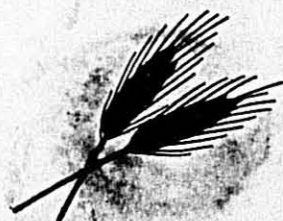
On the grocer's shelf they reach for it first... at home they go for it most — if it's macaroni or spaghetti made from quality semolina and durum flours milled at the North Dakota Mill and Elevator from 100% durum wheat.

Grown and milled in the heart of the world's greatest durum area

NORTH DAKOTA MILL AND ELEVATOR
Flour Milling Division  Grand Forks, North Dakota
FORTIETH ANNIVERSARY — MACARONI JOURNAL

More Durum Needed

By Robert M. Green, Executive Secretary, National Macaroni Manufacturers Association, at the North Dakota State Durum Show.



THE macaroni industry needs more durum wheat.

1958 was a big year for macaroni sales and durum consumption. 1,266,000,000 pounds of macaroni were produced—11% more than in 1957 and 11% more than the previous record high year of 1948 when the industry was working around the clock on export business.

Consumption Up, Acreage Down

Per capita consumption of macaroni products rose from 6.6 pounds in 1957 to 7.3 pounds in 1958. While there were many factors that accounted for this increase, the industry believes the two primary ones to be successful industry commodity promotion coupled with individual brand promotion, and because there was enough durum available for the production of quality products.

Historically, macaroni consumption has gone up when durum was in plentiful supply—gone down when it was in short supply. From the post-war low of 6 pounds per person in 1947, macaroni sales rose to 6.8 pounds per person in 1951. This was largely attributed to the product promotion work of the newly established National Macaroni Institute.

It was in 1950 that the dreaded rust 15-B first appeared. It struck again in 1951 and with a third consecutive appearance in 1952 durum production was cut from some 40,000,000 bushels to just over 23,000,000 bushels.

Acreage was cut below the 2,000,000 mark for the first time in many, many years in 1953, and because of the shortage of supply the macaroni industry was forced to go off the durum standard and work with a blend of 50% durum and 50% hard wheat. Consumption fell immediately from the 6.8 pounds of 1952 to 6.4 pounds. It dipped to 6.3 pounds following the crop catastrophe of 1954.

The real comeback, made possible by the new rust resistant varieties, came in 1956. 100% durum semolina was available again for the first time in several years in 1957 and consumption rose to 6.6 pounds. In 1958 it had the sharp increase to 7.3 pounds.

Problems All the Way

Now, there are problems connected with every single step along the way of getting durum from the field to the table, and we might do well to take a brief look at some of them.

The consumer is the starting-point, for she calls the tune for the success or failure of any food product. She is primarily interested in providing her family with

good nutritious food that they like and will want again.

Macaroni has an advantage in that it combines readily with other foods and can be served in dishes from soup to deserts. It can capitalize on the current trend towards convenience and glamorous foreign dishes for gourmet tastes and entertaining. It can be served simply as a budget-stretcher.

Macaroni has the same sales obstacle as other cereal foods—people think it's fattening. We are attempting to overcome this problem by advertising the nutritive values of macaroni and noodles to doctors in the Journal of the American Medical Association, to teachers and home economists in their publications, to the general public in every medium. By pointing out the protein content and vitamin and mineral enrichment we have a good story to tell. A complete dinner menu of spaghetti with rich beef and tomato sauce, a tossed green salad, half a cling peach for dessert with black coffee, has only 550 calories—great for any diet!

Two out of three macaroni sales in the grocery store according to research are made on impulse. Therefore the package and the product must be attractive to make that on-the-spot sale. Repeat business is dependent upon satisfaction in cooking and eating. Here is where durum is so important—it has more cooking tolerance and less tendency for starch to slough off in the cooking water. Connoisseurs say durum tastes better, but even a blend properly cooked can be mighty good eating.

Consumer Wants Uniformity

The important thing is that the consumer wants uniform results—she wants the same product in the same package time after time. She is not so much concerned with whether it's 100%, 75% or 50% one ingredient or another but whether or not it gives her satisfactory results.

The grocer from whom the consumer buys the macaroni is interested primarily in having a product for which there is demand and moves quickly off his shelves at the best possible return. It is up to the macaroni manufacturer to move the product for the grocer. On special occasions he can get the grocer to cooperate in putting up special displays on related item promotions, but this takes some doing when macaroni contributes only a small portion of store sales and is one of some 5,000 items carried in supermarket stock.

In order to create consumer demand, the macaroni manufacturer must have a product over which he can be enthusiastic, attractively packaged, and sold in competition not only with every other brand of macaroni products but in competition with every other kind of food seeking a place on the American dinner table. Somehow he has to convince Mr. Grocer that his product is the line to carry instead of that of a competitor, for unless he is on the grocery shelf Mrs. Consumer will never buy his package.

The most eloquent testimony that this is truly a competitive business is the fact that the U. S. Census of Manufacturers in 1959 counted 356 units making macaroni. In 1954 they counted 226. Our records indicate that there are less than 175 of any consequence.

The macaroni manufacturer buys his raw materials from the miller. There are seven mills equipped to handle durum, centered chiefly in the Minneapolis area. They must compete against one another for macaroni manufacturers' patronage in offering uniform products of best quality. If they fail, or if they do not have sufficient durum to work with, they lose business to mills competing with them for other types or flour trade in every state in the Union.

The millers, just like any other business men, have to buy the best material possible at the best price they can in order to satisfy their trade and make enough return to stay in business. By the same token, we are aware that we are competing for acreage on your farms against hard wheat, barley and flax, and you will raise the products that you think will bring you the greatest dollar return.

All Must Profit

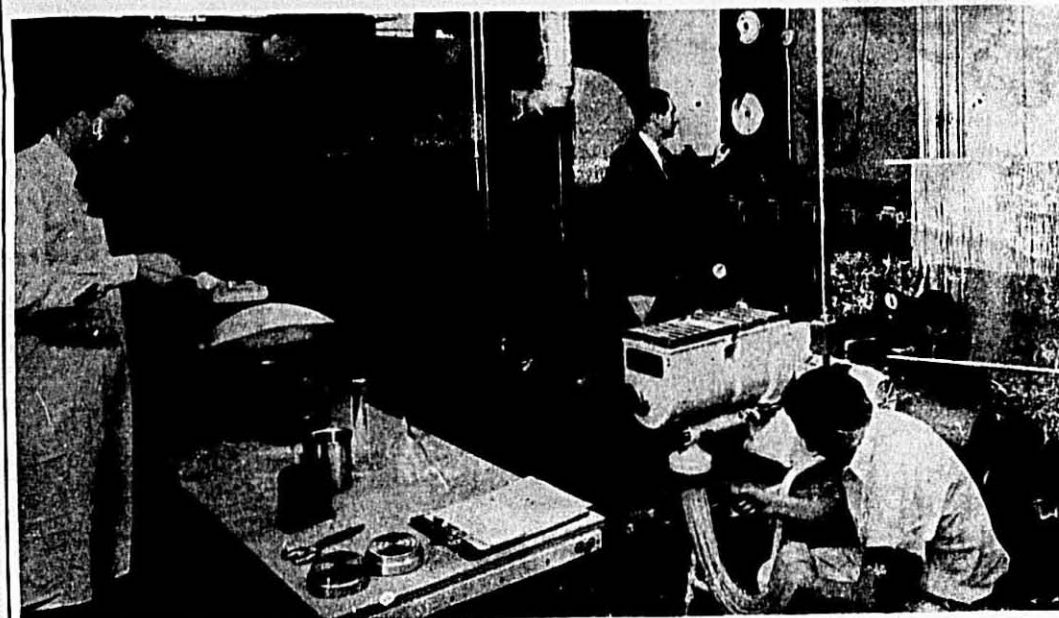
Nobody is in business for fun. We all expect to make a profit. We have to, to keep our heads above water. Durum has always commanded a premium over hard wheat. Hard wheat is in surplus supply. Durum is in short supply.

