

**THE
MACARONI
JOURNAL**

**Volume 40
No. 2**

June, 1958

Macaroni Journal

OFFICIAL PUBLICATION
OF THE
NATIONAL
MUSICIANS ASSOCIATION
OF THE UNITED STATES



JUNE, 1958



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BRAND
NAME**

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The MACARONI JOURNAL

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You'll Find:

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Economical Gourmet Entrees.....
Nutrition Foundation.....
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Cover Photo

Del Coronado, queen of Pacific Coast resorts, is home of championship tennis courts, salt-water pool, pitch and putt course, and nearby golf courses to balance business with pleasure at the 54th N.M.M.A. Annual Meeting.

The Macaroni Journal is registered with U. S. Patent Office. Published monthly by the National Macaroni Manufacturers Association as its official publication since May, 1918. Entered as second-class matter at Palatine, Ill., additional entry at Barrington, Ill., pending, under Act of Mar. 3, 1879.

Conferences Pay Off

TWENTY-FIVE years ago the country was in a depression. The National Macaroni Manufacturers Association's annual meeting in Chicago (which was celebrated as "A Century of Progress") drew attention to hear what the "New Deal" was doing in its Agriculture Recovery Act and the industry code of fair competition. These codes were looked upon as a way to bring order out of chaos and a way to get better prices for macaroni products with the elimination of competitive products that were affecting not only price but quality. They were seen as a way to give better treatment of distributors and consumers.

Definitions and standards for macaroni products that had recently been adopted by the Secretary of Agriculture on recommendation of the Committee on Definitions and Standards were explained by the Chief of the Central District of the Food and Drug Administration. It was reported: "He startled many by emphasizing the fact that all noodles containing less than legal requirements have to be labeled 'imitation' noodles."

labor and money we do not draw a lesson or two. I am convinced that the idea of cooperative advertising in our industry is sound and that regardless of government controls, price fixing and trade agreements there is nothing but continued underconsumption and consequent difficulties ahead for the American macaroni manufacturers unless a successful movement based on this idea is undertaken and put through at some time."

"We operate in a highly competitive market in which the consumer is continually, in an inconceivable number of ways, urged to buy and consume various food products. During these last three years of economic disturbance and depression it has been conclusively proved that those products which have been adequately advertised were the last and the least to suffer."

54th Annual Meeting

Today, with general business in a slump, competition keen and operating margins small, intelligent manufacturers will find it to their advantage to confer on general industry problems and gain ideas for specific application in their own operations.

On the next page details of the program plans for the 54th Annual Meeting of the National Macaroni Manufacturers Association are given and they clearly indicate that the industry's basic problems are still with us; only the approaches and techniques for solving the problems have changed.

Plant Operations Forum

In late April the Glenn G. Hoskins Company conducted a Plant Operations Forum at Northwestern University in



CONFERENCE LEADER: Association President Lloyd E. Skinner will greet delegates and preside at N.M.M.A. 54th Annual Meeting.

Chicago. In "Looking to the Future" (on page 10), Charles M. Hoskins observed several possibilities in reducing costs, some advances which could affect volume of sales, and some ways of increasing prices. His brother William G. Hoskins goes into considerable detail in his comments on "Costs and Their Control" given on page 12.

In this intensive two-day forum many areas in plant operations were considered. Further reports of these sessions will appear in the July Journal.

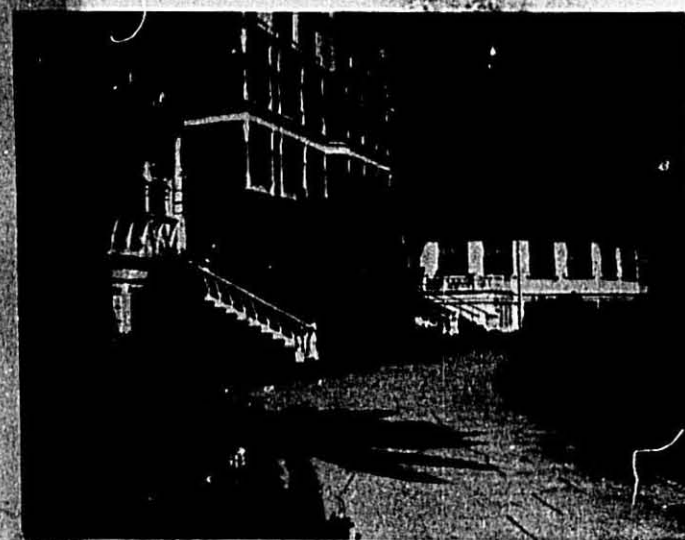
Typical of the comments of those who attended the forum were those of one manufacturer who said: "I feel that everyone who attended the forum went away with a better understanding of the problems that plague us and how to go about correcting them."

Develop Capabilities

The voice of organized business, the Chamber of Commerce of the United States, held its 46th Annual Meeting in Washington, D.C., in the last week of April. Its convention theme was "Developing Our Capabilities, Determination and Strength." Highlights from this significant meeting will be reported in the next issue of the Macaroni Journal.

Come to Coronado

The codes that were adopted twenty-five years ago were later found to be unconstitutional but the lessons learned in cooperative competition find their best expression in the activities of the modern trade association. These voluntary organizations work for the betterment of the industry and thereby help their individual members do a better business as well as serving the general public. Accept the National Macaroni Manufacturers Association invitation to "Come To Coronado" for ideas, information and inspiration. It will help you, your business, and your industry.



View of the 54th N.M.M.A. Annual Meeting - Hotel Del Coronado veranda with the Dining Room windows in the background.

QUESTION

Find an Automatic Dryer that runs a complete cycle by itself independent of weather conditions, day in and day out.

Find an Automatic Spread Short Cut Dryer that gives extrudes a perfect product "the clock" dependability production speeds — perfectly dries all shapes 1000 lbs., and 1500 lbs. alphabets to rigatoni.

Find a Sheeter for the production of noodles which gives you "taste tempting" noodles.

Find a Short Cut Press that gives you a perfect product with all cuts equal in length at all production speeds — 600 lbs., 1000 lbs., and 1500 lbs.

ANSWER

DEMACO

LONG GOODS FINISH ROOM

DEMAEMACO

AUTOMATIC SHORT CUT MECHANICAL SPREADER DRYER

DEMACO

SHEET FORMER

DEMACO

SHORT CUT PRESS

EVIDENCE

When there is something new in Long Goods Drying, it comes from Demaco. Our engineers have designed a brand new group of dryers that bridge the gap between laboratory and production line.

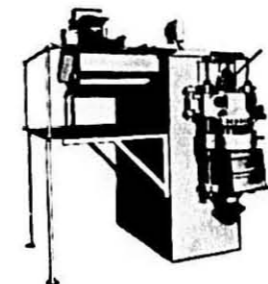
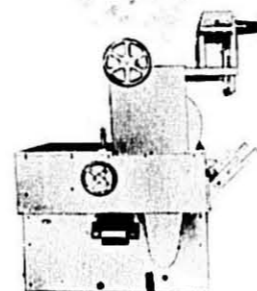
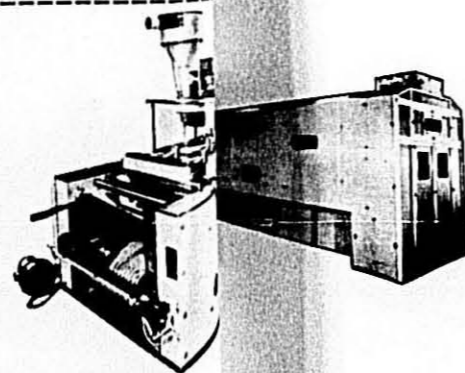
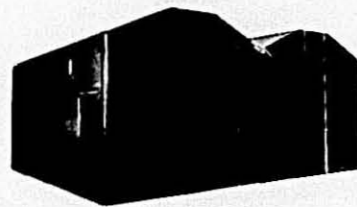
Come see at Paramount Macaroni Co. in Brooklyn how seven rooms dry the entire output of two spreaders at twenty-four hour daily production.

The Demaco Spreader and see an example of ment with the new design's creative touch in Short extrusion head, new design and Noodle Dryers. Our eter connecting tubes design saves space, labor matic and mechanic me and increases quality brake motors, no limit erating efficiency in dry- and no complicated ort cuts and noodles. The wiring. Runs on a standard that are complete and have den extras. motor.

The first real major advance in the production of noodles with the use of the Teflon Die first used by Demaco. Over forty Demaco Sheeters in actual use.

The Demaco Short Cut Press with the "trade approved" single mixer with full vacuum over entire mixer. There is no erratic feed from one mixer to another which either starves or overfeeds the extrusion screw.

SOLUTION



DESIGNERS AND FABRICATORS OF MACARONI EXTRUSION PRESSES AND DRYERS

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De FRANCISCI MACHINE CORPORATION
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EVERGREEN 6-9880

Program Plans

The 5th annual meeting of the National Macaroni Manufacturers Association will be held at Hotel Del Coronado, Coronado, California, July 8-9-10, 1958.

The Nutrition and Standards Committees meet July 7 to formulate recommendations for the Board of Directors meeting at luncheon and Monday afternoon.

Three years ago at the Del Coronado, the theme of the first national convention held on the west coast was "Opportunities Unlimited." Today, with the nation's economy in a business slump, food processing stands out as a bright spot in the picture. Macaroni manufacturers and their allies will examine more closely their opportunities in maintaining their competitive position through market research, consumer education and in product promotion.

Tuesday Morning

The convention will get underway with a registration breakfast at 8 a.m., July 8. President Lloyd E. Skinner formally opens the meeting at the first general session at 9:30 a.m.

Richard M. Oddie, Director of the Small Business Advisory Service, Bank of America, will speak on "Better Management Builds a Better Outlook." This is a repeat performance for Mr. Oddie. He has addressed macaroni meetings several times in the past.

"The Industry Outlook" will be examined by a panel of macaroni manufacturers led by Association secretary Robert M. Green with audience participation to review where we are and where we are going.

A golf tournament will be held Tuesday afternoon on the Coronado golf course with last year's champion Robert Williams defending his crown. While the



Dr. Philip L. White will tell convention "Look What Can Happen to Macaroni."

golfers are on the links the ladies will be enjoying a card party.

The traditional Rossotti Spaghetti Buffet highlights social activities in the evening.

Nutrition on Wednesday

The Board of Directors will have their traditional meeting with the durum miller at breakfast Wednesday morning.

The second general session will be devoted to a discussion on nutrition. Background will be developed by the Association's Director of Research, James J. Winston.

Dr. Philip L. White, secretary to the Council on Foods and Nutrition of the American Medical Association, will tell the assembly "Look What Can Happen to Macaroni."

Albert S. Weiss, Chairman of the Nutrition Committee, will report on the

Committee's recommendations for a program aimed at strengthening the product promotion efforts of the National Macaroni Institute and developing positive consumer cognizance of nutritional qualities of macaroni and noodle products.

While the ladies are enjoying a card party and luncheon sponsored by King Midas Flour Mills, the Board of Directors will hold their organizational luncheon for the election of officers.

The afternoon is free for recreation. Possibilities include deep sea fishing, or use of the fine facilities of Coronado.

Product Promotion

"The How's and Why's of Product Promotion Research" will be discussed by Mervin D. Field of the San Francisco Field Research Company.

The balance of the third general session will be on product promotion presentations by the Durum Wheat Institute and by Theodore R. Sills, Relations Counsel for the National Macaroni Institute. Plans for the fall campaign on "Youth Will Buy" will be developed.

General Mills takes the group on a boat trip of San Diego harbor Tuesday afternoon while the Association's party followed by dancing on the terrace will top off the convention program.

Room reservations at Hotel Del Coronado are being handled directly by Assistant Manager Gene Morgan who has reservations made promptly to avoid disappointment. Advance registration has been called for the office of the National Macaroni Manufacturers Association at Parkville, Illinois.



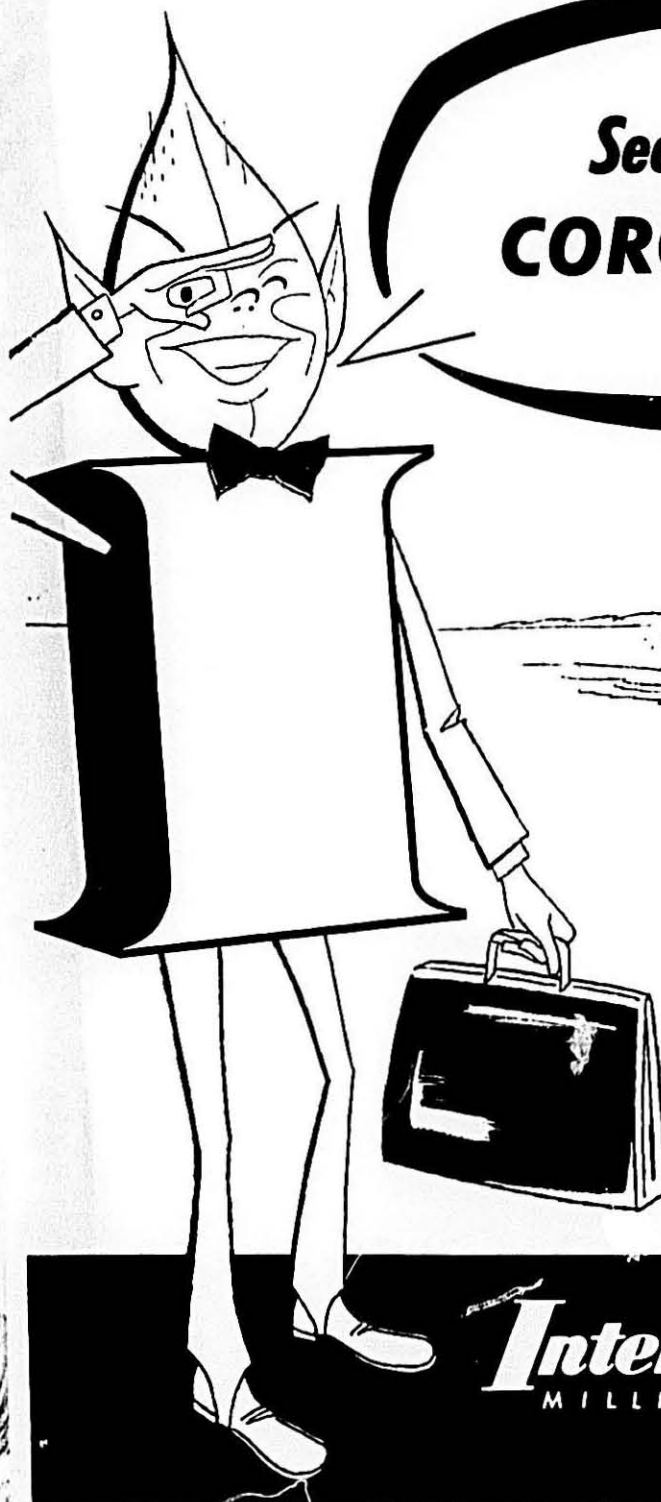
Vice President Horace P. Gioia, Alphonso Gioia & Sons, Rochester, New York, will conduct first general session.



Vice President Emanuele Ronzoni, Jr., Ronzoni Macaroni Company, Long Island City, New York, will conduct session on Product Promotion.



Vice President Albert Ravarino, Ravioli Freschi, St. Louis, Missouri, is an active member of the Nutrition Committee and will conduct the session devoted to nutrition matters.



See you in **CORONADO!**



Yes, "Mr. T" - symbol of International Milling Company and its Quality Durum Products - hopes to see you in Coronado next month for the NMMA summer meeting at the Hotel Del Coronado.

We welcome these opportunities to mix business with pleasure and to discuss, informally, our mutual industry problems and plans for the future.

See you there!

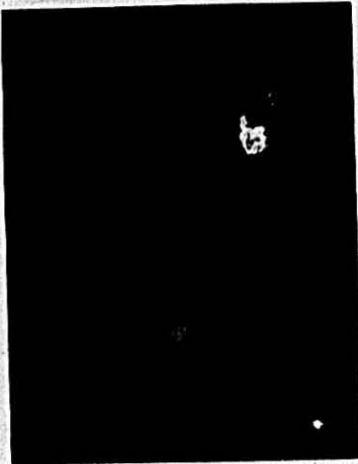
International
MILLING COMPANY

Looking To The Future

by Charles M. Hoskins, Glenn O. Hoskins Company, at the Plant Operations Forum

ONE of my professors at Purdue University said, "I want you to take away the idea that there should be a dollar sign in every engineering, chemical or physical formula which you use."

The industrial development of the past fifty years has amply illustrated that many chemical formulae have dollar signs in them. Consider, for example, the tremendous number of dollars which have changed hands because chemists connected with DuPont found that they could dissolve cellulose and then precipitate it in the form of a transparent sheet to manufacture cellophane. This created the industry based on transparent films used in packaging. The success story of the DuPont Company is one of the outstanding examples proving that there are dollar signs in the formulae of the scientists.



CHARLES M. HOSKINS

As a contrast to the scientifically based chemical industry represented by DuPont the macaroni industry has grown to its present state largely through a gradual process of evolution with little scientific research or design involved. This situation is changing rapidly because of the influx of scientists and engineers into the industry and the interest being shown in our industry by larger concerns. For this reason, I expect that the next 10 years will bring many unexpected and large advances in our industry. These advances will make money for someone. If you are alert and imaginative and use good common sense this someone could be you.

Profit Formula

Here is the dollar formula: $\$ = V(P-C)$. Translated into words it means that dollars of profit equals volume of production multiplied by the difference between price and cost. The research and development of the future must be directed toward increasing profit dollars by increasing prices, decreasing costs and increasing volume of production.

For example, one of the most costly operations in the macaroni factory is the packaging of long goods. Let us consider a manufacturer who packages 60 one-lb. packages of macaroni per minute in cartons with a crew of 8 girls. A machine is developed which will reduce the number of girls from 8 to 4 and which will weigh with an accuracy of plus or minus 1/2 oz. The saving will be approximately \$3000 per girl for a total of \$12,000 per year. However, it will be necessary to overweight 1/2 oz. to prevent underweights. If the crew works 2000 hours per year it will pack 7,200,000 lbs. of macaroni which is worth \$648,000 at 9c a lb., the value at the packaging machine. The average of 1/2 oz. overweight will result in a loss of \$20,200 in one year. Thus, this machine would

cause a loss of money before even considering the cost of the machine. The purchaser of this machine might feel that he had the most up-to-date long goods packaging line in the country, but he would be \$8200 poorer at the end of the year than if he had not bought the machine.

In spite of this rather sour example of what can happen because of a blind desire to "make progress," many extremely valuable things will come out of the laboratories and drafting rooms within the next few years.

In the past many of the facts about macaroni uncovered in laboratories have been published in scientific journals where they have died without producing results. Some of these facts deserved death because the researcher had no conception of the real needs of the industry. Other facts would have been valuable if understood and put into practice by macaroni manufacturers. The vacuum process is one example of experimental work put into practice.

I want to discuss a few of the possibilities which are now under investigation or which I feel should bear some investigation.

Reducing Costs

Flour Handling. The development of the Airslide car and improved methods of pneumatic handling of flour. The conversion of the industry to bulk handling is proceeding steadily.

Packaging. At present the area of packaging which is being most intensively explored is the possibility of weighing and packaging long goods automatically. I personally know of eight different concerns which are working on this subject. There has not yet been a major break

through to the point where you order a machine which you know will work. However, there are several promising lines of development in this field.

It appears that there may soon be a machine which will automatically fill and seal cellophane bags with noodles. This would be a very important development.

Drying. The drying of macaroni is a long drawn out and dangerous process. We can look for rapid improvement here. We know of five processes which are capable of drying short elbow macaroni in a period of approximately one hour or less. The product is generally not exactly the same as a standard macaroni product, but the fact that macaroni can be dried without checking in one hour is a hopeful sign.

I have frequently been asked what difference it makes whether macaroni dries for three days or twelve days. This brings us back to the dollar question. Drying time represents floor space in inventory, large and costly dryers, and maintenance and sanitation. All of these things cost money and a decrease in drying time will decrease them all.

Extrusion Pattern. I have studied goods presses in which as much as 20% of the spaghetti extruded through the die had to be trimmed off and returned to the mixer. 15% trimmings is unusual. This is a direct dollar loss because it reduces the production of the presses and increases the working time necessary to produce a given amount of product.

Packaging Films. Everyone would like to see a packaging film as transparent as cellophane, as strong as nylon, and as cheap as polyethylene. We have heard about progress toward this goal.

Advances Which Could Affect Volume of Sales

Every macaroni manufacturer is interested in increasing his volume of production, advertising and sales effort. In order to increase his sales of macaroni he can either take the business away from another manufacturer of macaroni products or increase the use of macaroni products. There is another way to increase sales and this is to go into other products which can be manufactured in a macaroni plant or which are related in some way to macaroni products. Here are a few possibilities:

Canned Spaghetti. Canned spaghetti is soft and mushy when compared to a dry product cooked properly. This is accepted as a fact of nature by consumers.

(Continued on page 41)



YOUTH WILL BE SERVED

... especially if the spaghetti is made from the semolina that makes youngsters really enjoy any macaroni products dish.....



Commander-Larabee
 MANUFACTURED IN INDIANAPOLIS, IND.

Costs and Their Control

by W. G. Hoskins, Glenn G. Hoskins Company, at the Plant Operations Forum

A PLANT manager studying costs and their control today would want to condition his approach to the cost problem by knowledge of these things.

1. What costs actually are.
2. Knowledge of reasonable range in which costs should fall.
3. The over-all anatomy of costs — that is, how much of a factor in costs is represented by labor, selling, administration, depreciation, waste.
4. A sound, well-defined philosophy relating to purchase of new machinery to save costs.
5. A general idea as to the areas in which costs could be cut and how to go about that.

The problem of keeping accurate costs on your operations always brings with it the problem of paying the person who gathers and records these costs. Too many manufacturers hold the philosophy that the keeping of records is such a marginal activity that it is not worth doing. When one realizes that just a little attention to waste control in most plants could save one-quarter of one percent waste, it can be seen that record keeping could be valuable. One-quarter of one percent waste on 10,000,000 pounds a year is 25,000 — worth about \$3,750.00. This item alone will come close to paying the wages of the record keeper.

Know Your Costs

You should know your costs. We don't advocate being a bit more elaborate with your cost recording system than is necessary, but you should know clearly where your money is going.

The question of what the cost should be is a difficult one. It was in an attempt to get the facts about what costs should be that we undertook a Plant Operations Survey. Several manufacturers in all size classifications have reported on this survey in great detail so that we now have a very complete picture of the range of costs encountered in various sizes and types of plants. The survey asked for and gathered information on personnel involved in various operations, types of products made, number of shapes and sizes, waste, shrinkage, square feet of floor space, power and light and costs on every phase of production. As a result we are now able to approach a particular cost problem with a soundly based knowledge of what costs should be. It has been a very interesting study, and we have been amazed to learn how much difference there can be in costs for the same activity.

We have promised the people who reported on the Plant Operations Survey that we would not reveal to people who did not respond the detailed cost figures. However, it is worthwhile to present what might be considered representative, if not average, costs for the various phases of operation. Macaroni and noodle costs to-



WILLIAM G. HOSKINS

day would work out something like the figures below.

Representative Macaroni Costs		
	\$/lb.	%
Semolina, delivered, sack,		
including shrinkage	\$0.665	44.3
Packaging Materials .....	.0230	15.3
Manufacturing Costs .....	.0125	8.3
Packaging Costs .....	.0150	8.6
Shipping & Receiving Costs .....	.0035	2.3
Administration .....	.0080	5.3
Selling and Advertising .....	.0240	15.9
	\$1.505	100.0
Representative Noodle Costs		
	\$/lb.	%
Flour, Delivered, sacks,		
including shrinkage	\$0.640	29.3
Egg Cost .....	.0670	30.6
Packaging Materials .....	.0260	11.9
Manufacturing Costs .....	.0125	5.7
Packaging Costs .....	.0155	6.2
Shipping & Receiving Costs .....	.0035	1.6
Administration .....	.0080	3.7
Selling and Advertising .....	.0240	11.0
	\$2.185	100.0

The representative total operating cost, not including selling and administration was about 5¢ per lb. It is with this figure that we are particularly concerned in this discussion and it is here that substantial savings can be realized.

Naturally, the biggest opportunity for saving on operating costs would be the saving in labor. It is interesting to note that the average of the labor as a percent of the total operating costs (not including selling and administration) is 58%. This compares with only 10% for depreciation. What this means is that in spite of the fact that the macaroni industry has spent a great deal over the past few years for machinery, even so the depreciation does not constitute a burdensome factor and could be increased very substantially if labor savings could be realized.

As far as spending money to save or other costs is concerned, there is one real philosophy to have; that is, if you have decided you intend to stay in business, you want to put in machinery that will pay for itself in five years or less.

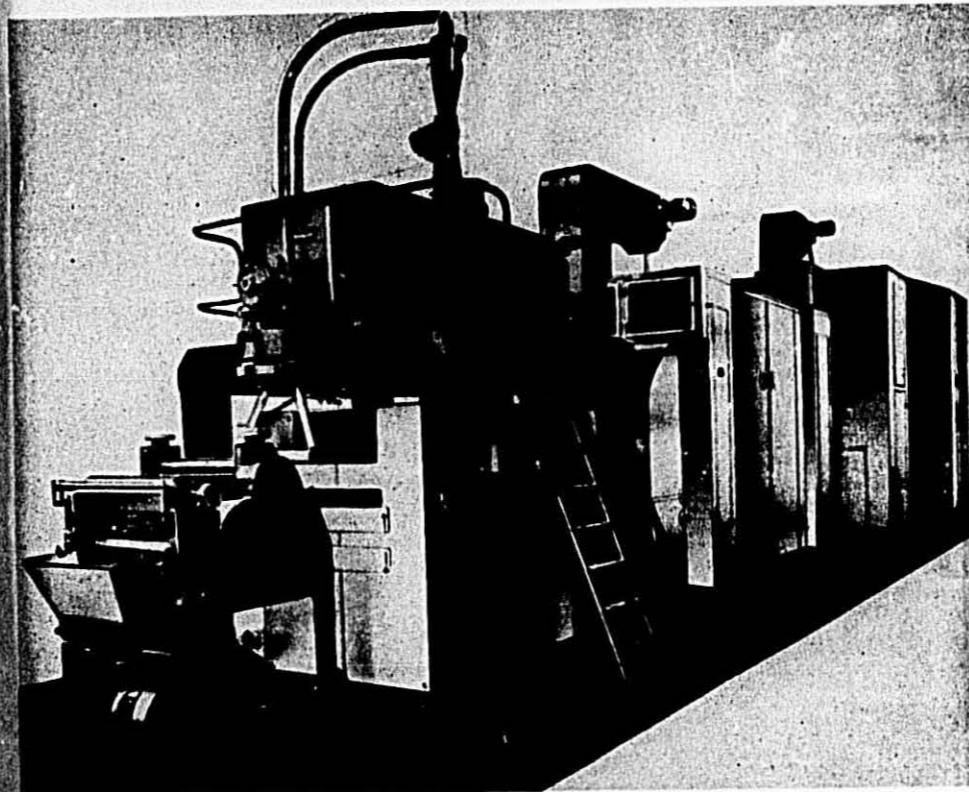
You would realize how important a philosophy this is if you had the opportunity that we have of going into plant over the United States where you see tremendous difference in profitability occurs when a plant keeps up with machinery needs. There are a number of things that favor the installation of saving machinery. The first, of course, is the direct saving that can be realized today. Another thing that must be realized is that wages have nearly tripled since 1942. This means that a machine that was put in in 1942 on a labor savings basis should have been put in for itself in five years at a labor rate of perhaps 60¢ per hour. Now that rate is \$1.65 per hour. In many cases good machines are still operating after 15 years and the savings per year due to machine have tripled.

Another factor in favor of the purchase of machinery is the declining value of the dollar. Several months ago we saw a report which indicated that the value of the dollar had regularly decreased over a long period of years at something in excess of 3% per year. This would mean that it would probably be wiser to put money into a labor saving machine to keep it in the form of cash or securities that might suffer the effects of inflation.

A Simple Depreciation Policy

In analyzing the purchase of new machinery one should not let his calculations become too involved or too complicated with the concept of depreciation. When you are considering the purchase of new machinery, the only depreciation you should really take into consideration is a depreciation based on the anticipated life of the machines. In other words, you would not be making a realistic appraisal of the new machine if you charged against that machine the accelerated rate of depreciation that the government might allow you to take for bookkeeping purposes. We favor the accelerated depreciation rates because they make available working capital which might otherwise have to be borrowed. This presents the necessity of paying interest on dividends. However, these are more less paper transactions whereas the depreciation of the new machinery should be based on the facts of depreciation, or the actual estimated useful life. A straightforward approach to the analysis of purchasing labor-saving machinery would be to calculate savings on the basis of the following table. The table simply is a direct and orderly method

modern installations for modern macaroni plants



Completely automatic line for the production of Short Cuts and Bologna stamped goods. Consisting of:

- Automatic Press Model "MAGOG"
- ZAMBONI Stamping Machine Model "ULTRA-VELO"
- Preliminary Dryer Model "TELEC"
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2036 East 27th Street, Los Angeles 58, California

Braibanti - Milano

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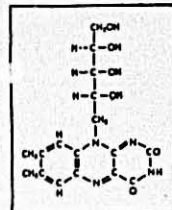
INSIDE SCIENCE

The Vital Story VITAMIN B₂ by Science Writer (Riboflavin)

A Quick History. Independent investigators, working separately to unlock several of nature's doors, sometimes open up unsuspected relationships. This happened with vitamin B₂.

Investigations. About 25 years ago, several groups, notably Warburg's, were investigating a "yellow enzyme" obtained from yeast. Almost simultaneously other investigators were studying a food factor that aided growth of laboratory animals.

What they found. Proceeding with chemical analysis of this growth factor, the team of Kuhn, György, and Wagner-Jauregg noted a relationship between the growth-producing agent and the "yellow enzyme." Their findings, and those of other researchers along similar lines, were published in 1933. Eventually, riboflavin and an essential part of the yellow enzyme were found to be identical and the unity of an essential nutrient and cellular metabolism was established.



Isolation of pure riboflavin was achieved by Kuhn and his co-workers, and by Ellinger and Koschra, in 1933.

Nomenclature. Known in the United States as riboflavin, this vitamin has also been called lactoflavin, ovoidflavin, hepatoflavin, and vitamin G.

SYNTHESIS

By 1935, two eminent chemists, working separately, had synthesized riboflavin, practically in a dead heat. Prof. Paul Karrer of the University of Zurich, a collaborator of the Hoffmann-La Roche Laboratories, produced the first successful synthesis. Five weeks later Richard Kuhn of Germany announced his synthesis of the vitamin. Prof. Karrer subsequently shared the Nobel Prize in Chemistry for his work in vitamins and carotenoids.

The Karrer synthesis forms the basis for chemical processes in widespread use today by Hoffmann-La Roche and other leading manufacturers throughout the world. Riboflavin is also manufactured today by fermentation methods.

CHEMICAL AND PHYSICAL PROPERTIES

Riboflavin is yellow, slightly water-soluble with a greenish fluorescence and a bitter taste. Its empirical formula is C₁₇H₂₀N₄O₆. Vitamin B₂ produced by the Roche process is identical in every way with that occurring in nature.

How does vitamin B₂ work? Riboflavin is a vital part of nature's chain of reactions for utilization of carbohydrate

energy. It has been found to be a constituent of the skin, the nerves, and the blood show the... It is probably required by the metabolic processes of every animal and bird as well as by many fishes, insects and lower forms of life. (In certain animals, however, the requirement may be synthesized by bacteria within the intestine.)

In the cells riboflavin goes to work attached to a phosphate group. This substance, known as riboflavin-5'-phosphate or flavin mononucleotide, may in turn be still another essential substance, adenylic acid, adenine dinucleotide. Either nucleotide then protein, thereby forming an enzyme, and taking oxidation-reduction reactions.

Requirements in Human Nutrition. As we have seen, vitamin B₂ is essential to life. We have no special stores in our bodies for this vitamin, although a certain amount is maintained in various tissues, with relatively high concentrations found in the liver and kidneys.

MEASURING METHODS

In the beginning, riboflavin activity was described in "quin-Sherman units" and requirements were very small. Subsequent research has shown that the unit and the Food & Drug Administration of the U. S. Department of Health, Education & Welfare established in 1958 a minimum daily requirement of 1.2 mg. of riboflavin for all persons 12 or older. For infants it is 0.6 mg. These requirements are designed to prevent the occurrence of symptoms of deficiency disease. The minimum daily requirement for children from 1 to 12 years is 0.6 mg.

Recommended allowances. The Food & Drug Administration of the National Research Council has recommended the following daily allowances of riboflavin in milligrams. These are designed to maintain good health in the U. S. A.

Table with 2 columns: Age Group and Recommended Allowance (mg). Rows include Men, Women (3rd trimester pregnancy), Infants (1-3 months, 4-9 months, 10-12 months), Children (1-3 years, 4-6 years, 7-9 years), and Adolescents (10-12 years, 13-15 years, 16-20 years).

of vitamin B₂ appear in several ways in human beings. The skin, the nerves, and the blood show the presence of riboflavin. Laboratory tests have demonstrated that a riboflavin-deficient diet can cause death of laboratory animals, deprived of riboflavin, may produce offspring with malformations.



To overcome and control deficiencies in riboflavin, physicians have pure riboflavin available for injection or orally, by itself or with other vitamins or multi-vitamin-mineral combinations.

How do we get our daily riboflavin? Vitamin B₂ has been found throughout the entire animal and vegetable kingdom. Good sources are milk and its products, eggs, green leaves and buds. Whole-grain cereals contain significant but not large amounts of riboflavin.

ADDITION TO FOODS

Cereal foods play a large part in our diet. To produce the white flour almost all of us want, millers are obliged to remove parts of the wheat that contain much of the grain's riboflavin and other nutrients. In addition, cereal grains are not rich sources of riboflavin. Millers meet this problem by adding riboflavin to the grain foods for which federal standards exist. However, they do more than restore the natural riboflavin level; they fortify the food with this essential vitamin to make it nutritionally valuable than it was in nature.

To protect the good health of millions of Americans, millers adopted enrichment of white bread and other cereal products with pure riboflavin. Since that time, products such as macaroni, pasta, meal and grits, farina, and breakfast cereals have had their food value increased by being fortified with pure riboflavin and other vitamins and minerals.