You can make more money if you keep the macaroni industry on the durum standard. You can lose this market if there is a short crop, and it will be hard to get back. This year—1959, we will have to have 1,500,000 acres seeded to durum producing an average of 20 bushels to the acre.

Next year with 4,000,000 more mouths to feed and another three-quarters of a pound gain in per capita consumption, we will need an additional 300,000 acres planted to durum.

This is our sales forecast. We hope you agree and act accordingly.

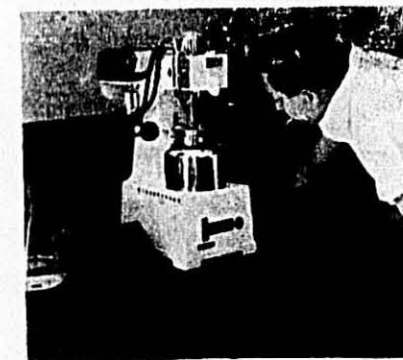
IMPORTANT NEW TOOLS for the MACARONI INDUSTRY



Fully equipped macaroni-noodle pilot plant at the food technology laboratory. Charles M. Hoskins at left, Laboratory Director Elmer Glabe sets dryer control instruments. Perry Anderson, Chief Chemist, tends the continuous press.



Left: Chemist Art. Holtorf and the Farinograph



Right: Chief Chemist Perry Anderson and the Amylograph

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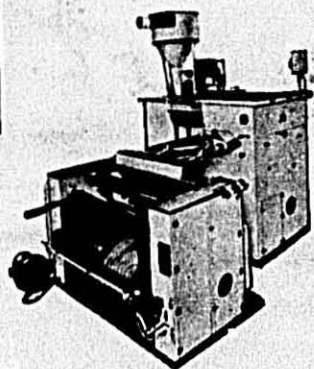
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Libertyville, Illinois

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Chicago 31, Illinois

In automatic macaroni presses and Dryers

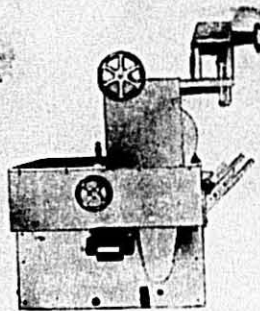
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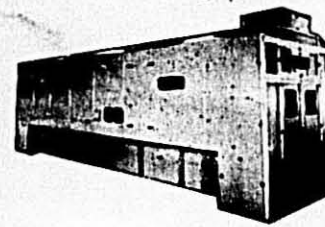
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A Long Goods Preliminary Drying room that will exit product uniform at 21%, no extra second stage required. Dual Air Control to insure even drying across entire stick. Now DeMaco design and patented positive slip up and transfers. Fully controlled with Taylor Temperature and Humidity controls, fin type steam coil electrical controls, engineer aluminum fans.



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Long Goods Finish Drying rooms that are fully automatic and will dry day in and day out to the moisture content you desire. Only DeMaco offers you the greatest space savings. Eight DeMaco rooms will dry the output of two Spreaders working twenty-four hours per day.



THIS?

Short Cut Dryers with NO hidden extras. Included are steam coils, electrical controls, aluminum side baffles for each screen, main vari-drive, dual air chamber design with maximum efficiency and uniform drying across screen. Perfect short cut drying in 3 sections, a 32'-0" Preliminary, a 40'-0" 2nd Stage and a 40'-0" Finish Stage up to 1500 lbs. of elbow.

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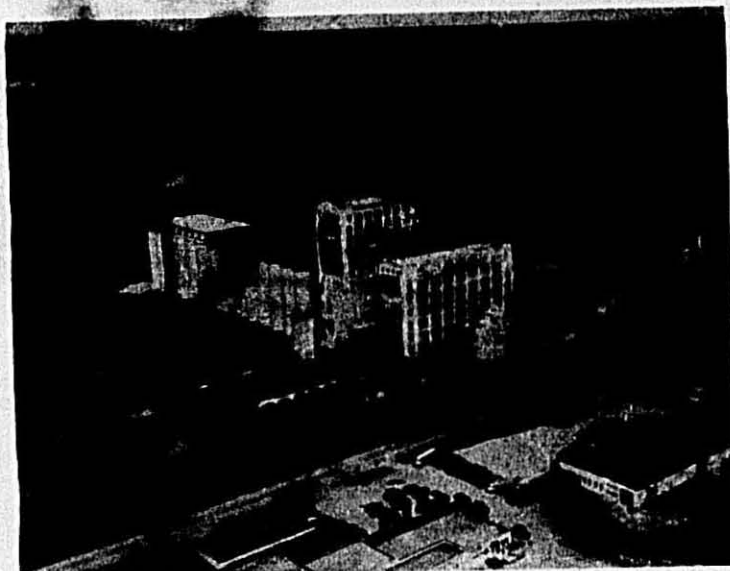
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Mill in the Wheat Fields



North Dakota Mill and Elevator

IT'S AMAZING!

These two words reflect the genuine surprise of many durum semolina and flour buyers when they first view the aerial photograph of the North Dakota Mill and Elevator, located at Grand Forks, North Dakota.

The air-photo graphically illustrates the near adjacency of this multi-million dollar mill to the nearby growing wheat fields. It is literally within a short walk from the mill to the fields.

Recently, a sales representative of the North Dakota Mill and Elevator was in the office of a New York City client. Upon seeing the air-view of the mill, the New Yorker exclaimed: "I can't believe it. When I look out my window, all I see are skyscrapers, commercial buildings, and traffic. Your mill is as close to the wheat fields as my house is to its lawn."

"The fertile, rich prairies of the famed Red River Valley wheat producing areas are literally at our back door," states P. R. Fossen, general manager of the North Dakota Mill and Elevator. "This key location brings us in close contact with the durum wheat fields and durum growers."

Close Contact

"We have grown up with the durum wheat areas," continues Fossen. "And, we have a personal acquaintanceship with hundreds of the durum growers. We know them on a first-name basis in many cases, and because of our convenient location, they frequently drop in for a visit."

This location is a prime factor in the close relationships that exist between the

durum growers of North Dakota and Minnesota, and with the North Dakota Mill and Elevator. The mill can lend a nearby "helping hand" in many ways to encourage the production of best quality durum wheat. The raising of durum wheat is no "mystery" to the staff of the North Dakota Mill and Elevator. They can actually watch the crop from seeding to harvest.

Durum Support

The North Dakota Mill and Elevator lends its support to the durum wheat growers in many ways. It has been active in the Durum Show, held annually in Langdon, North Dakota. Alma Oehler, advertising manager and home economist of the mill, has conducted public demonstrations and cooking schools for many years, showing housewives the best methods of preparing macaroni and spaghetti dishes.

The North Dakota Mill and Elevator is a member of the durum division of the Wheat Flour Institute. Over the years, the mill has donated many prizes for best new varieties in wheat development. The mill is a member of the Northwest Crop Improvement Association.

The North Dakota Mill and Elevator works closely in liaison with the State Agricultural College and Experiment Station at Fargo, North Dakota. Dr. Glenn Smith, a second generation agronomist, is located at this school, where he conducts his experimental work. He is recognized as an outstanding authority on durum plant breeding.

Field representatives of the North Dakota Mill and Elevator travel through-

out the durum wheat producing areas of the Northwest. Many durum growers drop in frequently for personal visits at the main plant of the mill and at the two local elevators, which flank the main facilities.

Con Lillgard, grain buyer for the North Dakota Mill and Elevator, is one of the pioneer durum men in this area. His office is frequently a "hot stove" corner for discussions with durum producers on their problems.

Durum Handling

The bulk of the boxcars of durum grain from the northern half of North Dakota are routed through Grand Forks, North Dakota, where the grain is checked by Federal grain inspectors. An office is maintained in the administration building of the North Dakota Mill and Elevator by the Federal Grain Inspection Department. Samples of this grain are made available to grain buyers of the mill. The prompt handling of the durum crops by these inspectors has been a great asset to elevator operators and growers. Storage facilities at the North Dakota Mill and Elevator can handle three and one quarter million bushels of grain.

The North Dakota Mill and Elevator cooperates on tours with visiting groups, both through the mill itself and in field trips in the growing areas.

The mill has always kept pace with progress, and has one of the finest, most modern durum flour milling plants in the nation. (This modernization was described in the *Macaroni Journal* issue of April, 1956.)

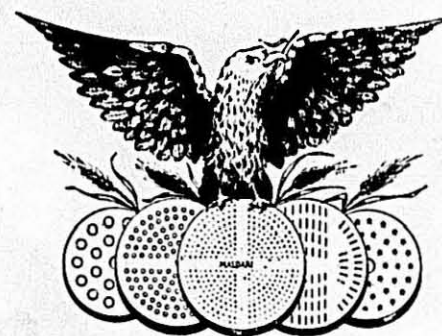
Key to Quality

One of the keys to producing top quality durum semolina and flour is found in the modern laboratory, housed on the second floor of the administration building. Here is where exhaustive tests are made to study protein, color and other analysis of the durum products. Milling tests are made on experimental varieties of durum, and samples are analyzed from many durum growing areas.

This laboratory is supervised by three men of extensive experience in the milling industry. William Brezden is production manager, with Sam Kuhl as assistant production manager and laboratory control supervisor. Herbert Morque, a chemist who has been in the mill laboratory work for over 32 years, is a third member of this trio that combine their talents to work for top quality products.

Representatives of the North Dakota Mill and Elevator attend area meetings throughout the Upper Midwest states, and also attend the National Macaroni Conventions. At a recent meeting of the

(Continued on page 56)



*Time tested, time proved,
time honored*

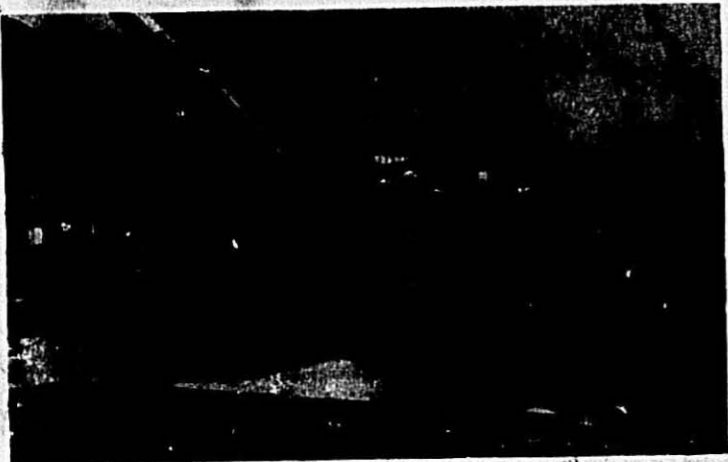
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1903 — Management Continuously Retained in Same Family — 1959.

Grain Handling by G. T. A.



Loading grain at G.T.A.'s St. Paul terminal elevator.

PLAYING a key role in the story of durum wheat, as it journeys from the farm to the nation's dinner tables, is an organization formed slightly more than 20 years ago by Upper Midwest farmers using \$50 million of borrowed capital.

At the end of the past fiscal year, that organization—Farmers Union Grain Terminal Association—had grown to a net worth of more than \$35 million. An important factor in this growth was the durum produced in North Dakota's world-famed Durum Triangle, in Montana, in South Dakota and in Minnesota—the four states served by G.T.A.

Largest Durum Handler

The regional grain marketing cooperative headed by General Manager M. W. Thatcher is the largest handler of durum in the U. S. and a large miller of quality semolina. It has been estimated by reliable sources that the G.T.A. handles approximately one-third of all the durum handled on the Minneapolis and Duluth cash markets.

A perusal of the location of G.T.A. elevators, from local affiliates up through the biggest of its terminals, makes it apparent that durum wheat is playing and has played a large part in the success of the co-op, just as the co-op is playing a major role in the marketing of that commodity.

G.T.A. has an elevator, either one of its Line division or an affiliate, located at every important durum shipping point in each of the four states which produce all of the nation's durum wheat.

Then, as the durum takes the next step from farm to market, the regional co-op has five of its substantial system of terminal and subterminal elevators located at the strategic sites of Minneapolis (2), St. Paul, Superior, Wisconsin, and Rush City, Minnesota.

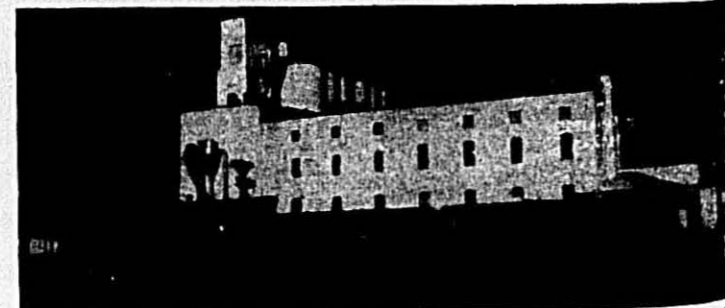
The Minneapolis terminal, with a combined capacity of 2.6 million bushels, is located to handle durum and other spring wheats as they arrived for handling on the world's largest spring wheat market, in Minneapolis.



Grain being moved by conveyor belts at the huge G.T.A. terminal at Superior, Wisconsin.

The recently-expanded G.T.A. riverfront terminal in St. Paul serves as the starting point for much of the durum that moves southward via the Mississippi River for export.

The huge G.T.A. terminal at Superior—the world's largest inland port elevator



G.T.A. terminal and durum mill at Rush City, Minnesota, with part of the mills' fleet of bulk Airslide cars.

with a capacity of 18.4 million bushels—stands ready to receive durum for shipment to durum milling points in the eastern part of the U. S. via the Great Lakes, and the use in the growing U. S. export durum trade.

Located directly between the big G.T.A. terminals in the Twin Cities and Superior is the subterminal at Rush City with a capacity of 200,000 bushels, which serves as the base for the co-op's Amber Milling division. The G.T.A. durum mill there has immediate access to the choicest of durums from the terminals in Minneapolis and St. Paul and at the Head of the Lakes.

A considerable amount of durum has been handled in recent years, too, at the co-op's Great Falls, Montana, terminal, which boasts a capacity of 600,000 bushels.

20th Anniversary

The G.T.A. celebrated 20 years of progress at its most recent annual stockholders' meeting in its headquarters city of St. Paul.

During that double decade the co-op which was organized by a group of Upper Midwest farmers on borrowed money for the purpose of marketing their grain cooperatively has grown into an organization having more than 600 elevators throughout Minnesota, the two Dakotas and Montana and a system of nine terminals and subterminals.

The terminals and subterminals have a total capacity of 29.1 million bushels, more than nine million of which was added during the past year. They are located at Superior, Wis., 18.4 million bushels; St. Paul, 5.2 million bushels; Minneapolis "M," 1.3 million bushels; Minneapolis "G.N.," 1.3 million bushels; Shelby, Mont., 750,000 bushels; Lewistown, Mont., 500,000 bushels; Great Falls, Mont., 600,000 bushels; Rush City, Minn., 200,000 bushels, and Sioux City, Iowa, 850,000 bushels. All are owned by the more than 200,000 farm families who own G.T.A., as are the co-op's Line elevators.

(Continued on page 58)

Buhler Brothers, Swiss Engineers

BUHLER BROTHERS, Engineers, Uzwil, Switzerland, is presently one of the largest family concerns in the Swiss machine industry. It is progressively headed by Mr. Adolph Buhler and Dr. Rene Buhler.