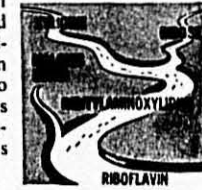
enriching, fortifying or restoring, food manufacturers add the necessary quantity of riboflavin (and other vitamins and minerals) to the food during processing, so that the product meets federal, state, and territorial requirements or contributes to the consumer an amount of the vitamin that dietary experts believe significantly useful.

PRODUCTION

Karrer's synthesis of riboflavin was a laboratory success. Adapting the process to commercial production,

however, demanded original thinking by chemists at Hoffmann-La Roche. The production of riboflavin by chemical synthesis requires the production of ribose, a rare sugar, at an early stage in the process. This special sugar must be made inexpensively if the synthesis is to be practical. Sugar chemistry is a difficult matter. In a brilliant piece of work, the Roche chemical experts developed a method to produce ribose on a commercial scale by an electrolytic process, thus overcoming a most troublesome problem. Subsequently, Roche chemists developed the first practical synthesis for riboflavin-5'-phosphate, identical with natural flavin mononucleotide.

Picture three streams joining to form a river and you have a simplified idea of the Roche process for synthesizing vitamin B₂. O-xylene and glucose are processed separately to form xylylidine and ribose respectively. These are joined to form ribitylxylylidine, which is then converted to ribitylaminoxylylidine. Starting separately with malonic ester, which is processed through intermediate stages to alloxan, the third "stream" is then joined with ribitylaminoxylylidine to form riboflavin. Purification occurs at each step of the synthesis. Riboflavin Roche equals or exceeds U. S. P. standards.



By the tons. So efficient is the Roche process that pure riboflavin is produced by the tons for use in pharmaceutical products and processed foods. An interesting development by Roche is the production of riboflavin in different forms related to the method of end use. Roche Regular riboflavin U. S. P. is especially useful in dry enrichment premixes, powdered dietary supplements, pharmaceutical tablets and soft gelatin capsules. Roche Solutions type is preferred for the manufacture of solutions having low concentration. Roche Riboflavin-5'-Phosphate Sodium is a highly and rapidly soluble riboflavin compound favored for all pharmaceutical liquid products and some tablets, lozenges, and capsules. It has a more pleasant taste than the bitter U. S. P. riboflavin.

This article is published in the interests of pharmaceutical manufacturers, and of food processors who make their good foods better using pure riboflavin Roche. Reprints of this and others in the series will be supplied on request without charge. Also available without cost is a brochure describing the enrichment or fortification of cereal grain products with essential vitamins and minerals. These articles and the brochure have been found most helpful as sources of accurate information in brief form. Teachers especially find them useful in education. Regardless of your occupation, feel free to write for them: Vitamin Division, Hoffmann-La Roche Inc., Nutley 10, New Jersey. In Canada: Hoffmann-La Roche Ltd., 1956 Bourdon St., St. Laurent, P. Q.



listing the costs and savings to be encountered and their net savings effect over a period of years. Before any actual savings are realized, it is necessary to pay back all of the cost of the machine, all the interest on the money that has not been paid back by the purchase of the machine and all the taxes and insurance and additional maintenance. If calculations are made in this manner, there is a realistic appraisal of what actually happens, rather than an appraisal that is clouded by the insertion of a depreciation factor which is, in itself, a guess and which can very much distort the picture.

Depreciation Table

The following table shows this form which can be used conveniently to evaluate the effects of the purchase of any type of productive equipment, whether it be a new factory, a new machine, or a new technique. The table assumes the cost of the item to be \$80,000 and other factors, assumed, are listed.

The only reason for including the depreciation in the table is that taxes and possibly insurance might be affected by the depreciated value.

Year	Depreciated Value of Item	Direct Savings Labor & Materials	Taxes	Insurance	Maintenance	Interest Payment	Payment on Principal	Owed on Principal	Net Savings
0	\$80,000	\$20,000	---	---	---	---	---	\$80,000	---
1	72,000	800	600	---	---	4,800	15,800	66,200	---
2	64,000	720	600	---	---	4,000	14,680	51,520	---
3	56,000	640	600	---	---	3,100	15,560	36,160	---
4	48,000	560	600	---	---	2,200	16,540	19,820	---
5	40,000	480	600	---	---	1,200	17,420	2,400	---
6	32,000	400	600	---	---	140	2,400	---	16,160
7	24,000	320	600	---	---	---	---	---	18,680
8	16,000	240	600	---	---	---	---	---	12,760
9	8,000	160	600	---	---	---	---	---	18,740
10	0	80	600	---	---	---	---	---	18,920
					Total				\$91,160

Cost of Item.....\$80,000
 Years to Depreciate..... 10
 Straight Line X Sum of Digits Declining Balance
 Interest Rate 6 3/4 %
 Basis of Calculation: Taxes.....1% of Depreciated Value
 Insurance.....1% of 75% of Cost

When the picture is presented in this manner, it is easy to see the point at which net savings will be realized. If there is a good chance that the machine may become obsolescent in, say, three years, it would probably be best to consider very carefully the advisability of this particular purchase. However, if it can be reasonably expected that the life and usability of this machine is ten years, the purchase should certainly be made.

Bulk Flour Handling

There are several areas in modern macaroni plants where substantial savings can be realized today by attention to new machinery purchase or changed methods. The handling of flour in bulk is one area in which the savings can be substantial. Bulk systems can be installed for anywhere from \$50,000 upwards and can result in a savings per sack of 18 to 20c, sometimes more. The installation of bulk handling must be regarded in a slightly different light than the purchase of other

machinery. Many of the expensive parts of a bulk installation have a very long life—in excess of 20 or 30 years, and consequently, the installation of such a system could be justified, even though the percentage return on investment per year might be smaller than in the case of a packaging machine or some other piece of production equipment.

Closely allied with the flour handling equipment would be the regrinding operation. Too many plants handle their regrinds very casually and, consequently, encounter substantial costs. The Plant Operations Survey revealed that regrinds handling costs varied all the way from \$30.00 per 1,000,000 pounds produced in one plant to \$870.00 per 1,000,000 pounds produced in another.

It is not necessary to feed regrinds into a grinding machine by hand. It is perfectly logical to catch the crooks as they come off the long goods cutter and to feed them and other broken goods into a continuously operating grinder that discharges into a storage tank big enough to hold a day's run. This is especially practical with a bulk handling system where the accumulating tank can

feed through a proportioning feeder directly into the conveying system for flour. With such a setup there is no reason to have any labor cost connected with the regrinding operation.

Press Operations

A second area of improvement, or lowering costs, is in the operation of presses. Much is being done these days, experimentally, to increase the output of individual presses already on hand, and to increase the capacity of individual units available for sale. A press that produces 1,500 pounds per hour may cost a third less to operate than one that produces 1,000 pounds per hour. Press production can decrease over a period of time due to faulty feed, wearing of screw and cylinder, excessive trim due to uneven extrusion of long goods. A good cost control program would have provisions for checking the output of presses to see that labor dollars paid to your press room and dryer operators are bringing you the

greatest possible return. We have a press which could easily be capable of producing a net of 1,000 pounds of product per hour running as low as 600 pounds per hour. It is costing this manufacturer approximately 40% more for most of manufacturing labor than it needs to

A great deal can be done to improve net long goods production by working with filters to even out the spreading of the long goods spreader. It should be possible to get by with 10% of the product being returned as trim. We have many instances where the pattern of extrusion was so ragged that the trim exceeded this amount.

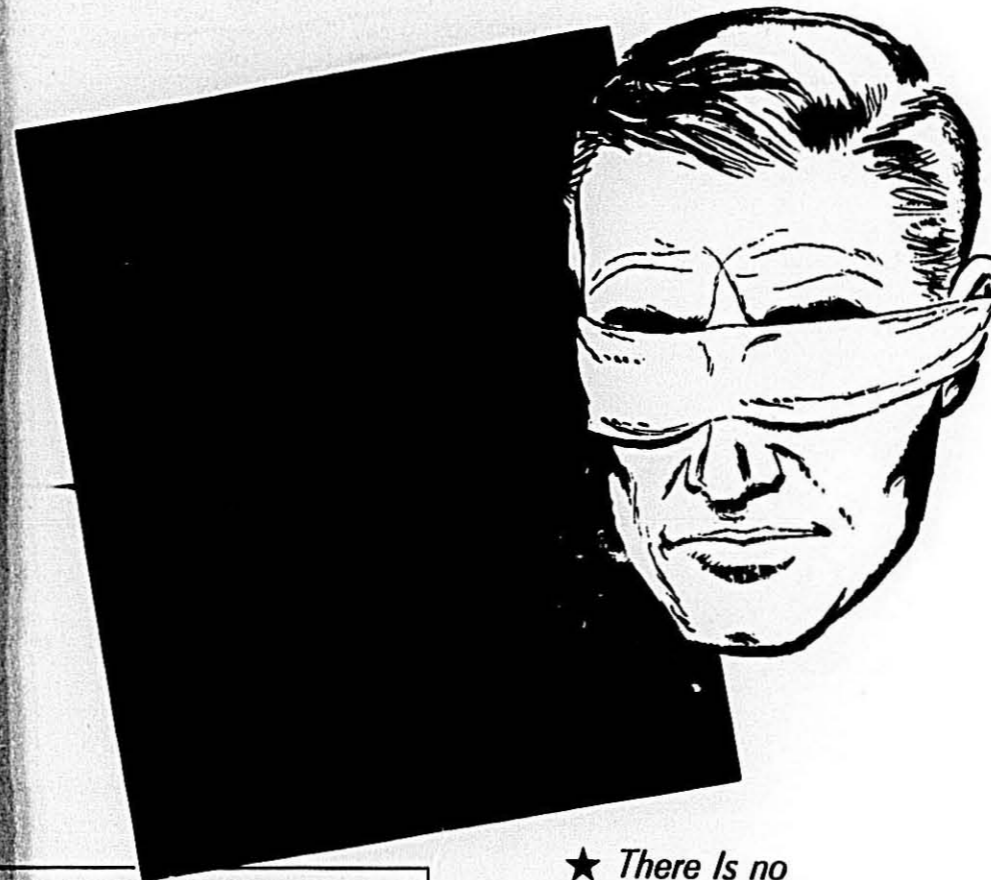
We have been doing some experimental work lately on the possibility of fitting additional presses through existing short cut dryers. Some of the things we have learned in our experimental program about higher temperature dryers seem to indicate that it will be possible to get additional production out of existing equipment. This can result in a fold saving. The first is the saving due to operating fewer pieces of equipment. The second is that additional capacity through existing equipment may obviate the necessity of purchasing new equipment. Modern macaroni production line cost in the neighborhood of \$100,000 and amortization, etc., runs in the neighborhood of \$15,000 per year.

Variety Complicates Production

A multitude of shapes and sizes complicates manufacturing problems. Changes, loss of production due to slow down, slow speeds necessary for special shapes and general interruptions to production make the production of a large number of shapes and sizes a costly thing. Our survey to date has revealed the range of shapes produced in individual plants from 3 to 52. We naturally do not want to discourage practice that increases sales. However, tailors have much the same problems do, and it costs them quite a good deal to handle a large variety of shapes and sizes. It is going to be inevitable that these shapes and sizes do not meet they are going to look with disfavor at the macaroni department. I think it is to us in the industry to keep the shapes and sizes within reasonable limits. Furthermore, individual manufacturers are to adopt coldly critical attitudes toward wide variety of package sizes and extrusion brands which diffuse advertising selling and production effectiveness.

Packaging Progress

Much progress has been made in the last few years in packaging machinery. This is an area where a great deal of labor is used and where a lot can be saved. In the field of cellophane packaging today, the Trans-wrap type of machine, for those who like the pillow type of package it produces, is a great money saver. The ability of this machine to produce bags at a rate of 40 to 60 per minute from a web film, and to fill the bags either volumetrically or with scale



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at that rate makes an investment in such a machine a real money saver.

There are probably more people working, at the moment, to develop machines for speeding the process of putting long spaghetti in packages than at any time in history. We have seen a machine in Germany which does a very efficient job of putting spaghetti in a carton which is formed on the machine. We understand that there is a wrapping machine under test in the United States now which can take hand-weighed material and wrap and seal the ends automatically. We know of at least two of the Trans-wrap type of machines which are being experimented with in an attempt to put spaghetti into bags. We, as an industry, should keep constant pressure on the package machinery manufacturers to solve this problem. More labor is used for this one operation than practically any other thing in a macaroni plant. The only way the thing is going to get solved is for us to spend the money to solve the problem, or to be sufficiently good salesmen to talk the machinery manufacturers into spending their money to solve it.

Warehousing

Warehouse handling costs vary a great deal from plant to plant. In the table above we indicated an average shipping and receiving cost of \$.0035. However, our survey reveals that these costs can vary from as low as \$.0008 to as much as \$.0064 - eight times as great.

Sometimes, handling of goods in the warehouse is not done very realistically. Many orders for macaroni are on a basis of a small number of many different cases. The warehousing problem is very complex to try and cover in a talk like this. However, we know that a conveyerized warehouse setup can result in substantial savings. Pallet handling by forklift trucks is justified in many operations, but not particularly so where the number of cases of one type of material per order is small.

The warehouse is a place where space is extremely valuable. It is a mistake to try to put too much goods into a warehouse space on the theory that building costs are high. Actually, a building is depreciated over a period of 50 years and the annual cost per square foot can be substantially less than a dollar. The actual depreciation cost of floor space which will cost less than ten dollars per square foot will be 20c per year. Additional space can permit the accumulation of added stock which in turn can reduce their number of production changes, permit longer production runs and reduce over-all plant costs.

A study of the Plant Operations Survey leads us to believe that average building costs including depreciation, maintenance and repair, heat, light, etc., probably comes to about \$.004 per pound produced. This is just one-fifth the \$.02 per pound paid for labor. This means - theoretically - that we could afford to double the size of a building to obtain a 20% over-all saving in labor.

Control of Waste

The control of waste caused by product falling on the floor and, thereby, being rendered unsaleable and unusable, can be an important factor. One of the most important parts of a waste control program is making your people recognize that every pound of your product they drop on the floor is about a 15c loss to you. A simple awareness of this fact can save many pounds of scrap. Waste from this source should not exceed 1 to 1 1/4 percent.

A detailed analysis of waste in a plant with what might be considered a typical distribution of production shapes revealed that out of a total waste of 1.20%, the following sources contributed these percentages to the total waste:

- Presses (mostly cleanup)..... 14.8%
- Long Goods Dryers..... 13.8%
- Short Cut Dryers..... 1.3%
- Long Goods Cutting..... 15.5%
- Short Cut Packaging (Cello-Simplex-o-matic)..... 29.2%
- Noodle Packaging..... 10.1%
- Long Goods Packaging..... 11.9%
- Miscellaneous..... 3.4%

The actual records from this plant were broken down in considerably more detail and a weekly record was kept showing the total weight of waste from each machine and from various other sources. The record was maintained by the simple expedient of having separate waste collecting containers at the various sources which were weighed by the janitor as he disposed of them. A simple form made it possible to accumulate records of waste extending over a long period of time. During the last couple of years of operation of this waste control program it has been found that the average waste will vary from a low of 1.03% to a high of 1.47%. Experience has shown that just a little attention can have a lot of influence on the amount of waste.

Waste, or shrinkage, is a direct manufacturing loss and affects the net amount of raw material used. Consequently, waste and shrinkage should have considerable attention. Principal sources of shrinkage are moisture loss (flour comes in at 14% and dries to approximately 10%), overweight packaging, scrap and underweight bags of raw material.

Overweight Packages

Overweight packaging is an item of waste, or shrinkage, which is very often not given sufficient importance. Packaging machines are very often set up so that the average weight of the packages is slightly above the correct weight. This is done "just to be a little on the safe side" and, we believe, to eliminate the need for close supervision. Thinking in regard to overweighting should be conditioned by these facts:

An eighth of an ounce average overweight on an 8-oz. package is a direct loss to you of 1.6%.

There is little justification for having packages average overweight. No packaging machine produces weightings right

on the button, and most will range from a half ounce over to a half ounce below - some considerably worse. Therefore, nothing is gained by maintaining an average of a quarter ounce over. You will have some packages that are under the correct weight.

Most of the regulations relating to package weights are quite reasonable and allow for some variation. We have made a detailed study of the weight control program and conclude that the manufacturer serving most states of the U.S. who makes his average weight come right on the button will not get into trouble.

The control of costs is the most important job of the plant manager. It is a job that takes his constant attention and requires him also to keep constant pressure on the people who are responsible for the various functions in the plant. One of the most important things a manager must do in connection with cost control is to keep his people constantly aware of costs and of their importance in the successful operation of the plant.

Prince Appoints Agency

The Prince Macaroni Company, New York Division, has announced the appointment of S. E. Zubrow Co., Philadelphia, as advertising and marketing counsel for their complete line of macaroni and spaghetti products, and prepared Italian foods.

Newspaper, television and radio advertising will be used intensively in the Middle Atlantic and South Atlantic regions and the Chicago area.

Swansons In Europe

Lester Swanson, durum sales manager for King Midas Flour Mills, and Mrs. Swanson, left for an European vacation. They will fly to Frankfurt, Germany, where their daughter, Joanne, teaches the daughter of an American military person. She is included in their itinerary as a visitor to the world exposition at Brussels.

Roche Honors Salesmen

Arthur J. King and John H. Stuart were honored recently as the top salesman of the Vitamin Division of Hoffmann-La Roche Inc.

Mr. King was presented with the Award by Roche President L. D. Barrett. Mr. Stuart was presented with the President's Award by Vitamin Division General Manager, Robert W. Smith. The Barrell Award is presented annually to the salesman in the Vitamin Division who has achieved the best record during the year. Named in 1957 was Emil C. Barrell, for many years a salesman of Roche International. The award was presented to Mr. King at a banquet.

The Vice President's Award was presented to Mr. Stuart in recognition of achieving the largest sales increase the year in the Vitamin Division.

Mr. King lives at 2312 Sunny Drive, San Jose, California. Mr. Stuart lives at 3219 San Lucas Avenue.



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Trends in Europe

Rene Samson, Technical Director of Catelli Food Products, Ltd., Canada, made the following remarks at the Plant Operations Forum:

I WAS in Europe in February and March for the purpose of getting help on drying problems. I noticed trends that have made definite progress:

Teflon Dies

First, the use of teflon dies. Now, I am not going to discuss the advantages and disadvantages in the use of the teflon die but it seemed to me that all of the larger factories in Europe are going into teflon dies. I brought some samples back of macaroni made of durum granular of poor quality with satisfactory color through a teflon die. The same goods made with an ordinary die would have been pale yellow or white. Long goods in general benefit from uniformity of color produced by the teflon die. Of course, the die cannot improve the quality of the goods but it does improve the uniformity of color.

Packaging Long Goods

Secondly, about the packaging of long goods. Although in Europe they package primarily in bulk they have been experimenting with the automatic weighing of long goods. I saw one installation working very satisfactorily and I believe that the problem of weighing long goods is now solved. The problem that is not solved is how to bring the goods to the weighing device. The equipment manufacturers who have developed automatic dryers for long goods and automatic cutting devices have not solved the problem of transportation to the weighing device. There are two firms in Germany working on this.

Automatic Drying

Third, there is automatic drying. Today, even the small factory has abandoned the old ways of drying and does the job automatically. Now the drying of cut goods you know all about, of course, but there is one development in Europe which has not reached here yet and that is the production of twisted goods.

I call twisted goods those products made in the shape of a figure eight. You have seen this done with vermicelli a great deal. Now it is being done with spaghetti and macaroni as well. These twisted products are in reality long goods because when you boil them they straighten out.

Braibanti has developed an automatic dryer that will handle twisted spaghetti in twelve to thirteen hours, when the same spaghetti on a rod dried by the old standard method takes thirty to thirty-five hours. Even with the new improved automatic dryers on the market the best you can get is twenty to twenty-two hours,



Mike Vagnino (left) and Rene Samson discuss drying matters at Plant Operations Forum.

so the twisted product offers a definite advantage.

Question from the audience: What is the diameter of these products?

Answer: They can be as much as two millimeters or .082 inches. They are making twisted spaghetti on the west coast at .072, the same as the products dried on rods.

The reason these driers were developed is because it is easier than to dry the products on a rod. There is another product produced which they call "bird nests." These are also easy to dry and they are having a very good sale, indeed in substantial volume. We have one of these units in Montreal which runs at the capacity of 500 pounds per hour and we are selling all we can produce. We would like to put in another machine.

The only problem is packing the products in bags after they are dried. It is the only thing I know of that is harder to package than long spaghetti.

How About Cost?

Question: Is the price of twisted goods to the consumer a great deal more than ordinary long products?

Answer: No. There is less handling because the product is extruded directly from the press into a tray which is then handled completely automatically.

There is another problem which has not been completely solved and I have taken it up with the manufacturer. I want all of these twisted products made in exactly the same way so we don't have to weigh them. Since they weigh about an ounce apiece, we might say on our package, "Sixteen weigh approximately one pound."

Question: Do you think this will ever be possible? Doesn't the weight of the individual nest vary in direct proportion to the moisture in the product?

Answer: Yes, but in an automatic drier today you can control the moisture content of the finished product within limits of two-tenths of one per cent. For example, if you set 13 per cent at the end of your drier you can easily maintain it between 12.9 and 13.1 degrees and all you need is two instruments.

About Teflon

Teflon is the DuPont "Wonder Plastic" which among its other remarkable characteristics "sticks to nothing." This characteristic, which gives to Teflon its greatest advantage, also has been a limiting factor in its application, as it was always advantageous to use mechanical fasteners which pierced the Teflon and often nullified its superior performance. Further, since thin, inexpensive tapes of this material could not be used as a replacement to other materials for supporting many uses of Teflon became impractical costwise.

A newly discovered process whereby the surface of the Teflon is altered by treatment with sodium metal and liquid ammonia provides a surface that can be bonded to a number of materials and commercial adhesives. This bonding face is available on one or both sides of a Teflon tape of thicknesses ranging from .005" to .060", weighing in pounds per square foot, from .06 to .72, respectively. This tape is available in widths up to 24" and costs between \$15.70 and \$21.50 per pound (depending on thickness) in quantities under 25 pounds.

Teflon sheets, tubes, cylinders, rods, bars can be given a cementable surface by the above process. Teflon can be cementable by another process, providing a porous surface to which certain commercial adhesives bond effectively.

Cementable Teflon sheets are available in standard form in thicknesses of 1/16" to 1", in sheets 12" x 12", 18" x 24", 24" x 30", 30" x 30", 34" x 34", 36" x 36" and 48" x 48", depending on supplier. On special order sheets have been made 2" to 3" thick. A square of 1/16" weighs approximately 1.25 pounds. Knowing the specific gravity of Teflon to be 2.2, you can calculate weight of any size piece.

The proper selection of the adhesive to be used in bonding cementable Teflon is dictated by the individual requirements of the application. There are a number of good adhesives on the market. Pressure-sensitive adhesives may also be applied to cementable Teflon for surfaces requiring this type of adhesive, but the bonding is not too good.

A pressure-sensitized extruded Teflon tape in widths from 1/2" up to 3 1/2", rolls 36 yards long and in thicknesses of 3 1/2 and 6 1/2 mils, is available on the market. The 1" roll costs \$19.84 for the 3 1/2 mil tape and \$31.04 for the 6 1/2 mil tape.

Teflon may be applied to a surface by spraying with the Teflon in solution. The spray may be applied on a metal surface, for example, in a layer approximately 1/2 mil thick. This must then be baked at a temperature of around 700° F. A layer up to 2 mils thick may be obtained by repeating this process several times. The process does not give as good resistance to abrasion as does tape and sheet Teflon.

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MINNEAPOLIS MINNESOTA

Sanitation Problems of the Macaroni Plant

by Tom Huger, The Huger Co., Inc. and American Sanitation Institute
at the Plant Operations Forum

THE physical operation of a macaroni products plant today, of necessity, is one deeply concerned with food plant sanitation. The reason for this is simply due to the identity of the basic raw ingredients, semolina or wheat flour. These products are so readily infested with insects and are so attractive to rodents as a source of food that the macaroni manufacturer must consider his plant as a veritable fortress within which he is constantly carrying on a war against infestation.

Let us get to the point and discuss what have been actual instances of where manufacturers have failed to do just this, so that we may learn from experience.

Then, after studying a few of these, we will endeavor to answer the question—Why did they occur? What was wrong with the thinking of the plant in permitting these things to occur?

Storage Infestation

Living mouse infestations are found in storage of semolina and flour owing to poor stacking and owing to failure to keep the stored material moving, so that none becomes old enough to furnish breeding places.

Even when stored ingredients are kept moving rapidly, storage conditions have frequently been so poor that heavy dirt, dust and paper accumulations will collect under skids. This furnishes harborage for rodents which then have freedom to romp about even over constantly moving bags, and contaminate them as they feed therein. The same applies for insect infestation developing in storage. This problem of storage in the macaroni plant is one of the most critical situations to handle.

Semolina and Flour Handling Equipment

Insect infestations living and breeding within the equipment will build up in so called dead spaces, when accumulations of ingredients are not removed at frequent periodical intervals by physical cleaning.

This problem is inherent in all semolina and flour handling equipment for until very recent times no thought seems to have been given by manufacturers to this question of where dead or static flour might accumulate and form a breeding center for insects inside of equipment.

In the past, this material has occasionally been met by some plants who fumigated their entire building in a "General Fumigation." This will kill the insects, but it leaves their dead bodies free to become dislodged in these areas inside of equipment and thus get in the finished product.



Sanitation Panel: (left to right) Bill Hahn, Leo Rerucha, Bob Freschi, Russell Houston, and Tom Huger.

The true answer to this problem is periodic thorough cleaning by means of a vacuum cleaner of all flour and semolina handling equipment followed by "local or spot fumigation."

Housekeeping

There is no question but what poor housekeeping has probably caused more trouble for the macaroni manufacturer than any other sanitation factor. For, even where a plant has had an adequate equipment cleaning program and good storage practices in a sense that they move their incoming ingredients rapidly and check them as they are incorporated into the manufacturing system, they have often failed to maintain clean, neat housekeeping in all areas of the plant. Such is very difficult to do, for the tendency is for untrained plant personnel to maintain good housekeeping only in those areas readily and commonly frequented by working employees. Actually, housekeeping must extend down to the cracks and crevices.

There is no question but what there have been many regulatory actions taken against manufacturers, that would not have been taken, had they kept their plant clean at all times from evidence of past infestations. The ingredients used in a macaroni plant are so inviting to insects and rodents that occasional infestations will develop in nearly any plant. However, evidences of these in the form of dead insects and rodent pellets must be cleaned up as soon as possible after the infestation is brought under control, lest they be credited, when the inspector goes through the plant for structural faults, with current living breeding infestations that actually do not exist. Very few macaroni plants have been built with the thought in mind that all cracks and crevices where accumulations of flour dust might build up, must be kept caulked or sealed. Likewise, all hollow walls, and spaces between the floors and the ceiling, must be kept sealed off from adjoining open manu-

facturing areas, or these will be infested with dermestids, flour insects, and the like, which feed on debris that sifts down into them. Spaces should be eliminated where possible, even at considerable expense if this can possibly be done. Where simply cannot be done, then it must be sealed off and such sealing maintained at all times.

In this connection, there are minor structural harborages to be found in a macaroni plant, such as switch electrical conduit junction boxes like the like.

Actual Inspection Reports

It is interesting to note from inspections, what has been found as chief problem. Briefly summarizing, and mentioning names, we find:

"This inspection discloses that the firm has an appreciable insect infestation in its plant. This has developed and is actually breeding in cereal dust on the walls, floors, and in the equipment. There is no possibility for the large amount of static dust that can be found in accumulations of flour dust or broken macaroni are perfect breeding places for insects. How best to get at these? Do we spray with insecticide? Do we have a man go through and vacuum? Do we blow them? Let's ask Bill Hahn of the Skinner Manufacturing Company what he does."

Hahn: "We have tried everything from spraying to blowing and fumigation but none of these procedures were successful until we started the heat treatment of driers. First we blow them out with compressed air and then heat the driers up to 120 degrees by closing the air intake on the instrument panels. By doing this the temperature actually goes up to between 160 to 170 degrees where we hold it for four or five hours. We do this once a week."

Huger commented that because of the life cycle of weevils, which is three weeks, this was often enough to do it. He commented: "Those of you that are spending money on insecticides and labor should get into this heat sterilization. We have been talking about it for about five years and some ten or twelve plants are finding it the complete answer to insect control in driers."

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A third one reads:

"Improvements have been made as regards to insect control, but the plant is still operating with appreciable insect infestation. This is undoubtedly attributable to breeding places for insects found under the false floors between the ceiling of the room below and the floor itself."

There are specific answers to any of the specific problems that are present in macaroni plant sanitation. However, above and beyond these specific ones there is a single basic answer. That is, top management must understand the problem and provide opportunity for correction. For example, if the plant

is properly cleaned and poor housekeeping is in existence, then personnel funds must be provided by management to develop a housekeeping program and someone appointed to direct it. If the plant has a very poor floor, management must appreciate the problem and provide some measure for correcting and treating the floors so that these problems will not exist. It can be done, but each specific problem must be solved in a tailor made fashion.

Then, it must be recognized that the specific details of how to do these things are not learned through working as a producer of macaroni, but by expert advice from people who have experience in the type of work. Ultimately, a detailed planned sanitation program must be set up with the full knowledge and understanding of every section of the plant, on the part of management, and with the appointment of a responsible person within the plant, for maintenance of the program, who might be called the Sanitarian. This program should be prepared under the guidance of an experienced counselor, who has set up such programs previously.

Egg Dosers

How do you keep your egg mixing equipment sanitized and sweet smelling?

Russell Houston of Delmonico Foods said: "Every few days we run soap powder through our system and then the next time alternate with an acid base liquid cleaner. We pump water through the system first then put the soap in and wash it out through the first tank, and then pump it over to the second tank and then wash it through. After this has been done we take down all the pipes, put them in the sink and wash them. The primary stages are a help in speeding up the job and making it more efficient."

Huger asked: "I wonder if some of you realize what a serious avenue of potential contamination egg equipment is?" "I have checked pipes, particularly those going to the motor or some of the fittings down around the pump, and have found a one and a half inch pipe reduced to an opening as small as a dime because the rest of it had accumulated eggstone. Some of you know what I am talking about because I am talking about your plants. The important thing is that, in cleaning egg equipment, alternated cleaning with an alkaline and acid program will keep your equipment clean and fresh smelling."

In some plants plastic hoses have been used to replace stainless steel because you can tell then at a glance whether the equipment is clean or not.

Macaroni Press

The press is most important because here are areas that are in actual surface contact with the food. Bob Freschi of Ravarino and Freschi had this to say about keeping presses clean.

"While the actual press section has very high temperatures and is completely enclosed by plates, take nothing for granted. Presses should be cleaned and inspected at least at two week intervals."

"The feeder section is the most likely spot of contamination. The amount of flour is regulated by moving this section in and out. I have tried to impress upon my mixer men that, on every shift, they should take the wheel and spin it all the way out and back as fast as possible so as not to upset the mix but to get rid of the accumulation of flour in that corner."

Rerucha: "We take the tops, sides and bottom off of our screw conveyors to

"To help speed up cleaning time put thumb screws on the side of the plates replacing the slotted head screws."

"Accumulations of cuttings and blowing from the chopper find their way to the bottom of the spreader and are inaccessible to high air pressure. This requires hydraulic jacks to lift the spreader for cleaning it out and spraying."

Packaging Machinery

"What do you do to keep your packaging machinery nice and clean, Russell (Houston)?"

"During the week we don't do too much. We sweep the floor with a sawdust and oil combination and we have high pressure air hoses for blowing off the equipment. On Saturdays we bring a man in to clean overhead, particularly where the storage tanks for products feed into the machines. The plant sanitarian comes along to spray the ledges."

"We keep all our materials on skids so it is portable and so we can clean behind them. Even so, if the skids stand too long you will be surprised at what gets underneath them."

"We try to keep the people working in the packaging room conscious of cleanliness by having them wear clean uniforms and putting up a few posters with helpful suggestions. Basically, all that is required of the packaging room is just good housekeeping."

Effective Preventive Sanitation

Some time ago H. Geddes Stanway, Vice President and Director at Skinner Manufacturing Company, wrote an article in Food Engineering telling how management actively participates in organizing and implementing an efficient program by carefully selecting key personnel, checking their work, and assisting them when necessary. In addition, a sanitation consultant is employed for further guidance.

This systematic program has paid off, says Mr. Stanway, because it has boosted employee morale and reduced accidents. "Furthermore," he states, "we believe it enables production of a higher-quality product. And, most surprising, we now know that a well-organized program actually lowers rather than increases costs."

Skinner uses a Daily Sanitation Report listing jobs to be accomplished, a space for noting time required, conditions noted, date for the operation to be repeated, material and amount used, inventory remaining, and recommendations. This form has a place for the sanitarian's signature and for the approval of the superintendent who must review it.

While Skinner has an extensive and expensive program of preventive sanitation, management considers foresight less expensive and time consuming than hindsight with infestation headaches. They have information available for their distributors to keep their goods from becoming contaminated in warehouses, retail storage and even shelf-space, recommending close periodic checks and proper stock turn-over.