The Buhler organization now employs approximately 2750 people. It holds an important position within the Swiss economy.

Today's plants in Uzwil cover an area of approximately one million square feet. Additional domestic (as well as foreign) plants are attached to the head office, such as the high productive die casting plant in St. Gall. The Buhler roll foundry recently was made part of the very modern Sulzer Iron Foundry.

Founded in 1860

The Buhler firm was founded during 1860. Mr. Adolph Buhler, grandfather of the present owners, at that time opened a small foundry with five workmen in a small shop of 1000 square feet area. Due to the high quality of its products, the original organization grew quickly and during 1870 the first roller mills for the flour milling industry were manufactured.

Then came manufacturing of conveying plants of all kinds and equipment for the feed milling, oil milling, chocolate factories and macaroni manufacturing.

Wide-scale and modernly-equipped laboratories and prototype work shops serve to experiment on new ideas. A large staff of experienced engineers and draftsmen form the nucleus from which the quality products emerge. Many of these have undergone a four-year apprenticeship in the well-known apprentice school. Advanced benefits, such as spare time organizations, sports and social activities, pension funds



(1) Dr. Rene Buhler and Adolf Buhler, present owners of Buhler Brothers.

and hospitalization make for a harmonious staff of employees.

Buhler Schools

Two years ago Buhler Brothers, Uzwil, together with neighborhood firms founded a state-approved night engineering school in St. Gall. Intelligent and ambitious specialists and designers can attain an engineering degree after eight semesters.

Shortly thereafter, a flour milling school also was founded by Buhler Brothers in the same city. Flour milling specialists become head millers after a one-year course, many of whom later on

are in charge of technical operations of domestic and foreign flour mills.

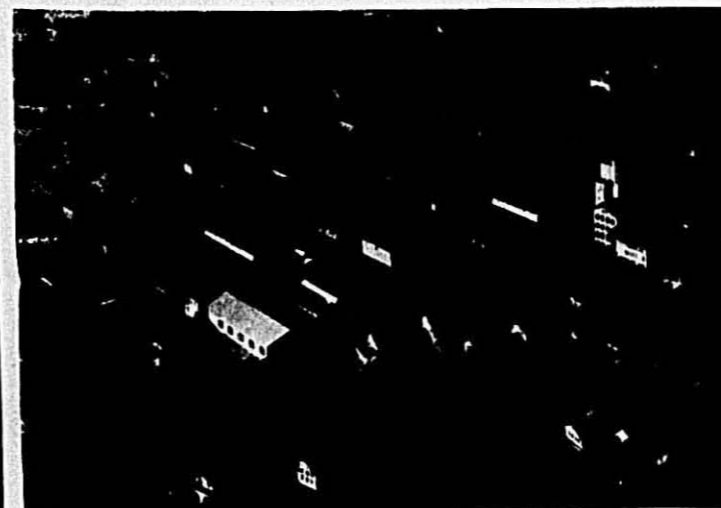
A subdivision of the milling school is the macaroni school for people from the macaroni industry. Already two courses have been completed with great success. It is intended to teach this special course in French and English, if demand warrants. Anyone working in the macaroni industry with basic schooling and practical experience can attend.

Equipment Exports

Most Swiss concerns as well as Buhler Brothers depend upon exporting of their products. Ninety per cent of the equipment is installed in countries of the five continents. An intricate and well-organized sales organization covers the whole world. Approximately 500 experienced specialists assist customers in the various fields from the branch offices. The strict politics of several countries result in high import duties, and restrictions on imports as well as monetary exchange. Therefore, the supply of complete plants from Switzerland to these countries sometimes is connected with great difficulties. To serve these customers, Buhler branches have started their own manufacturing where parts and smaller machines are made, according to the original plans. Most foreign branches have their own engineering offices.

In the development and modernizing of the macaroni industry, Buhler Brothers has played an important role. In Europe, mechanical manufacturing of macaroni products can be traced back to the Middle Age. A simple, although primitive, industrial fabrication only began during the second part of the last

(Continued on page 62)



(2) Aerial view of plant at Uzwil, Switzerland, in 1955.

not once...not twice...but **3** times

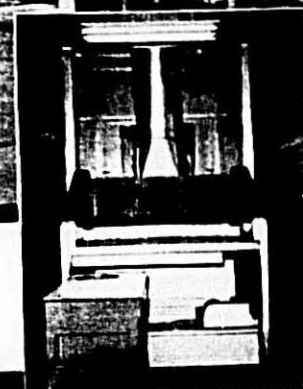
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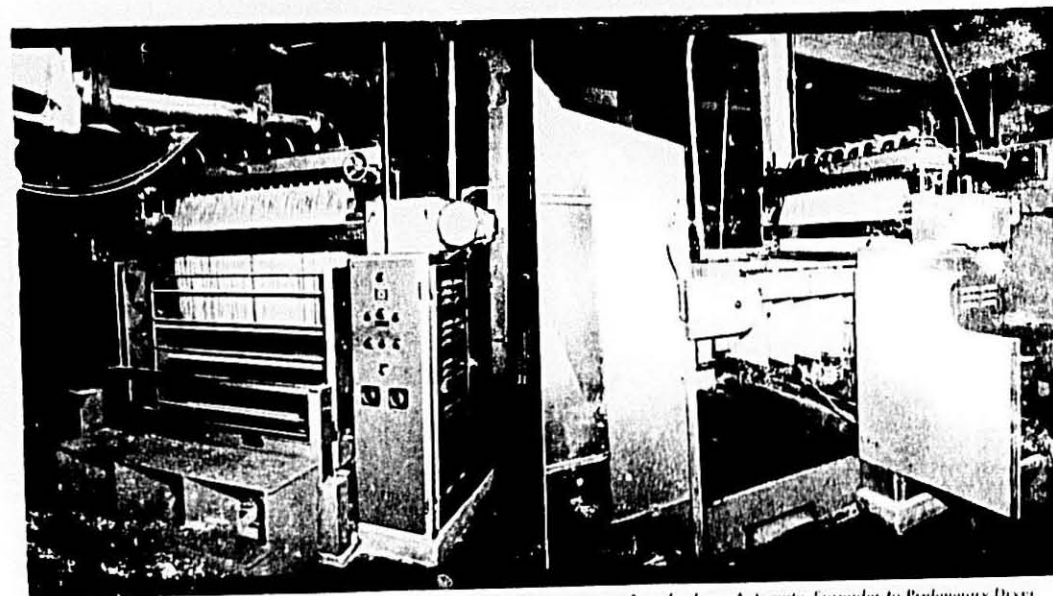
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What The Milling Industry Expects In Quality of Durum Wheats

By E. V. Hetherington, General Mills, Inc., at the Spring Wheat Conference,
Fargo, North Dakota

DURUM wheat is grown primarily to eat in the processed form of macaroni, spaghetti, noodles, and related products. The manner in which durum wheat performs during the milling process, during the macaroni, spaghetti, and noodle processes, and the ultimate consumer cooking and eating processes are of fundamental importance in considering desired quality. Plant breeders throughout the world are all these factors in developing new durum wheat varieties.

Ideas of quality sometimes change. Predictions are risky and extensions of trends are often erroneous. We cannot use a crystal ball to detail development in the milling and macaroni industries. The future will depend ultimately on that most variable factor, the human element—his likes and dislikes, habits and inventions. However, in looking backward, tracing the changes in processing along with the human likes and dislikes and carefully considering trends and their logical direction, we should be able to arrive at the requirements of durum wheat in the years ahead.

Product Production

Production of durum products in the United States did not assume commercial importance until about 1900. Production increase was low until World War I, at which time growth of the durum milling industry started increasing rapidly. At this time more mills were converted or specially equipped to mill semolina and durum flour. Slow but continuing progress has been made in milling equipment and milling techniques since that time to allow for maximum milling efficiency and increased quality of durum products. From the beginning, however, there has been little change in the type of durum wheat the miller desired for optimum milling quality.