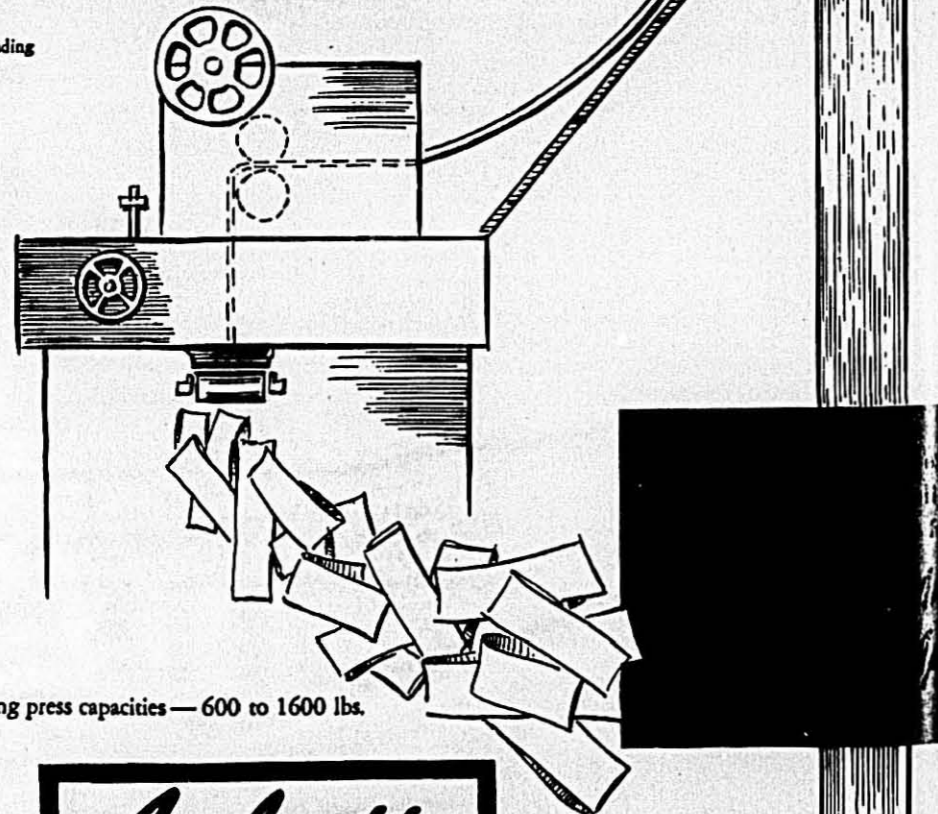
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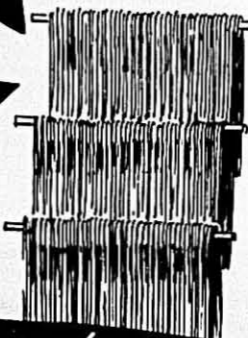
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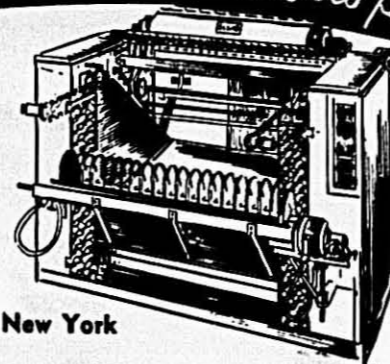


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Durum Growers and Processors Meet

DURUM millers and macaroni representatives told a subcommittee of the North Dakota Farm Bureau at the Minneapolis Grain Exchange April 18, that a wheat commission could go a long way toward developing a demand for durum and durum products.

Labeling Discussed

G. H. Mikkelsen, president of the North Dakota Farm Bureau, stated that the meeting was called by them for the purpose of discussing a durum labeling bill which would require all products made from durum to be labeled as to semolina content. The Bureau, at their annual meeting in November, 1957, went on record supporting the efforts of producers of durum in North Dakota to secure more accurate advertising and labeling of semolina products.

The group was told by manufacturer representatives that according to law, any product now labeled as containing semolina must be made of 100% durum, and growers should see that the Food and Drug Administration enforces the law.

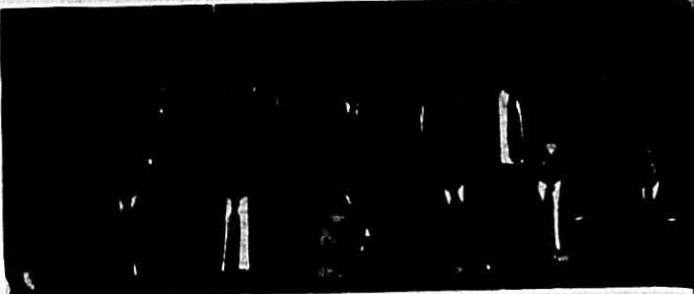
Lloyd E. Skinner, president of the National Macaroni Manufacturers Association, said he personally felt that there could be more descriptive labeling of durum products. Skinner added that the meeting could be the beginning of an important relationship between durum processors and growers and offered the possibilities for study and cooperative efforts that will promote gains for both groups. He formally issued an invitation to the North Dakota Farm Bureau to send a representative to the National Macaroni Manufacturers Association convention to be held this summer in Coronado, California, to present the durum grower's problems to the association. Robert M. Green, secretary-treasurer of the National Macaroni Manufacturers Association, added that cooperative efforts for the promotion of durum from the farm to the table were a move in the public interest.

More Advertising Desirable

Tom Ridley, Langdon, stated that he realizes the durum processors and producers have common problems and that more advertising of durum products would be desirable for both groups.

Dick Crockett, Langdon, stated that both groups agree that durum wheat is the essential ingredient in the manufacture of quality macaroni products and that growers feel that accurate labeling would be a definite guide to the buying consumer.

Harold Hofstrand, Leeds, stated that according to government reports, durum growers' intentions to plant this year are only 1,179,000 acres. This is only 50% of the 1957 acreage. Montana indicates a reduction of 89%, Minnesota—67%.



At the meeting: Seated—Al Keating, Tom Ridley, Lloyd Skinner, Maurice Ryan, Wheatley, Les Swanson. Standing—Louis Roe, Clint Zinter, Ray Wentzel, Jim W. Henry Putnam, Earl Hetherington, Harold Hofstrand, Gene Kuhn, R. C. Crockett, Cliff Jess Cooke, Otto Koenig, Morris Ainsworth, G. H. Mikkelsen, and Lee Merry.

North and South Dakota—35%. An annual crop of 30 to 35 million bushels is needed to meet present durum requirements.

No definite action was taken on the durum labeling bill by the group. George Mikkelsen, State Farm Bureau president, said he will urge the Farm Bureau Field Crops Advisory Committee to give this issue further study, and he will encourage the committee to contact the Food and Drug Administration, who now has the authority to enforce the accurate labeling of durum products.

In Attendance

North Dakota durum growers in attendance: R. C. Crockett and Tom Ridley of Langdon; G. H. Mikkelsen of Starkweather; Harold Hofstrand of Leeds; and Al Keating of North Dakota Farm Bureau.

Macaroni manufacturers: Lloyd E. Skinner, Skinner Manufacturing Co. and president of the National Macaroni Manufacturers Association; Maurice L. Ryan of Quality Macaroni Company; James Williams, Jr. and Otto G. Koenig of The Creamette Company; Eugene J. Villame of Minnesota Macaroni Co.; and Robert M. Green, secretary of the National Macaroni Manufacturers Association.

Durum millers: C. W. Kutz of Commander-Larabee Milling Co.; E. W. Kuhn and J. K. Cook of Amber Mills, G. T. A.; Ray R. Wentzel and Irvin M. Solum of Doughboy Industries; Lee Merry, John Brooks and E. V. Hetherington of General Mills, Inc.; Pierce Wheatley and Morris Ainsworth of International Milling Co.; Lester S. Swanson, Harry Deaver and Walter O. Stack of King Midas Flour Mills; and Louis Roe, William C. Steinke, Clinton Zinter and Ron Kennedy of F. H. Peavey & Co.

Also present were Henry O. Putnam of the Northwest Crop Improvement Association and Ahern W. Donahoe of the Minneapolis Grain Exchange.

Test Grains Planted

Experimental wheat, oat and barley breeding lines harvested in late April in Ciudad Obregon, Sonora, Mexico, were seeded at Upper Midwest and Canadian Experiment Stations in early May, according to Donald G. Fletcher, Executive Secretary, Rust Prevention Association, Minneapolis.

Nearly 40,000 breeding lines have been grown in Mexico under supervision of the Rust Prevention Association in the United States and Canada Department of Agriculture during the last four years. These plantings, made possible through the cooperation of the Mexican Department of Agriculture and the Rockefeller Foundation, have greatly reduced the 12-15 year period often required to develop a new cereal variety, Fletcher said.

In addition to the nearly 5,000 wheat, durum wheat, and oat lines, 500 barley breeding lines were included in Mexican plantings this year. Two crops each year will speed development of new barley varieties resistant to attack by leaf diseases which have plagued Upper Midwest barley crops in recent years.

Testing in Puerto Rico

Extension of winter testing to Puerto Rico, where man-made rust epidemics can be started without danger to main cereal plantings, has already had important results. More than 50 oat lines were found to be resistant to crown rust 264—as present the most serious threat to oat production in the United States and Canada. This race can attack all commercial oat varieties grown in North America as well as currently used sources of rust resistance. Although not suitable for commercial varieties, the rust resistance of these oat lines will be transferred to useful varieties through breeding. Sixty-six,000 wheat, oat and barley lines were included in Puerto Rico tests, Fletcher said.

The presence in the Upper Midwest last summer of wheat stem rust race

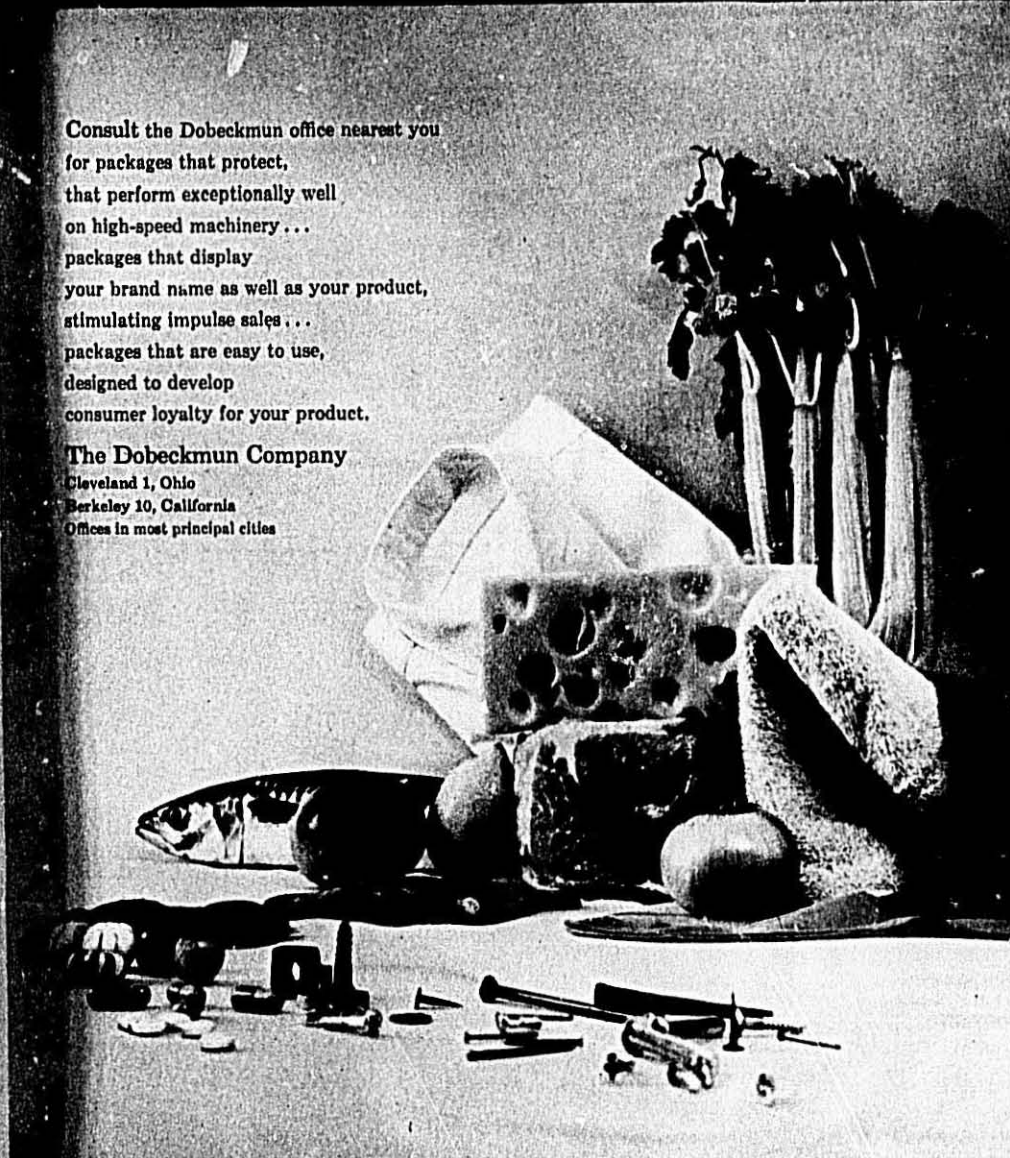


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trace amounts which can attack Selkirk and the durum wheats (Langdon, Ramsey, Towner and Yuma) make continuous research necessary to hold the rusts in check.

The annual northward movement of cereal rusts from southern overwintering areas has already begun but many factors such as winds, development of rust races and climatic conditions will interact to determine the extent of rust development in the Upper Midwest and Canada, Fletcher added.

Durum In Canada

C. L. Sibbald, director of the Catell Durum Institute, writes:

At the beginning of March, the government forecast that Canadian farmers anticipated seeding 34% less durum in 1958 than was seeded a year ago. Alberta acreage would drop the most they said, declining exactly 50%. Saskatchewan farmers, perhaps harder pressed for alternative crops, would seed 33% less durum. And to make the picture complete, farmers in the province of Manitoba would swing slightly stronger into durum, using principally the new, partly rust-resistant variety Ramsey. The net reduction across the prairies would be nearly 800,000 acres.

Even with such a decided drop in the Canadian durum acreage from a year ago, the area in durum may be 1,577,000 acres, it was reported. If seeded, this must still be considered as a large durum acreage.

Factors For Planting

Now, in May, we can only reflect on what might have happened since then to alter that intended course of action. First of all, it has been largely the Canadian Wheat Board selling price and delivery quota that have kept farmers from dropping durum altogether this year. This has not changed appreciably since March, as durum remains at \$0c per bushel premium over comparable grades of Northern wheat. Meanwhile delivery quotas have been increased from 5 bushels to 8 bushels for each acre seeded to durum in 1957.

A second big reason for such a large durum acreage is the heavy surpluses of alternative crops, in particular bread wheat. Though Canadian bread wheat is disappearing faster than a year ago, the country elevators and farmers' granaries are bulging.

Finally, spring weather has a definite effect on seeding plans. By early May a fair amount of wheat seeding has been accomplished in the durum area. It could not be considered an early spring start, except in southern Manitoba, but in general spring weather has been reasonably good to this date.

All in all, it would appear that the government figures as at March 1 would be a good estimate today as well. Weather conditions to May 15 will probably tell the tale, as durum must be seeded early.



C. L. SIBBALD

Planting Down in U. S.

Planting of durum in the United States has been early. Due to good weather in the "Durum Triangle" of North Dakota, close to 50% of the durum was seeded by early May. The crop has largely shifted from Montana back into North Dakota this year. But, as in Canada, the total acreage seeded is expected to be down from a year ago.

Within the limits of normal world consumption of all kinds of wheat, Canadians have reason to be optimistic these days. In recent weeks the news has been generally good on the wheat-marketing scene. Consequently, not only is Canada supplying a higher percentage of the market, but her actual volume of exports has risen, and the quantity stored on farms has declined somewhat, even though it is still appreciable.

The marketing of durum wheat is, however, somewhat clouded. Two successive large crops in 1956 and 1957 have left large surplus stocks on the farms. With a minor crop such as durum, this may be quite serious. It is to be hoped that marketing of Canadian durum will speed up as well, but the prospect is not too likely.

Dollar Return

Soybeans yielded the greatest average dollar return per acre of the grain and oilseed crops in North Dakota during the past five years, according to the North Dakota Crop and Livestock Reporting Service. Corn for grain ranked second followed by hard spring wheat, durum, flax, barley, rye and oats.

Hard wheat had an average value of \$29.84 per acre during the 5-year period. The highest value was \$38.00 per acre in 1957 and the low, \$21.70 in 1954. Durum returned an average of \$27.06 per acre, with a high of \$36.90 in 1957 and a low of \$10.74 in 1954, a severe rust year.

Packaging Old-Timer

Pressman Edward G. Boyden rounded out fifty years of working with Milprint, Inc. in May. His record of employment is exceeded only by William Heller, Milprint's Chairman of the Board, who joined his brother, M. T. Heller, in the printing business in 1901.

"If you can fit yourself in here, you got a job," M. T. told Boyden when he walked into the Milwaukee Printing Company in April of 1908. Boyden, who has been trying to do just that since, Boyden agreed to work with M. T. Heller for the first week and "let the boss decide what he was worth." The salary was set at \$6 a week. On the week of his \$23 a week, he moved from his room and laundry, to better quarters at a week.

Letterpress Operator

Boyden's first assignment was as an apprentice to William Heller, Sr. in the operation of the firm's three foot-power "platen" letterpresses. Mr. Heller told Boyden to operate the presses so he might have more time for typesetting. Boyden relates that Billy Heller was a switch-hitter in baseball and applied his talent to typesetting. He used both hands and "was the fastest typesetter you ever saw."

In 1908, Milprint had only eight employees producing printed sales trading stamps, and a great deal of music, including such popular songs as "On Wisconsin" and "After the Ball." In about 1917, as Mr. Boyden notes, the company started printing globe wrappers for a 5c candy bar. The wrappers were printed in two colors, the firm name in one and the product name in the second color.

It was some time during World War I that M. T. Heller got an idea to use a victory flag and "I suppose that really the beginning of printed flex packaging" says Mr. Boyden. The boost came in 1924, when the firm began printing on cellophane.

Forty Years Service

Boyden was a pressman for 10 years. For the last ten years he has been on a semi-retired basis, conducting tours at the Milwaukee plant from November to May and spending the summer months on Washington Island, 150 miles north of Milwaukee.

Boyden is filled with wonder at the spectacular growth of Milprint. "I think, in fifty years they've built a big plant and ten others like it in the country and they've got 22 foreign filiales. I don't think it could happen again."

Boyden has no plans for complete retirement. He's still "fitting himself" and has a job for as long as he wants and "I still want it."

Egg Supplies

The United States Department of Agriculture Outlook and Situation Board reports that the present production of eggs is below last year, principally because of the decrease from last spring in the number of layers on hand. Output will continue to fall a year earlier until perhaps next summer or October. Flock size is not expected to equal year-earlier levels until the final quarter of 1958, when the laying flocks will be replenished by pullets from this spring's hatch. Through April the hatch of replacement pullets was 5% above 1957. In view of the larger-than-usual number of old hens in the present laying flock and the need to replace them, the projected small increase in pullets raised will not markedly increase the size of the 1958-59 laying flock over the year before. Therefore, any increases in egg production in the last quarter would result from increases in rate of

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PREMIUM: A new and unique measuring spoon that combines four different measurements in one unit is being offered as a free premium with every purchase of a twin-pack of Mrs. Grass Chicken-Y Rich Noodle Soup. Made of attractive red plastic, the 4-in-1 spoon measures 1 tablespoon, 1 teaspoon, 1/2 teaspoon and 1/4 teaspoon.

Mrs. Grass Chicken-Y Rich Noodle Soup is manufactured by the I. J. Grass Noodle Company, 6027 South Wentworth Avenue in Chicago, who also manufacture Mrs. Grass Vegetable Noodle Soup, Mrs. Grass Beef Noodle Soup, and Mrs. Grass Famous Genuine Egg Noodles.

On April 1, frozen egg stocks were a third below last year, and those of the less important shell eggs were 90% lower. These deficiencies, which are likely to be only partially offset in the next two months, are equivalent to about three eggs per person.

The 1958 peak of egg production may now have been passed. Retail prices for the next four or five months are likely to continue higher than last summer.

Egg Production

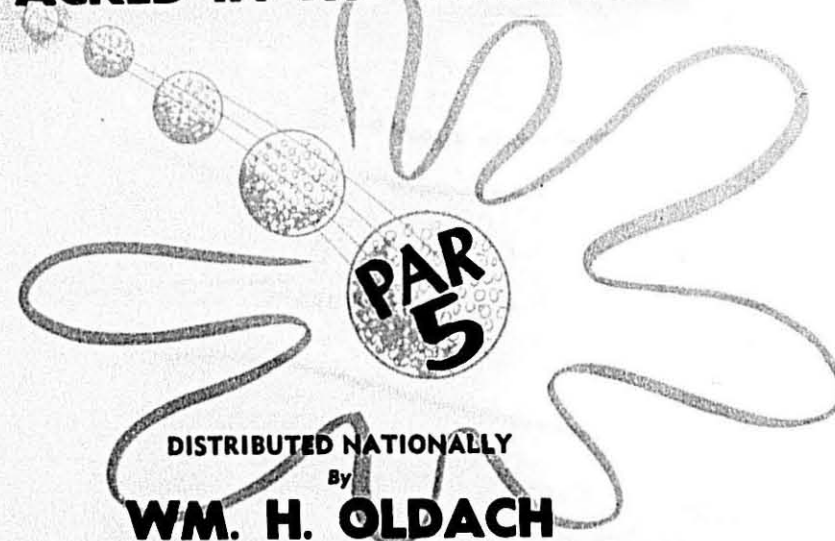
Liquid egg production started off the first quarter of 1958 with a total of 29,208,000 pounds in January. This was 19% above the production in January, 1957, and 32 percent above the 1952-56 average for the month. Of this total, 1,894,000 pounds were used for immediate consumption and 6,019,000 pounds were used for drying. Both of these quantities were smaller than those of a year earlier. The quantity used for freezing, which totaled 21,295,000, however, was larger.

February production of liquid eggs totaled 36,700,000 pounds. This was 12 percent above the production in February, 1957, but 16 percent below the 1952-56 February average. The quantities used for immediate consumption and drying, totaling 3,781,000 and 7,312,000 pounds, respectively, were lower than a year earlier, but the 25,607,000 pounds used for freezing was larger.

The production of liquid eggs during March, 1958, was the smallest for the month since March, 1938. Production totaled 32,664,000 pounds, compared with 59,170,000 pounds in March, 1957, and the 1952-56 average production for the month of 70,590,000 pounds. The quantity (Continued on page 41)

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NRA serve approximately 80 per cent of all the meals prepared outside the home. The restaurant industry claims 25 per cent of the American food dollar, serving as many of one meal out of every three eaten in large metropolitan centers.

Copies of the new restaurant-school lunch recipe book will be made available to macaroni manufacturers through their National Macaroni Institute. The publication will be unusual in format — a workbook as well as a recipe reference booklet. Each page shows the recipe, the restaurant source, a picture of the finished dish, with space for computation of cost. The book will be center-punched at the top, so that restaurant operators may hang it up and follow the recipe as they work on the preparation of the food.

The recipes have been tested and standardized in the Durum Wheat Institute kitchens. A number of dishes were especially prepared for members of the food committee of the research department of the National Restaurant Association. Copies of the recipes were subsequently circulated for evaluation by this NRA testing panel.

Preparation Demonstrated

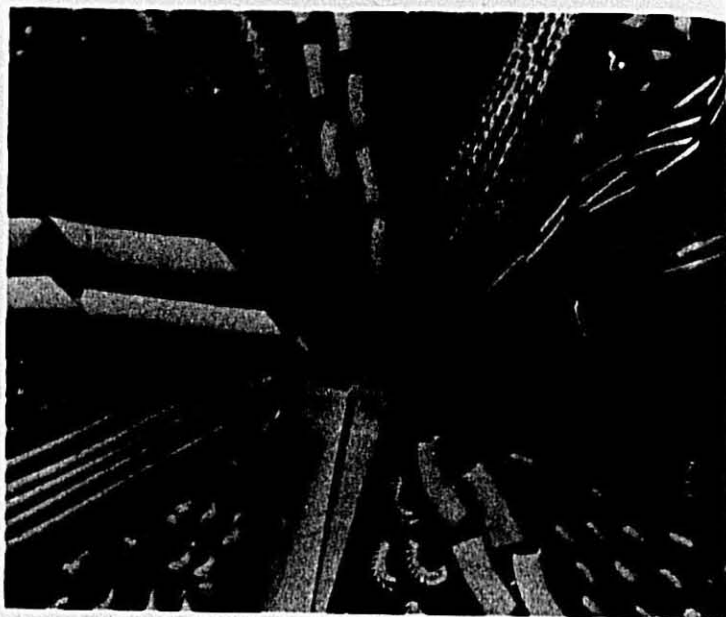
As they worked at the NRA Show, Mrs. Adams and Miss Behnke explained that 100 per cent durum products hold their shape through cooking without becoming soft or mushy. They used the Italian term, "al dente," to describe how properly cooked spaghetti or macaroni tastes to the expert.

"Have you ever wondered why the Italian people do not tire of eating spaghetti products," Miss Behnke asked, "even though they are served many times a week every week? One reason may be that macaroni and spaghetti have a mild, wheaty taste. You don't tire of something mild as you tire of something that has a strong distinctive flavor."

Miss Behnke also pointed out that Italians serve macaroni foods with a variety of sauces to change the personality of each dish from meal to meal. She pointed out that there is an exciting variety of macaroni foods to offer the restaurant customer. Macaroni and cheese, spaghetti and meat sauce and beef and noodles were named as "tried and true combinations."

"But how about macaroni and sweet breads with mushroom sauce, or a spaghetti and cheese soufflé, or a macaroni and fresh fruit salad? You could work a great deal of variety into menus by using different shapes of macaroni foods," she said.

The interchangeability of various macaroni products was also stressed, together with the versatility of the product in service for breakfast, luncheon, dinner — side dishes, salads and desserts. "Remember," said Miss Behnke, "macaroni products are always available to feature on



Endless variety — that's just one of the many lessons taught by the Durum Wheat Institute filmstrip, "Tricks and Treats with Macaroni Foods." Macaroni comes in more than 150 different shapes. Here, from the filmstrip, you see some of the fancier shapes. Many of them bear Italian names. Starting at the upper left corner: yellow and green egg cappelletti, mafalde, rigatoni, attuppatelli lisci, fusilli senza buco, shells, mostacciolini, margherite, tiny egg novelties, green noodles, fusilli bucati, cavatelle, tuffoli, cresta di gallo (rooster's crest), lasagna, rosetta, long zitoni, rotini and manicotti. These imaginative shapes can stimulate any creative cook — and home economics students. All shapes are not readily available all over the country. But, when you can buy them, they're exciting and different to use.

your menu. They are easy to prepare, easy to store, popular and good tasting."

The Durum Wheat Institute team pointed out, too, that macaroni foods contain a high percentage of protein — and when served in combination with milk, meat, eggs, cheese, fish and poultry — the protein is complete and adequate.

The "classic" recipes from famous restaurants contributed to the "gourmet" theme of the presentation. This feeling was extended by the ingredients themselves — recipes calling for herbs, spices and wines. Miss Behnke pointed out that as originally imported into England from Italy during the 18th Century, macaroni foods were considered the ultimate in high fashion. To support the point, she quoted the folk rhyme about "Yankee Doodle," who "stuck a feather in his cap and called it macaroni." Macaroni was thus the mark of elegant eating.

Filmstrip

A new chapter in industry-school cooperation is being written by macaroni manufacturers and home economics teachers, working together with the full-color filmstrip—"Tricks and Treats with Macaroni Foods."

The filmstrip introduced a year ago by the Durum Wheat Institute presents basic product facts, cooking methods and recipes for home economics class work with spaghetti, macaroni and noodles. The importance of the high school market is underscored by statistics showing that half of all girls under 20 are mar-

ried. The home economics teacher actually helps train her students for home-making—and the filmstrip makes knowledge of macaroni foods part of the training.

More than 100 copies of the 52-frame film, each accompanied by a narration guide and a quantity of recipe leaflets, have been ordered by high school and college home economics instructors, home demonstration agents, macaroni manufacturers and other organizations. Users order additional recipes as needed.

Counting 30 students in each classroom — and a minimum two showings a year — the story of the film has reached at least an estimated 60,000 audience, in less than 12 months of circulation.

In the School

In the Cleveland, Ohio, public schools, the filmstrip is offered as a visual aid for use by teachers in 13 senior high schools, 18 junior high schools, and six special elementary classes. According to the directing supervisor of home economics, Dorothy Ellen Jones, children learn more when they see and touch subjects of interest as they also listen to a teacher's words. She has suggested to teachers that product samples showing variations and differences in macaroni foods be used in conjunction with the film presentation.

Mrs. Peggy Walton, home economist for the Nebraska Wheat Commission, also reports audience enthusiasm for the filmstrip and its message. Mrs. Walton re-

(Continued on page 34)

Sterwin ENRICHED Macaroni MEANS MORE...



PROFITS FOR YOU!

GET CONSISTENTLY UNIFORM ENRICHMENT WITH

B.E.T.S. (The original food enrichment tablet) FOR THE BATCH METHOD | **VITRAM** (Brand of food-enrichment mixture) FOR CONTINUOUS PRESS

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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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Nutrition Foundation Elects Trustees

A prominent American business man, a leading educator and a noted United Nations administrator were elected Trustees of the Nutrition Foundation, it was announced by H. J. Heinz II, President of the nonprofit food research and education organization.

At the occasion of its annual Spring meeting held at the Chicago Club, Chicago, the 100-plus Board of Trustees elected as members: Kenneth H. Redmond, President of the United Fruit Company; Dr. Conrad A. Elvehjem, President-elect of the University of Wisconsin; and Maurice Pate, Executive Director of the United Nations Children's Fund (UNICEF).

Founded in 1941

The Nutrition Foundation, organized by food and related manufacturers in December 1941 as an expression of their interest in scientific progress and human health, has as its basic purposes: The development of a comprehensive program of fundamental research, providing basic information in the science of nutrition; and the support of educational measures that will assist in making the science of nutrition effective in the lives of present and future generations.

The Board of Trustees of the Nutrition Foundation, in addition to a Who's Who in the food and associated industries, is composed of a cross-section of the nation's foremost science, education and government leaders. Representing science and education are the Presidents of the Universities of Notre Dame, Columbia, California Institute of Technology and the Massachusetts Institute of Technology. Speaking for Governmental health officials are such noted health leaders as Dr. Leroy E. Burney, Surgeon General, U. S. Public Health Service and Herman Hilleboe, New York State Commissioner of Health.

Biased Claims Impose Risks

Biased or irresponsible claims by faddists, unscrupulous salesmen and others will continue to reach the public and impose serious risks to their health and burdens on their economy unless honest measures of education for intelligent public guidance are taken, a leading nutritional scientist has warned.

Call For Education

Addressing the annual Spring meeting of the Nutrition Foundation's Board of Trustees at the Chicago Club, Dr. C. G. King, Executive Director of the organization, dealt with the serious problems of maintaining balanced diets and the hazards of overeating and stated that, "without education of the consumer, the public is easily confused and uncertain about the adequacy and safety of their food resources."

Dr. King called on "those who produce, manufacture and distribute food . . . to become more active and more

effective in reaching the consumer with educational guides. Unless the consumer makes the right selection at the store and dinner table," Dr. King stated, "damaging and expensive forms of malnutrition will occur in the midst of plenty."

The Nutrition Foundation, a nonprofit organization supporting basic research and education in the science of nutrition, founded and supported by the American food industry, has distributed over \$4.8 million in grants to universities and medical schools in support of studies to gain a better understanding of the human requirements of the individual nutrients.

The Role of Fats

In his report to the Board, Dr. King stressed that: "The current emphasis on fats is clearly merited in the public interest because of the rapidity with which this field of nutritional research has opened very significant new techniques of investigation and new areas of interest in relation to health and food practices. Primary emphasis in the program is placed on discovering a more complete picture of how fatty materials are formed and utilized in living cells broadly, and in the human body specifically. In addition, there is an emphasis on the health aspects of fat metabolism. Edible fats have an essential role to play in animal and human nutrition, but certain aspects of fat utilization have vague relationships to health and should be studied intensively."

Dr. King continued, "In the first of the above areas of research on fats, the approach is primarily biochemical, to discover (a) the manner in which vitamins, minerals and specific catalysts (enzymes) regulate the synthesis, storage and disposal of fatty materials in normal living cells, and (b) the specific steps by which the carbon fragments such as acetate groups from fats, oils, sugars and proteins are converted to the fatty materials found in the body."

Other Nutrients

"The second aspect of the program is largely medical in nature," Dr. King stressed. "Scientists want to discover the quantities of edible fats of known composition that can be consumed with greatest advantage to infant, child and adult health, when the diet is otherwise well balanced. Others are examining the effects of varying intakes of other nutrients such as proteins, sugars, minerals and vitamins upon the tolerance of different kinds of fatty acids. Others are getting an appraisal of the relative role of fat intake compared with the effects of genetic handicaps, nervous tensions, smoking, excess caloric intake, infections, poisons and other factors that may have a dominant bearing upon such diseases as atherosclerosis, coronary heart disease, cerebral "strokes," diabetes, and fatty livers. Still others are studying the kinds of food intake that can afford optimum resistance against the degenerative diseases associated with disturbances in fat metabolism, whatever their cause."

The Nutrition Foundation's Executive Director then declared, "There is a critical need, for example, to find whether diets that result in moderate changes in blood cholesterol concentration furnish a true indication of diets that will affect the incidence of heart disease. We also need critically to know which tests with experimental animals give the best clues to the human situation."

Of Public Interest

"Obviously, problems of the above nature are of intensive interest to the public, to the medical profession, and to the food and related industries. Those who contribute to the Foundation do so on the basis that we urgently need reliable evidence to serve as a guide. If changes in dietary practices or in food manufacture are indicated, the respective practical measures will be put into effect, wholeheartedly. Meanwhile, premature conclusions, guessing, ignorance and occasional distortion of the evidence create confusion and impose a heavy penalty on society, both in health and in money," Dr. King concluded.

Filmstrip

(Continued from page 32)

cently showed 200 vocational home economics teachers the educational filmstrip at a state-wide meeting in Lincoln.

The filmstrip was presented as an example of visual aid materials offered for teachers' use by the Nebraska Wheat Commission. Most of the viewers were trained home economists. They expressed amazement over the versatility of macaroni foods and the variety of shapes. The fact that macaroni is non-fattening and high in protein apparently also struck the audience as new, according to Mrs. Walton. The term "semolina" required further explanation, Mrs. Walton pointed out, since durum wheat is comparatively unknown in Nebraska.

An estimated 40,000 to 50,000 homemakers saw "Tricks and Treats with Macaroni Foods" early in May when Mrs. Walton showed the film on "Creative Cookery," a daily half-hour program on KOLN-TV in Lincoln. Viewers responded enthusiastically to an invitation to send for recipes illustrated.

Use of the filmstrip has made a staunch supporter for the macaroni industry out of Mrs. Walton. She points out that variety of macaroni products is limited in Nebraska. Accordingly, she was forced to give up a plan to demonstrate a recipe for "Manicotti with Tomato Sauce" which appeared in a spring issue of Durum Wheat Notes, also published by the Durum Wheat Institute. But she says that more shapes are appearing gradually in local food stores.