Based on present milling practices, which probably will extend into the foreseeable future, the miller is desirous of having an ample supply of durum wheat that has good amber or desired yellow color, ample gluten quality, hard endosperm, plump berries, a bran coat that is easily removed and free from black point or bran blemishes. Durum wheat of this type will allow for maximum milling quality by present milling techniques. As previously indicated, it is difficult to predict the future, but it does appear that these durum wheat factors would be desirable even though major changes are made in milling practices. The macaroni industry, like the durum milling industry, started development in



E. V. HETHERINGTON

this country at about the turn of the century, but it was not until World War I that large production was attained. Since then production of macaroni, spaghetti, and noodle products has been on the increase. During the early years, production of products was limited to the batch process of mixing, kneading, extruding, and drying. Amber or desired yellow color of the product was of prime importance, followed closely in importance by the quantity and quality of gluten. During the early 40's, the macaroni and noodle industry saw the introduction of continuous automatic processing equipment. Such equipment allowed for the production of some products in 6 to 10 hours on a continuous basis. This change in processing was helpful in producing more uniform and better colored products. It did not, however, lessen the desire for maximum color of semolina and durum flour along with ample quality protein. In the early 1950's, the vacuum process was added to the automatic macaroni and noodle processing equipment. The vacuum removes the air from the dough during processing and thus allows for a more compressed and a more amber or yellow colored product. Here again, this improvement in processing technique did not lessen the desire for durum product raw materials of maximum color and ample quality protein. Therefore, as progress has been made in milling and macaroni processing techniques which have allowed for improved quality, there has been no let up in the desire for additional improvement of quality.

The foregoing backward look shows what has been strived for in durum production. There has been a constant drive for quality in color and protein or gluten strength. This undeviating course, I believe, gives the trend that might be

expected in the future.

This constant drive for quality of durum products by the macaroni and durum milling industries has been responsible for the continuing increase in consumption of macaroni and noodle products. It is well recognized by the macaroni and durum milling industries that the increase in production of durum products has been made possible by the use of durum wheat which lends itself to a greater degree in the production of quality macaroni and noodle products than any other class of wheat. Durum wheat is particularly adapted to use in the production of macaroni and noodle because of its hard endosperm which allows for production of semolina or granular products with rich yellow color and desired gluten quality.

Durum growers are desirous of having durum seed wheat that not only meets the quality standards desired by the milling and macaroni industries, but also durum wheat that resists rust and disease and has the ability to outyield or yield as well as other classes of wheat. Such durum wheat, then, will allow for a continuing and increasing market for durum wheat. With an ample supply of quality durum wheat, there will be no place for the use of other types of wheat, which are not so well suited, for the production of macaroni and noodle products. With such a program as this, the durum milling and macaroni industries would be assured of a continuing supply of quality durum and the durum growers would have a captive and increasing outlet for the durum wheat they grow and at a premium price.

Everyone Wants Quality

It seems to be a most happy fact that the consumer enjoys better macaroni dishes when good durum wheat is used—the farmer obtains a better return, and is assured of a growing domestic market, and the macaroni, grain and milling industries are mutually benefited by ample supplies of quality durum wheat. Consequently, any program that can help everyone certainly should have the support of everyone!

In summary, then, "What the milling industry expects in quality of durum wheats," which must also include what the milling industry customers expect, is as follows:

1. An ample supply of quality durum wheats. To have such a continuing supply, durum wheats must be able to resist rust, disease and other agronomic adversities and outyield breadwheat varieties, such as Selkirk.

(Continued on page 46)

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International — Bulk Flour Specialists

International Milling Company began from a small, rented country mill at New Prague, Minnesota, to one of the largest millers of flour in the world and one of the leading suppliers of semolina and durum flour to the macaroni and noodle industries.

Today the company operates 21 flour mills in the United States, Canada and South America. Four of these mills are devoted to the milling of semolina and other durum products.

Research and Engineering

Scientific research and engineering have played important roles in International's steady growth. The company was quick to recognize the potentialities and the tremendous advantages of bulk flour to the baking and macaroni industries. International was one of the early pioneers in the handling, shipping and storing of bulk flour and semolina.

Prior to entering the field of bulk flour engineering last year, International had done extensive research in bulk flour handling for several years in its own plants throughout the United States. The company also worked closely with General American Transportation Corporation in field testing the original "Transite" bulk flour rail car, as well as today's "Airslide" car.

As a natural outgrowth of this, and in cooperation with major truck trailer transportation companies, International developed its own bulk flour truck, which utilizes similar "Airslide" unloading principles. Today International operates the largest fleet of bulk flour trucks in the



During a demonstration at International's Detroit, Michigan, mill are a bulk slide car and portable transfer device. These are the three principal units that contribute International's efficiency and flexibility in bulk flour handling and transportation.

country, and uses more "Airslide" cars than any other milling company. Even with the development of efficient bulk flour transportation and equipment early in 1951, International realized that from an engineering standpoint, the possibilities of bulk flour handling could not be fully utilized by either bakers or macaroni manufacturers. Bulk flour handling was still in its infancy outside of the milling industry and very few bulk flour engineering services were available at reasonable cost. Utilizing its own experience in this field, International organized a

bulk flour engineering department as a service to the baking and macaroni industries.

Chief Accomplishments

Chief among International's accomplishments in this field are designs on bins utilizing the variable pitch screw conveyor and "Airslide" principles for bulk flour installations. These bins helped to minimize maintenance and sanitation problems. In this same area, International pioneered in the application of pneumatic unloading and "in-plant" systems, working out engineering refinements that result in more efficient, trouble-free operation.

International's contributions to the rapid growth and technological advancement of bulk materials handling culminated last year when the company released to the macaroni and baking industries at large all rights to its pending and issued patents on bulk flour bin design and installation techniques. The company felt that with the growing number of fabric companies providing bulk flour engineering services, its original contribution in this field had been accomplished, and discontinuing its bulk flour engineering services. International has been concentrating on expanding its flour engineering services and facilities to better serve the macaroni and baking industries.

Scientific Experiments

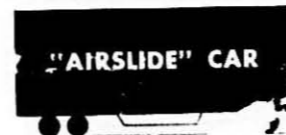
In addition to its bulk flour engineering services, International has been active in the field of scientific research. From an milling semolina and other durum products are valuable service features to macaroni manufacturers. The Babyns, New York, mill serves the heavy eastern market, the two mills at St. Paul, Minnesota, serve most of the rest of the United States, and the durum mill at

(Continued on page 92)

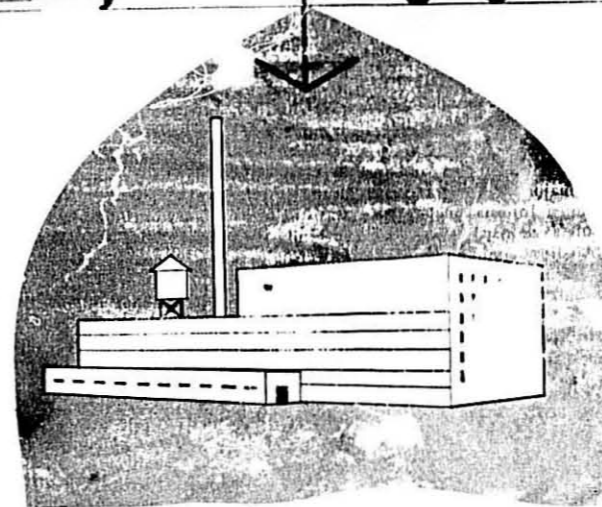


The color is most important, says head miller Lloyd Wall of International Milling Company's Capital "B" mill in St. Paul, Minn. Examining the finished, packed samples of semolina are Senzo Otsuki (left) and Makoto Kaneta (center), Japanese science teacher. The Japanese teachers are members of a group of 12 foreign secondary school science teachers who toured the mill. They are studying in the U. S. under the International Teachers Development program which is under the auspices of the U. S. Office of Education.

SAVE with BULK DELIVERY from International



Bulk handling can mean savings to you. International stands ready to serve you by "Airslide" rail car or bulk truck delivery from strategically located mills in St. Paul and Babyns, Minn.



International
MILLING COMPANY

ST. PAUL DIVISION
GENERAL OFFICES: MINNEAPOLIS, MINN.
ST. PAUL, MINN.

Bulk handling enables you to curtail storage costs, reduce storage and handling costs, reduce loss-making costs, and improve working conditions in your plant. International's engineering staff has had many years' experience dealing with bulk problems. Ask your International representative for further information on how bulk handling can be adapted to your plant.

CONGRATULATIONS TO THE MACARONI JOURNAL
ON ITS 40th ANNIVERSARY

Developing Tomorrow's Leaders

by Lloyd E. Skinner, Skinner Manufacturing Company, at the Winter Meeting

More attention should be devoted to developing manpower inventory with regard to both current and future needs.

Things to Know

More attention should be paid to improving relationships between supervisors and subordinates at every management level. This is the top where the most important work is done. It is an area where a frank, authoritative approach to these basic relationships is needed. How can I improve? How can I improve my management team? How can I improve each of his? How can I do, and how can I do it better? Motivation and motivation to indicate that he is capable of receiving these people and establishing sound plans for promoting and retaining them.



LOYD E. SKINNER

Compensation plans should be established which will reward each person in management according to the results and value of his performance. Every development program should be tailored to the needs of the individual as they compare with the requirements of his job. There should be more requirements on a flexible and accountable work assignment.

In all development efforts, more consideration should be given to distinguishing clearly between performance and potential. Standards of performance should be developed so that the individual can judge his own accomplishments. Opportunity should be developed for every person in the organization to express frankly and freely his ideas for the improvement of the company and his supervisor.

In all development efforts, correct emphasis should be placed on the results a man achieves and less upon his personality traits. It should be recognized that although a company cannot develop leadership, the individuals, themselves, can. Management, through its policies, practices, and management, can either provide opportunity for this development or ignore and stifle leadership potential.

Points to Think About

Those are the main points we covered in our management seminar at the Winter Meetings. Now, what will happen in the future? It will be hard work. Here are some points that we'll probably have to think about:

(1) There will be increasing analysis of the whole man and of his relationships with the community, and

- (2) Companies will be required to utilize many sources that are available.
- (3) Increasing attention to the problems of executive health, and to insure that managers are effectively maintaining their physical and mental facilities.
- (4) There will be wider and more cooperation between businesses and universities, including participation in exchange programs and research projects.
- (5) More and more management will realize the importance of facing up early to the temporary failure of executives and taking corrective action. We're thinking here, of course, not of executives who have been with the company for 20 to 30 years, but four or five years of a manager's career with a given firm.
- (6) There will be an increased emphasis upon the responsibility line executives have in developing themselves and those reporting directly to them.
- (7) Companies will give more recognition and credit for developing people. At the same time, there will probably be less of (a) copying what everybody else is doing, (b) starting programs on short notice without considering long range problems and effects. This is something many of us managers are guilty of. And, (c) encouraging the system whereby individuals are given priority on certain jobs long before the vacancy exists. That certainly is a fault with many companies. Finally, (d) making hasty decisions on a replacement, (e) considering seniority unduly in promoting executives, and (f) overemphasizing the importance of gadgets.

In conclusion, I'd like to read this quote from J. C. Penny, the department

store man, who says the most important asset is a... "The asset which towers above all... is not money, not... but men. Men in... confidence in one another. Men who see their own success in the success of their business associates. Men who are not well... or one another, but with...

Principal Objective

"Money is not and never will be the principal objective of our business. We place the greatest stress and emphasis on the training of men in the line of service. It is the responsibility of the producers."

Michigan store managers, be... and of the manager is... engineering discipline that we can... the affairs of the... that because he has... proved to us that he can... man to take his place. Once a business... enough to recognize this, the financial income of...

Enrichment Refresher

Regulations and suggestions for required dietary labeling of enriched food products are contained in a new publication, "Dietary Labeling Course: An Enrichment Refresher" just published by Merck & Co., Inc. The new booklet answers questions important to producers of enriched food products: "What does the dietary labeling statement really mean, and how can it work to my advantage? How do enrichment ingredients safeguard health? What is the story behind the enrichment program?" These, and other questions vitally important to business from marketing, sales, advertising, and production standpoints, are clearly answered. Means of adding enrichment ingredients to cereal products are described, as well as the best ways of using enrichment water mixtures. Federal standards of dietary labeling for enriched foods are outlined in the center spread of the 22-page Merck booklet. Specific standards and labeling requirements for bread, farina, corn meal, applesauce, pasta, and macaroni products are itemized in a ready-reference table. Millers, bakers, cereal manufacturers and others in the food field will find this book a handy reference guide as well as a "refresher course." Copies are available from Merck & Co., Inc., Chemical Division, Rahway, N. J.

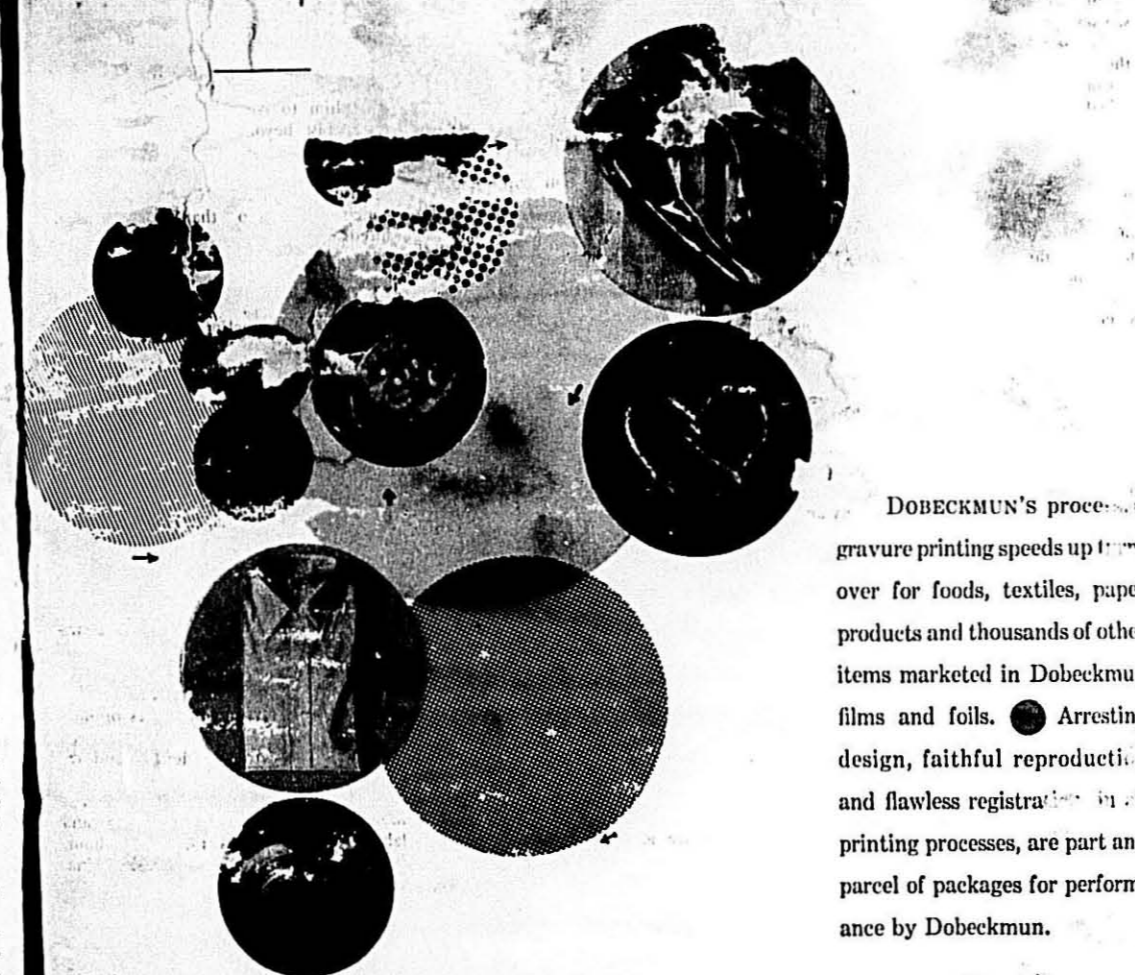
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THE MACARONI JOURNAL

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No. 12

April, 1959

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CONGRATULATIONS, MACARONI JOURNAL!