Manufacturer's Experience

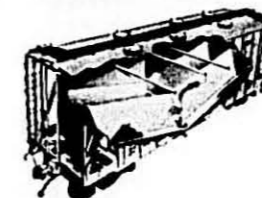
Among manufacturers, Dominic F. Palazzolo, vice president in charge of sales, Delmonico Foods, Inc., Cincinnati, Ohio, offers his experience on the effective use of the filmstrip.



Save! Ship flour in bulk via Airslide® cars

The nation's millers and bakers were first to recognize the value of Airslide cars. Today, these industries are among the principal users of this safe, clean, economical method of bulk transportation. Over 3000 Airslide cars are now in use or on order. They require no re-spotting, provide far more clearance for unloading and can be unloaded into any conveying system as fast as the system permits. If such requirements are important to you, write today for full information about General American's new Airslide car.

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Food Business Is Good

Pre-sold on the value of similar visual presentations through experience in the wine industry, Palazzolo undertook to convince his team of 12 salesmen. "Tricks and Treats with Macaroni Foods" was used as the basis for a sales meeting, then discussed thoroughly in round table fashion. It was at once evident that facts taken for granted by macaroni experts would be not only new but also extremely interesting to anyone less familiar with this type of food.

For The Ladies

The filmstrip program is now offered, free of charge, to various organizations. Delmonico salesmen make one presentation a week. They have thus far appeared before 54 women's clubs in Cincinnati, Dayton and Columbus, Ohio, Louisville and Indianapolis. Audiences usually average 50 persons although 117 attended one showing in Cincinnati. Palazzolo says that better response comes from groups numbering between 30 and 100. In addition to the filmstrip recipe leaflet, a booklet of recipes carrying the Delmonico Foods, Inc., imprint is distributed to the audience. In most cases, the film recipes are distributed on each seat in advance, and the speaker asks that the leaflets be held for later discussion. Seldom do these follow-up discussions end briefly, Palazzolo reports. Enthusiasm and amazement over new mealtime ideas often carries over into involved question-and-answer sessions.

Sparks Brokers

Palazzolo has also found the filmstrip of great value in pin-pointing macaroni ideas for prospective brokers. If interest is sufficiently high, he meets personally with a handful of key men for a special showing. To date, the filmstrip has helped in 12 important business meetings.

The results of this kind of work with the filmstrip are becoming apparent, particularly in the Cincinnati area, Palazzolo believes. Food stores which a year ago considered elbow macaroni, macaroni shells, spaghetti and noodles an adequate variety have begun to add new shapes and kinds. Homemakers have seen something different and they want to try it. So now food dealers are calling Palazzolo to relay customers' requests for new shapes — translating consumer demand into orders.

Up until now, filmstrip presentations have been limited by Delmonico Foods to homemakers and key accounts. For the future, however, Palazzolo hopes to develop programs for such groups as hotel chefs, home economists and other professional groups, and mixed audiences. Delmonico Foods, Inc., is currently preparing its own recipe booklet to accompany the filmstrip leaflets. The company's salesmen, at first doubtful of the effectiveness of the material, now match Palazzolo's enthusiasm.

Let's Eat Outdoors!
July Is Picnic Month

A LEADING spokesman says that the food industry's business so far this year is "even better than we had projected at the end of 1957."

Paul S. Willis, President, Grocery Manufacturers of America, Inc., declared, "We expected that total food consumption expenditures would rise to about \$79 billion in 1958, up from \$75 billion last year. On the basis of current reports, augmented by discussions with executives in all parts of the country, it appears that the industry is running ahead of that prediction."

Bright Spot

He said, "The food industry is probably the brightest spot in the economy at this time. Retail food store sales for the first four months of 1958 were 9 per cent ahead of the previous year, the inventory situation is favorable, and both manufacturers and distributors are confident and optimistic. There has been no apparent change in planned capital investment, and most expansion programs are proceeding on schedule or ahead of schedule."

"The fact that 'people have to eat' does not entirely explain the food industry's success, Mr. Willis emphasized. He said, "This industry operates on the principle that the consumer is boss. Accordingly, a great deal of research is constantly carried on to find out what kind of products consumers want, and where and how they want to buy those products. The research findings are then translated into products which have the quality, variety, taste, and convenience for which consumers have expressed a desire."

"In addition to offering products which accurately reflect the consumers' wishes, the food industry further enhances the appeal of its wares through effective advertising and promotion, thereby stimulating people to buy. The overall effect of these developmental and merchandising efforts is that shoppers derive a lot of satisfaction from modern food products. This helps to explain the industry's strong position."

Efficient Management

Mr. Willis also pointed to "efficient management all along the line" as a reason for the food industry's continued progress. "Competition is so keen, and operating margins are so small, that the techniques of moving food from the farm to the table are being constantly refined and improved," he declared.

"This steady improvement in the mechanics of distribution is facilitated by an excellent spirit of cooperation between manufacturers and distributors," the GMA president observed. "They work together as partners to find new and better ways of serving the consumer effectively."



PAUL S. WILLIS

This teamwork is a great source of strength for the industry."

Consumers Have Money

Mr. Willis noted that "consumers have money to spend—total income is actually ahead of last year, and savings are at an all-time peak." He added, "The people have complete freedom of choice as to where they want to spend this money. Judging from the figures, they are choosing to spend it increasingly at the food store. In this connection, it is very significant that there seems to be no 'downgrading' of food purchases. The new, modern products with built-in mail service continue in heavy demand."

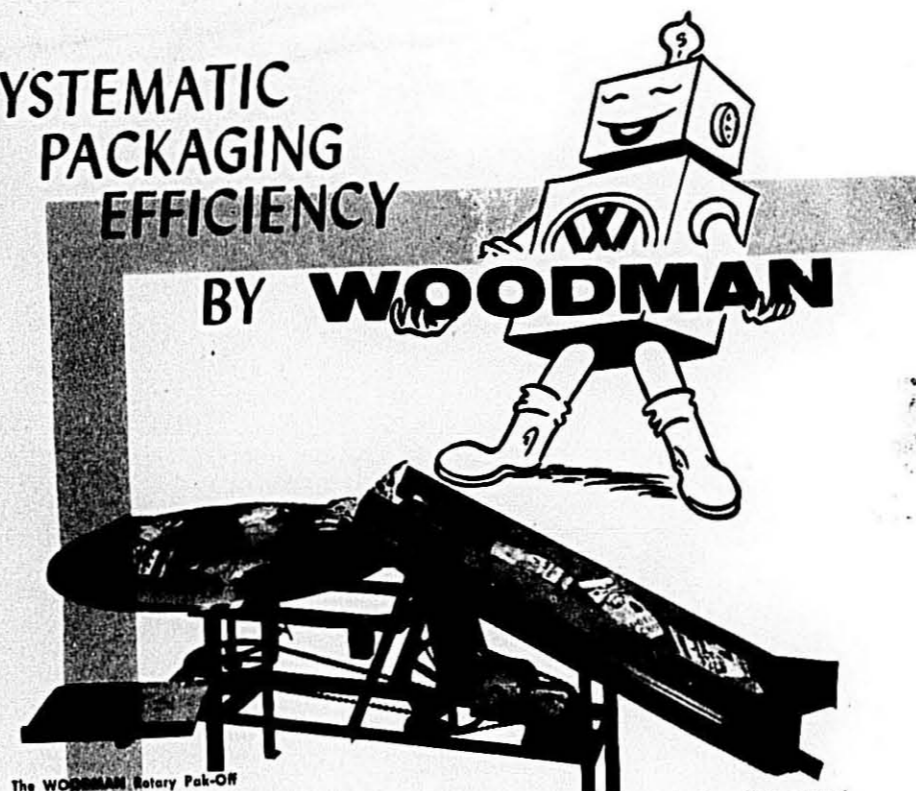
Mr. Willis asserted, "The conclusion that can be drawn from the food industry's excellent performance during the present recession is that the American people will continue to respond to an industry which is sincerely consumer-minded and which bends every possible effort to give the people what they really want."

A Quarter for Food

Americans spend about 25 per cent of their disposable income for food. However, if they were satisfied to buy the same "market basket" they bought just before World War II, they could get it for only 16 per cent of their disposable income, reports Paul S. Willis, president, Grocery Manufacturers of America. The additional amount which consumers are voluntarily spending represents improvements in quantity, quality, and convenience of the products purchased.

SYSTEMATIC PACKAGING EFFICIENCY

BY WOODMAN



The WOODMAN Rotary Pak-Off

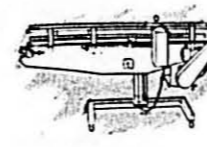
The Rotary Pak-Off accumulating table automatically receives the production line output, gathers and holds the product for "casing-up." This simple yet efficient machine, operating from a single driving motor, automatically allows for fluctuations in production or interruptions in casing thus allows the caser sufficient time leeway to prevent expensive production line shutdowns.



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WOODMAN engineers systematic efficiency in packaging operations from fully automatic weighing, bag, box, jar or carton filling to conveying, sealing, stitching and casing.

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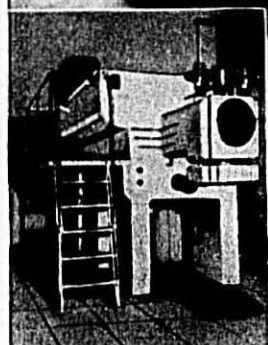
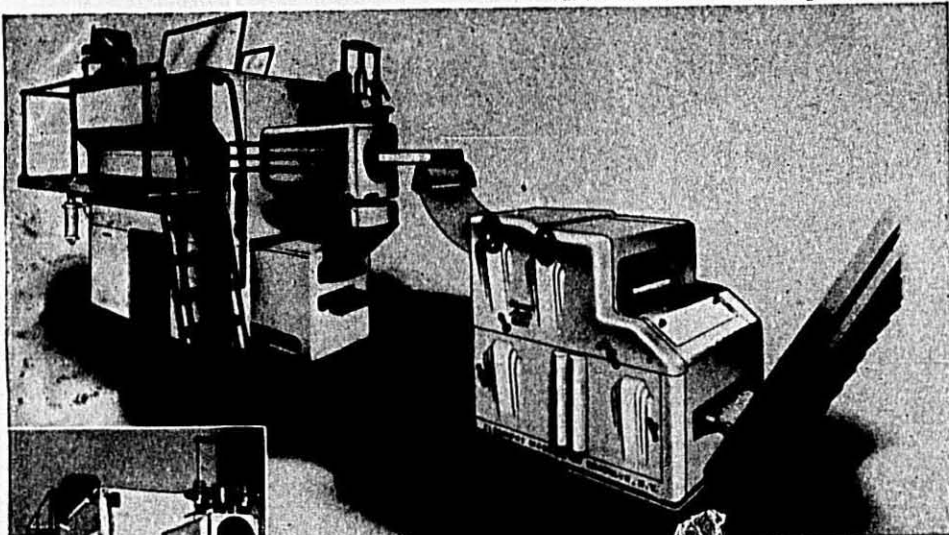
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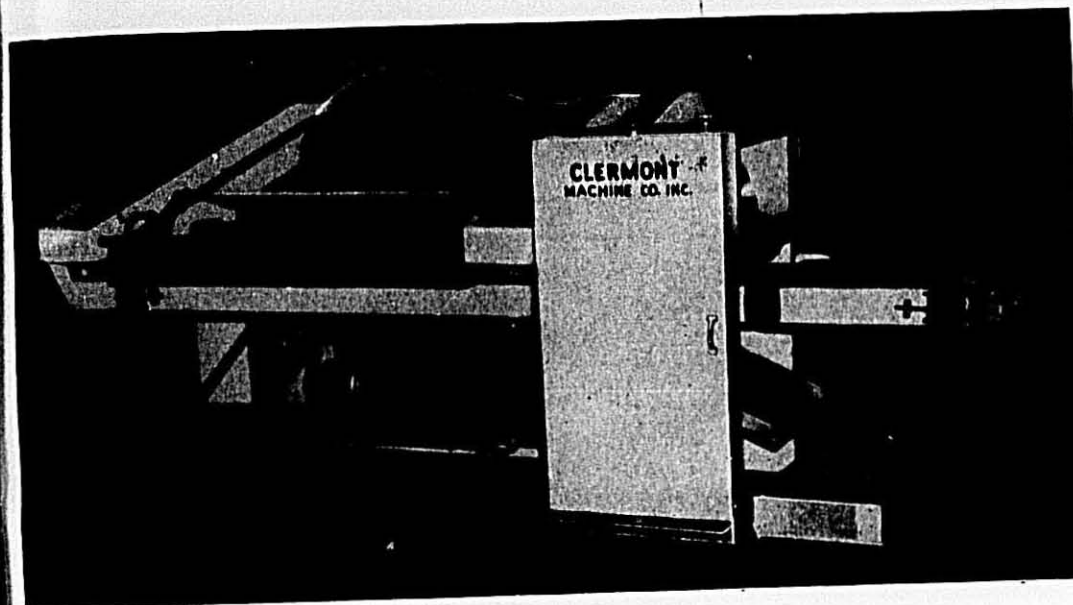
TAILOR-MADE FOR THE NOODLE TRADE
Available with or without vacuum process

- C**apacity range - Two speed motor affords flexibility for 1600 lbs. or 1000 lbs. per hour or any two lesser outputs can be arranged.
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- M**atchless controls. Automatic proportioning of water with flour. Temperature control for water chamber.
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Rounded Career

"ROUNDED CAREER HELPS SELL PASTA" says a story on Bob William by Los Angeles correspondent, Gladwin Hill in the April 12 issue of the New York Times. The story:

FOR a man who has been a golf professional, movie publicist, aviation instructor, real estate broker and helicopter service operator, manufacturing spaghetti might seem a nonsequitur.

Bob William, late of Brooklyn, doesn't claim that it's exactly logical. But he's enjoying it. And, he observes, it's surprising how his past ventures have applications in the spaghetti business.

"You notice," he remarked, as he led the way through his three-acre plant, "that every piece of machinery has the company name on it. You can't take a picture without getting it in. I wasn't in the movie business for nothing."

The name is Globe A-1 Macaroni Products, which under Mr. William's direction has burgeoned from obscurity into a leader in one of the most competitive fields in American business.

The profit margin in macaroni is so slim that freight costs can erase it. Consequently, it is one of the few industries still split up regionally, with each of the big metropolitan markets supplied by local producers.

Pasta International

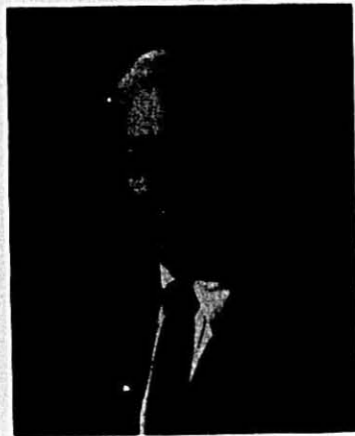
Los Angeles is far behind New York in the Italian-American population that is the nucleus of the macaroni business, but it makes up with a large Mexican-American population devoted to certain "pasta" products, and a general population that goes for "exotic" foods.

Mr. William, who now ships 40,000 pounds of pasta a day anywhere from Salt Lake City to Hawaii, is battling at the regional barrier through more efficient production, merchandising and promotion.

Mr. William, 44 years old, is a genial, relaxed man who still talks in the accents of his native Bay Ridge. He is a son of Dr. Maurice William, a Fifty-seventh Street dentist famed for his avocation of political economy. A book of his, "The Social Interpretation of History," is credited with having changed the course of Asian history through its influence on Sun Yat-sen, founder of the Chinese Republic.

Bob William, while attending Colby College in Maine, worked summers as golf instructor at the Fairmount Hotel in Tannersville, New York. There he met a Warner Brothers executive who hired him for the company's New York publicity department. In the late Thirties he was a familiar figure in the Stork Club, squirting movie glamour girls—business, not pleasure.

"I was making \$15 a week," he says, "and spending \$500 on the expense ac-



ROBERT WILLIAM

counts."

Into Aviation, Then Macaroni

From the company's Hollywood studio, when World War II came, he moved into instruction of Air Force cadets. After the war, a budding real estate career was halted by his invention of an aerial camera mount. This led to establishment of the aircraft charter service responsible for Hollywood's initial helicopter photography.

Meanwhile, he became intrigued with the possibilities of a little factory in east Los Angeles where spaghetti was being manufactured by methods reminiscent of those found by Marco Polo on his celebrated trip to China. He bought the plant in 1948. He discovered later that the sellers had a banquet to celebrate their unloading of the property, and it took him seven years to get above water financially.

At that time Pillsbury Mills was both selling milled wheat products to Los Angeles' half-dozen macaroni makers and making macaroni in its Globe A-1 plant in suburban Culver City. After two years of negotiations Mr. William convinced the company there was no future in thus competing with its own customers. In mid-1955 Pillsbury sold him both the plant and the use of the valuable Globe A-1 name in the macaroni field.

Sales Are Doubled

Since then he has been bringing his variegated career to bear on all phases of the operating, from merchandising macaroni-making operations to swinging deals on the golf course. The company now has seventy employees and its gross has doubled to some \$2,000,000 a year.

Married and the father of five, Mr. William is a camera bug and uses a cigarette-lighter-size Minox to unobtrusively photograph grocery-store merchandise layouts for ideas.

He astonished a television station the other day, by asking to buy a block of one-second commercial spots, to flash a label on the screen with the oral injunction, "A-1 Mac, in the Pack!" The TV people had never heard of a one-second commercial, and couldn't believe a message could be gotten across in one second. Mr. William had no doubts.