Best Wishes on your 40th Anniversary from all of us at
 Doughboy Industries, Inc., New Richmond, Wisconsin



DOUGHBOY INDUSTRIES, INC.
 NEW RICHMOND, WISCONSIN

CRAFTSMEN IN PLASTICS — PACKAGING MACHINERY — FARM FEEDS — DURUM PRODUCTS — PRINTING

Since 1856

From Indians to Electronics

By Joseph A. Ferris, Doughboy Industries

THE curator studied his notes carefully and then picked up the small, colorful, beaded bag. It had been restored to its original condition and now he was ready to report on his findings.

"The Indians of Western Wisconsin used this type of pouch for a ceremonial," he explained, "and the figures of the graceful bird in flight, and the fawn in the forest, represent peace."

The visitor, a student of Indian lore, was intrigued.

"What about the period," he asked, "when did the Indians inhabit that area?"

The curator grinned. "We have," he chuckled, "been able to pinpoint the date. And we did it with all things, a flour sack!"

Quickly, proudly he traced each step in a unique research project launched at the museum after a wealthy St. Paul widow had willed them the other valuable Indian objects.

They had studied each piece in the collection, and were able to determine the source of beads through their color, shape and size. Some had been used in transactions between Indians and early settlers.

But their big surprise came when they looked at the base of the bag—the fabric to which the Indians fastened the strings of beads as the ceremonial pouch took shape.

For that fabric was a part of a flour sack.

And a few letters of a brand name, "Shakespeare," popular bread flour of the 1880's and later years, were almost as far as the day the imprint had been made on the sack.

It had come from the New Richmond Roller Mills, a predecessor company of Doughboy Industries of New Richmond, Wisconsin, now famed the world over for its diversification in manufacturing—and for its products.

The link, in itself, is another in a long, exciting chain of events which take this firm back to the days of the pioneers—the early settlers who came West to seek a new way of life.

Early History

Doughboy Industries, Inc., the outgrowth of a business enterprise started in 1856 to help early settlers carve a community out of the wilderness, played an important role in the making of early history.

With covered wagon and ox-carts moving over rough, hazardous trails west of Chicago, there was a need for cabins to house the families now on the line of trail-blazers.

It all began with a small sawmill which turned trees into logs and lumber for

those new homes. Once the land had been cleared, the settlers soon had a grist mill to give them flour.

The pioneers were inspired. They were building for a better tomorrow.

Others came, settled and soon were captured by the spirit of the times—inspired by a new philosophy of ambition, hard working, patriotic pioneers who had staked everything on the new frontier.

Soon a new, thriving community had sprung up on the banks of the picturesque Willow River in Western Wisconsin, about 50 miles East of what is now the Twin Cities—the St. Paul and Minneapolis metropolitan area.

Today, more than 103 years after a colorful beginning, that same area is a bustling city of New Richmond, Wisconsin—home of Doughboy Industries—the site of its executive offices, its plant, mills and shops.

From the home of many of those early pioneers, those men and women who were willing to accept the sacrifices and challenges of those frontier-conquering days of the past.

From that early beginning of pioneer days, has come a strong, aggressive manufacturing company with several divisions—milling, formula farm feeds, plastics, grain, mechanical and printing, all turning out products which make important contributions to the growth, expansion and prosperity of the nation.

New Name Adopted

The original operation became one of the West's largest and best flour mills and the company adopted its present name from one of the original brands. The name "Doughboy" was a household word, and well established, before World War I soldiers were nicknamed "Doughboys."

The years brought a steady, planned growth and expansion—with every move carefully thought out, and with definite, early defined objectives and sales goals in mind.

In the early 1930's the company went into a cereal packaging operation and also created a new type of heat sealer to package the product in transparent sacks.

This experience served the company well when World War II broke out and the first K rations were packaged by the firm. Later they handled survival equipment and other supplies for the Armed Forces.

When the War ended the company swung into a post-war expansion program and with Edwin J. Cashman at the helm as president, the company launched new, bold, imaginative programs.



EDWIN J. CASHMAN

"A wide range research and development programs helped the company prepare trends and enabled each division to keep the pace in different fields with dependable products. The company launched many projects, made many moves, to lay the groundwork for the production of good products, and soon the march of progress was going full steam ahead.

"Meeting challenge is the real measure of strength and progress," President Cashman explains. "The ability to envision the future has played a major role in many of the company's moves."

"Through foresight, Doughboy Industries has been able to bring perspectives of future requirements into focus. Every effort is done to insure our products in new markets."

This policy inspired a modernization program which called for equipping the mill with the latest, most modern and most efficient units in the world. This program was carried out under the leadership of Ray Wentzel, Vice President of the Milling Division, and today, the mill is producing the best of semolina, durum flour and other products.

The division has kept pace with the changing times and recently new bulk storage facilities were installed, and a new system adopted for speedier handling of bulk shipments in special cars.

Right beside the mill is one of America's finest formula farm feed plants and the scientifically blended feeds produced are making possible greater efficiency, and increased profits, for farmers of several states.

The milling division has worked in close cooperation with the Mechanical Division, headed by E. R. Livingston, Vice President, on those projects related to the macaroni industry, and heat seal machines are used by many firms to package their finished products.

When the company's plastics division moved into a giant manufacturing plant in West Helena, Arkansas, the Mechanical

(Continued on page 42)

Electronic Heat for Elimination of Internal Insect Infestation

By James J. Winston, Director of Research, National Macaroni Manufacturers Association

THE macaroni industry, similar to other cereal industries, has been plagued for many years by insect infestation in the products, particularly during the warm weather from May to October. Insect eggs which have been carried over from the farinaceous material into the finished goods, or eggs that have been deposited by insects during the course of processing will, under conducive conditions of high humidity and high temperature, develop into different insect stages; i.e. larvae, pupae, and in sufficient time, adult beetles.

Macaroni-noodle products are subject to infestation by insects via two channels: (1) internal infestation, which is due to the presence of insect eggs either in the raw material, or the deposition of insect eggs in the finished goods prior to packaging; (2) exterior infestation, which is caused by the ingress of insects through the crevices of the cartons, either during distribution, or in storage in warehouses.

The Objective

It has been the objective of our experiments to see whether we can possibly minimize or eliminate internal infestation by means of electronic heat. In experiments conducted by our laboratory for the past six months, we have received the cooperation of the Sherman Industrial Electronics Co., located at State College, Pa. The equipment for the production of high dielectric frequency heat has been very well explained in an article published in "Food Industries."¹ This equipment makes use of the concept of dielectric heat because the product to be heated is a non-conductor or dielectric material. Since foods generally are in this category, this, therefore, has direct application to food products. The process consists of carrying the food or the packaged product between a pair of metal plates that are charged with high frequency voltage. The dielectric heat which is produced is largely frictional heat and arises from the fact that each molecule of the foodstuff is being repeatedly stressed or distorted by the high voltage field. The direction of the electrical stress reverses with every alternation of the high frequency voltage. In the re-arrangement of molecules, the repeated distortion of the particle constitutes work, and this work appears as heat. In this process, electric current at 60 cycles input is converted by the high frequency generator to 27 million cycles. This is then applied as electronic heat.



JAMES J. WINSTON

For the purpose of these experiments, it was decided to see what effect this dielectric heat would have on egg pasta (noodle product). Ten pounds of egg pasta were treated with 50 live confused flour beetles (*Tribolium*) for a period of two weeks in order to bring about the maximum degree of infestation in the pasta. This was done in a confined compartment, and the insects then were killed by the use of a fumigant—carbon tetrachloride. The insects were removed by a sieving process which retained the pasta and permitted all the insects to pass through. The material was then packaged commercially in cartons filled with 8 ounces of pasta. These packages were then sent to the Sherman Industrial Electronics Company, where they were processed by means of electronic heat at different time intervals. This was done in the following manner:

Sample Number	Processing Time	Number Packages
1	2 secs.	2
2	2½ secs.	2
3	3 secs.	2
4	3½ secs.	2
5	4 secs.	2
6	4½ secs.	2
7	5 secs.	2
8	6 secs.	1

Three packages were kept in the laboratory as controls. The eight samples of pasta and the three controls were then subjected to the following tests to determine whether any changes had been caused by this high dielectric heat: moisture content, color score in the form of carotenoid pigments² and cooking tests.

The results are as follows:

Sample Number	Moisture %	Color Score PPMs
1	9.0	9.2
2	9.0	9.2
3	9.0	9.2
4	9.2	9.3
5	9.0	9.3
6	9.2	9.2
7	9.2	9.2
8	9.1	9.2
9 (Control)	9.2	9.2

• PPM Carotenoid Pigments, parts per million.

Cooking test results were normal in each instance.

In the course of the cooking test, each sample of pasta was prepared in the identical manner wherein two tablespoons of pasta were added to a cup of boiling water and heated for approximately five minutes until all the water was either evaporated or absorbed. The cooked pasta was then subjected to panel testing by four members who constituted this panel. The results of this panel indicated that there was no difference in the taste and appearance of the nine items tested.

Determining Success

In order to determine whether the dielectric heat was successful in eliminating internal infestation, all the packages were placed in an incubator, where the temperature was maintained at 80° F and 65% relative humidity. Each package was withdrawn every week, the contents were opened, thoroughly examined, and returned to the package which was sealed. The purpose of this visual examination was to determine whether there would be any growth of larvae or adults with the passage of time. This incubation period was started on November 28, 1958, and the first sign of any insect growth took place on January 2, 1959. After a period of approximately five weeks, the three control boxes (untreated) began to show signs of insect life in the form of live larvae. The other eight packages which had been subjected to electronic heat, showed no evidence of any insect life. This incubation was continued until February 12, 1959. At this point, each one of the controls showed the presence of either one or two live flour beetles, whereas all the treated packages, 1 through 8, showed no evidence of any insect webbing, larvae or other indications of insect life. It is noteworthy that the high dielectric frequency applied to the pasta had been adequate to desiccate and destroy the in-

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Experience at the C. F. Mueller Company

by C. Frederick Mueller, C. F. Mueller Company, at the Winter Meeting

WE HAVE a sales organization of some 85 men of which 11 are divisional sales managers. Looking over our organization several years ago and evaluating the men on an individual basis, we realized that some of the divisional managers did not seem able to do an effective job in the modern methods of marketing.

So we said to John Murphy, our general sales manager, "John, the key to the future of our general sales organization is our divisional managers." Then we got together in a conference to decide what we could do about this.

Formal Program

It was from that meeting that the formal training program for divisional sales managers, which we now use, came into being. It was established so that our future would be assured, and we could teach our divisional managers the modern methods of selling and merchandising.

Our sales operation and our sales organization differs from many manufacturers because our men are primarily merchandising men rather than direct salesmen. They sell direct only to chains and wholesale grocers.

The first thing we did was to analyze the men that we had. We developed the framework of the program and established what we wanted in it, what type of men we wanted in it, and how many.

We put this into a 19-page ten plan for training future divisional sales managers. This book formed the basis on which the plan was developed. It gave a job description for the position of sales representative, a job description for the position of sales manager; it told about subjects relative to the position of sales manager, subjects relative to the position of divisional sales manager, training methods, home office training, field training, supplementary training, reading assignments, divisional sales managers' responsibilities related to the sales managers' training program, etc. This was the first time we had this in written form and the first time we had such a formal program.

Recruiting Candidates

Next, we sent staff members out into the field to recruit. Our assistant general sales manager went down to Tampa, Florida, and recruited one candidate. Another was recruited in Jacksonville, two in New England, and two around the New York metropolitan area.

We went into the background of every one, studying first those men who were in our employ; then those men who were our candidates. We looked at their educa-



C. F. MUELLER

tion, at their service record, we looked, if we could, at their background, family, etc.; and analyzed them for managerial potential. We stayed very close to our job description in making the selection.

Job Description

Our job description for the position of the divisional sales manager is as follows:

"The divisional sales manager is directly responsible to the general manager and assistant sales managers. The primary mission in your division is to achieve the highest profitable volume and profitable sales in your division at minimum expense, by following out the company's program and carefully planning, directing and supervising.

His primary responsibilities entailed in fulfilling this mission are personnel sales engineering, customer relations, competition, and communications.

The first responsibility for handling personnel is "recruit continually in your division sources and potential sales personnel, and if possible, have applicants available when needed." This is very important when someone resigns and gives you two week's notice. It is nice to have somebody available—somebody that you know something about. Interview sales applicants according to the company's prescribed procedure." Again, we have a formal, prescribed procedure for interviews.

"The sales representative is the retail man who goes around and calls on supermarkets and independent grocers. His Number One responsibility is selling. This responsibility is being executed when all channels of potential sales are being continually explored and exploited, in order to increase the profitable volume of sales in the territory. His duty is to continuously sell non-stocked products to all sources of distribution—wholesale grocers, chain stores, cooperative groups, independent supermarkets and other retail outlets. He must maintain sufficient

inventories of presently stocked products in all sources of distribution."

The second responsibility is merchandising. We instigated formal development reports. In conjunction with our divisional managers' trainee program, we put extra effort on our current divisional managers. We worked with them; we saw what kind of work they did in the field; we stayed with them two days while they trained a man. At these times there would be three of us in the store at the same time. This did not go smoothly.

Program Questioned

Our divisional managers were shocked when they were told that the program was being questioned. They were shocked because they had been with the program for 15 years. Mr. Jones and I were talking down in Miami with a retired general sales manager a couple of years ago, and he told us, "You're ruining me out in the sales organization. You're sending our States these guys, to ruin me. I don't want to have you at one time or another. It's ruining me."

We were shocked because we had just spent \$200,000 in a plant which was recently modernized and we had just spent \$100,000 in whom we would have had to keep, and I don't know how many because of our program. They're delighted to be rated.

Rating Factors

The factors involved in their rating are: intellectual leadership qualities — problem solving abilities, creative thinking, intellectual maturity, range of reference all the way down to personal leadership qualities — drive, emotional maturity, flexibility, consistency, temperament, character, and so on. There are also the activities as applied to our own job description — planning, supervising, measuring, coordinating, and so on.

When the staff rates these men, they do so on "outstanding," "good," or "below standard." The boys have become accustomed to being rated — to becoming a part of the team. They want to know how they stand. Certainly no one playing in a sports contest would like to finish it and not know how he did.

We have the same kind of report for our retail sales representative — a Sales Representative's Development Report. This goes into retail selling responsibilities on the basis of the 10-point sales presentation which we drew up.

(Continued on page 48)

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