"Training fliers," he said, "we found that with a picture flashed on a screen for only one-hundredth of a second, students could recognize a Messerschmitt 109. One second for 'A-1 Mac, in the Pack' is a breeze."

"You never can tell," he added, "when something you've learned like that is going to come in handy."

Dr. Forsythe Honored

Dr. Richard H. Forsythe of Springfield, Missouri, has been cited by the Institute of American Poultry Industries for his contributions to poultry products technology. He received the I.A.P.I. 1958 Achievement Award of \$1,000 at a special Awards Dinner on May 27 in Chicago in conjunction with the 18th Annual Meeting of the Institute of Food Technologists.

Dr. Forsythe has been Director of the Central Laboratories of Henningsen, Inc. at Springfield, since 1953. He has had a diversified career in poultry technology, as a research administrator, industrial scientist and teacher.

He was born in Red Oaks, Iowa, and educated in chemistry and biochemistry at Iowa State College. From 1948 to 1951 he was affiliated with the Poultry Department at Iowa State, first as a graduate student and then as Associate Professor. He later served as Assistant Director of Food Research with Armour and Company in Chicago.

Egg Research

Dr. Forsythe's research was largely responsible for the increased use of whole egg and egg products in prepared cake mixes, icings, and meringues. He also developed special blends of whole egg and egg yolks with sugar, corn syrups, and dextrin products which increased the storage life of these products to the point where they could be used commercially by bakers.

As a member of the Research Council of the Institute of American Poultry Industries since 1951, Dr. Forsythe has organized and participated in several industry studies toward the improvement of poultry technology. Through one of these projects an industry-wide method was adopted for determining yolk color in egg products.

As an Associate Editor of *Food Technology* and author of many papers, he has contributed substantially to food science and technology progress.



"CREATIVE MERCHANDISING" for Ronzoni TV Program Wins Top Honor—Emanuele Ronzoni Jr. (left), executive vice president of Ronzoni Macaroni Company, joins in presentation of trophy for "outstanding achievement in creative merchandising" to Emil Mogul (center) president of Emil Mogul Company, advertising agency, by Leslie T. Harris, vice president and general manager of CBS Television Film Sales, Inc. Award was for promotion of "The Honeymooners," weekly TV film show starring Jackie Gleason, sponsored by Ronzoni in New York, Philadelphia and New Haven. With Mr. Ronzoni and Gerard Benedict, Ronzoni's advertising and sales manager, as honored guests, trophy presentation occurred at luncheon in "21" restaurant, New York.

Merchandising program which helped boost audiences (and Ronzoni customers) to new high was spearheaded by "Honeymooners" Sweepstakes. The contest, in whose promotion Ronzoni dealers cooperated aggressively, had prizes of Bermuda cruises for three couples, 1,000 pearl necklaces and cash for dealers named in winning entry blanks. Stores reported nothing-to-buy entry blanks served as good traffic-builders.

Italian Food Festival

"The period of our Chef Boy-Ar-Dee Italian Food Festival," says Larry Sauer, Vice President for Sales at American Home Foods, "is the opportune time for retailers to feature Italian foods that offer all the romantic glamor of Italy at the low cost per meal the consumer is looking for in today's economy. This is the sure way to build store traffic and volume."

Chef Sales Up

A consumer survey conducted by a nationally known organization indicates that retailer sales of Chef products for the first quarter of 1958 are up about 30 percent over the same period last year. This follows 1957's all-time record sales that reached their peak for the year during the Chef Boy-Ar-Dee Holiday in Italy promotion which has been awarded recognition as one of the outstanding promotions sponsored by a member of the food industry.

"Our Italian Food Festival promotion, now going into high gear, is tangible evidence of our confident belief that aggressive selling and merchandising can make 1958 another record year for American Home Foods," says Mr. Sauer. "We are backing that belief with the introduction of additional new products and the hardest-selling promotion program in our history. All this is aimed at bringing greater consumer traffic, sales and profits to our retailers."

Consumer advertising highlighting the Italian Food Festival theme is prepared. Store display material prepared for the event creates an authentic Italian

photographs sell the no-work meals made possible by heat-and-eat Chef products.

Says Mr. Sauer, "All our resources of planning, preparation and performance have been brought to bear to assist the retailer in ringing up extra sales and profits this summer by joining our Italian Food Festival. A store-wide Italian Food Festival promotion, with mass displays of Chef products, offers an opportunity to cash in both on Chef foods and related high-margin products for which the retailer can arrange tie-in displays that are naturals for summer eating."

Spaghetti Dinner

Spaghetti Dinner, a new product of Kraft Foods Company, Chicago, will be launched with a national ad campaign beginning June 15 and embracing newspapers, Sunday supplements, TV spots and "Kraft Television Theatre." The package consists of separately-packed herb-spice mix, Parmesan cheese, and spaghetti.

Caruso Foods

Caruso Foods, Inc., of Brooklyn, New York, has appointed Food Enterprises as New York metropolitan area representative for its line of spaghetti, macaroni and minestrone soup mixture.

Egg Production

(Continued from page 29)

city of liquid eggs produced from January through March was down 15 percent from the same period last year. 1,807,000 pounds were used for immediate consumption, 5,654,000 pounds were used for drying, and 25,203,000 pounds were used for freezing.



FAMILY PORTRAIT. Dave and Dorothy Wilson are celebrating their twenty-fifth wedding anniversary. David, Jr. (21) is in training to become his father's assistant as New York sales representative for King Midas Flour Mills. Steve (14) is busy in school.

Merck Enrichment Preparations give your Macaroni Products increased consumer appeal



MERCK VITAMIN PRODUCTS FOR ENRICHMENT OF MACARONI

Enrichment packs a potent appeal for nutrition-conscious consumers. It can help your macaroni products two ways.

1. By enriching your products, you'll create preference for your brand over unenriched macaroni.
2. Your enriched macaroni products can compete more effectively with many other food products.

Our technical service staff is always ready to help you apply whichever of the following Merck vitamin products is best suited to your process. Or, if you prefer, ask the mills to use MERCK ENRICHMENT MIXTURES in your flours and granulars.

For Continuous Production

MERCK ENRICHMENT MIXTURE No. 34P—feeds readily, flows easily, and can be distributed uniformly with the usual mechanical equipment.

For Batch-Type Operations

MERCK ENRICHMENT WAFERS—dissolve quickly, promote uniform enrichment because they resist chipping and dusting, disperse uniformly as the batch is mixed.



Research and Production

for the Nation's Health



MERCK & CO., INC.
RAHWAY, NEW JERSEY

Looking to the Future

(Continued from page 10)

macaroni manufacturers. It seems to me that this is an area in which research could be done. I have always felt that the consumption of canned spaghetti cuts down the total consumption of spaghetti because many people never learn what good spaghetti tastes like. A canned spaghetti in a different shaped can, treated in such a way that it did not get soft, might very well be a way of increasing the total consumption of spaghetti.

Frozen Spaghetti and Macaroni Dinners. There are a number of frozen macaroni and spaghetti dinners and ravioli products on the market. Some of these dinners yield a product which is almost as soft as canned spaghetti. As a result of our research on the use of gum gluten, we know that this is not necessary and should be corrected.

Other Products. In many cases it would be easier for a macaroni manufacturer to increase his dollar volume by going into another product than by increasing his sales and advertising effort on macaroni. The product should be one which fits into the manufacturing processes in a macaroni plant or which fits into the sales picture. A macaroni plant is essentially a factory for mixing, extruding, drying, and packaging formed pieces of dough. Some manufacturers have taken on products like beans and candy which can be purchased in bulk and fitted into their packing process. Macaroni presses have been used to make plastic garden hose and dog food. I do not see why they could not be used for making cereal products and snacks similar to Fritos or Corn Kurls.

We have always considered that the macaroni industry should form wheat flour and water into many shapes to sell as food. I should think that there would be many different foods which could be increased in sales appeal by being formed into interesting shapes. Who could do this better than you people?

How To Increase Prices

The price of your product can be raised if the quality is improved above that of your competitors or if the customer thinks that the quality is superior. The quality factors in macaroni which affect its desirability are: color, shape, absence of flaws such as checking or mold, consistency after cooking, taste, cloudiness of the cooking water and nutritional value. I have already mentioned the desirability of improving the consistency of canned and frozen products. I think that there are other possibilities which are worth investigation. These properties can be affected by using different raw materials or combining other raw materials with durum products or these properties can be affected by processing. Most of the attention given to quality over the past few years has

been directed toward appearance and color. The research along these lines has been very successful and we now have a beautiful amber colored vacuum product with very few flaws. It is time that we paid some attention to some of the other properties of macaroni to see if we can obtain better consumer acceptance.

Additives. Recently interest has been revived in soy products. Preliminary investigation shows that they can be used in macaroni products without seriously affecting the color or flavor and that they increase the tolerance to cooking in the home and also in canned products. Furthermore, the protein in soy flour contains some of the amino acids which are notably lacking in the protein of wheat flour.

Gum gluten has been used to increase the resistance of spaghetti to overcooking in canned and frozen products. There is a serious limitation on the amount of gum gluten which can be added to macaroni products contained in the standards of identity. However, these standards can be changed and should be changed in cases where the changes will be beneficial to the industry. As long as the standards protect the consumer and the industry they are good, but when they inhibit research and the development of new ideas which are good for the consumer and the industry they are harmful.

There has been recent agitation for permitting the use of beta carotene in eggs on the grounds that it is a vitamin. The fact that beta carotene lends a rich color of yellow to the eggs makes this of extreme interest to noodle manufacturers because it could greatly reduce the cost of egg yolks to be used in noodles.

Perhaps there is a market for macaroni products with some flavor in the macaroni itself. We know that spinach, carrot and beet macaronis have not been a howling success, but this does not mean that there are no flavors which would be liked in some situations.

Quick Cooking Products. Work was done back in the '20's on the use of disodiumphosphate to make quick cooking macaroni. This was included in the standards but apparently was not widely developed. There are probably other ways of increasing the rate of cooking of macaroni products. The Quartermaster Food and Container Institute is looking for a product which can be mixed with a dehydrated sauce or cheese and which will reconstitute itself to cooked macaroni when a measured amount of boiling water is poured over it. All the water must be absorbed so that none has to be poured off. There have been unsuccessful promotions of macaroni products which were supposed to be quick cooking. However, don't you think that there is a place for a product which is really quick cooking and could be prepared in one or two minutes?

Some of the things that I have discussed are only a few months away from commercial production. Some have been presented as food for thought with the idea that there are ways of making money with a macaroni plant which have not been explored simply because nobody has thought of them but which require no great amount of research for putting them into practice. Others of the things discussed are raised as serious problems in the macaroni industry which require intensive research for their solution but which should be pursued actively.

New Feed Speeds Unloading

A portable transfer unit with a new dual feeder device empties Airlside car in half the time of a single-feeder unit, according to an announcement made by Fuller Co.

The dual feeder has two airlocks, each of which is situated directly beneath outlets in the car. This new feature eliminates need for the centrally positioned Airlside brand of fluidizing conveyor which formerly delivered material to a single airlock from both outlets.

Designed for handling flour and other materials with similar properties, the new portable transfer is equipped with a manifold which can be plugged in either end, making it possible to unload from each side of the car. There is no need for additional conveying hoses, as air connections for both sides of the car are an integral part of the equipment.

Also included with the unit is a device which enables the operator to regulate output.

How It Works

After the operator has positioned the unit beneath the Airlside car, he attaches the lifting mechanism to the side rails of the car and lifts the unit into place.



New dual feed transfer unit is shown about to be positioned beneath outlets of Airlside car.

Then, after hooking up air and conveying line hoses to the car and the portable transfer, and opening the car outlets, he starts the blower.

Material drops by gravity through the two outlets directly into the airlocks, and then into the conveying system. The unit is adaptable to either 3 or 4 in. conveying lines.

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RETROSPECTIONS

by

M. J.

35 Years Ago — June, 1923

- Promotional program — "Eat more macaroni, a good wheat product" — gets NMMA approval and support.
- Henry Mueller of C. F. Mueller Co., Jersey City, N.J., reelected as NMMA president at Cedar Point convention. Other officers are Edward Z. Vermyley of A. Zerega's Sons, Inc., Brooklyn, N.Y., as first vice president, Henry D. Rossi of Peter Rossi and Sons of Braidwood, Ill., second vice president and Fred Becker of Pfaffman Egg Noodle Co., Cleveland, Ohio, as treasurer.
- Thomas L. Brown of Washburn-Crosby Co., Minneapolis, Minn., discusses subject of "Increasing Macaroni Consumption" at convention.
- Martin Luther of Minneapolis Milling Co., Minneapolis, Minn., recommends "Coordinated Advertising."
- Guy A. Thomas of Washburn-Crosby Co., suggest that NMMA back drive to have Friday designated as Macaroni Day.
- "The Dangers of 'Old Man Weevil'" were discussed by H. F. Thunhorst, secretary of the American Specialty Manufacturers Association.

25 Years Ago — June, 1933

- Complaint by Hans Pfeiffer, German immigrant, against relief distribution practices in Chicago area: "They give spaghetti to German families and sauerkraut to Italians."
- The NMMA through its president Alfonso Gioia, vice president Glenn G. Hoskins, advisor Frank L. Zerega and the entire Board of Directors in Washington, D.C., conference, pledged full support of the government provisions of the Farm Relief Act.
- Eastern Manufacturers confer in New York City on how best to cooperate with governmental agencies in reaping the benefits that may accrue under newly adopted regulations.
- John V. Canepa of Red Cross Macaroni Co., Chicago, was elected an NMMA director to fill vacancy caused by resignation of past President Frank J. Tharinger who had disassociated himself with the macaroni industry.
- The girl employees team of the Foulds Milling Co., Libertyville, Ill., won the national championship in the women's basketball tournament.
- Vincent Arena & Co., Norristown, Pa., announce plans for a new addition covering 20,000 square feet of floor space.

15 Years Ago — June, 1943

- Colonel John N. Gage, executive officer at the Chicago Quartermaster Depot, is scheduled to be the principal government speaker at the Industry's War Conference, June 25-26 in Chicago.
- Manufacturers of paper boxes warned to expect further restrictions as the paper situation tightens.
- Michael Pesce, macaroni pioneer, co-founder of the Mission Macaroni Co., Seattle, Washington, died May 25, aged 74 years.
- Chicago macaroni manufacturers are complimented for their voluntary contribution of their products to "Chicago Nights" for service men.
- C. W. Mercer, founder of the Noody Products Co. of Toledo, Ohio, sold his business and plant to Leo Kahn.
- Ernest A. Dench discussed ways to avoid accidents in macaroni-noodle plants.
- Dried eggs are in big demand as a wartime food, said C. W. Kitchen of the USDA, and an increasing number of women have been employed for work in laboratories and in processing plants.

5 Years Ago — June, 1953

- Having completed the task of preparing for publication the June, 1953, issue of the Macaroni Journal, M. J. Donna, managing editor since the launching of this official organ of the National Macaroni Manufacturers Association in May, 1919, turns over his editorial prerogatives to Robert M. Green, who begins his work as editor-in-chief with publication of the July, 1953, issue.
- The war of the noodles — two noodle establishments in Rome debate who is the real king of fettucine.
- "We'll Call it Macaroni" — an article from Packaging Parade, takes the reader on a tour through the San Giorgio macaroni plant.
- "Some like it hot — some like it cold" is the theme of an intensive publicity campaign beamed at the consuming public June 15-July 31 and sponsored by the National Macaroni Institute and the Tuna Research Foundation.
- Durum Day in Lisbon, North Dakota, was celebrated with a memorial plaque commemorating the first field of durum grown in 1884.
- Directors met at Hershey, Pa., to review operations of the National Macaroni Institute.

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FOR SALE — Clermont Noodle Cutter, with five sets standard cutting width roller, Dough Breaker, Noodle Dryer consisting of two units, Preliminary Dryer and Finish Dryer. In excellent condition, in operation now. Reasonably priced. Write Box 154, Macaroni Journal, Palatine, Illinois.

FOR SALE
Triangle High-Speed two-section Noodle Weighing and Filling Machine with take-away Conveyor and Conveyor Feed Hopper. Will sacrifice. Box 157, Macaroni Journal, Palatine, Illinois.

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Samuel B. Regalbuto

Samuel B. Regalbuto, chairman of Western Flour Company and the leading flour distributor for Pillsbury Mills, Inc. in the Philadelphia market, died Sunday, May 4, at the Jefferson hospital in Philadelphia. Mr. Regalbuto, who was prominent in civic and political affairs as well as a flour distributor, was 60.

Born in Andriano, Sicily, February 5, 1898, Mr. Regalbuto came to the United States as a youth and was employed as a pharmacist in South Philadelphia for about ten years before entering the grain and flour brokerage business. He became one of the ranking flour handlers in the eastern part of the United States.

Survivors include his wife, the former Florence Felice, a brother, Vincent of Catania, Sicily, and a sister, Mrs. Vincenzina Mongino of Philadelphia.

COME TO CORONADO

for the 54th Annual Meeting of
National Macaroni Manufacturers Association



Site of the Convention — Beautiful Hotel Del Coronado
Coronado, California, across the bay from San Diego
July 8 - 9 - 10

ON THE BUSINESS SIDE: An outstanding program with top notch speakers will bring you information, ideas and inspiration.

"The General Business Outlook" by Richard M. Oddie, Director of the Small Business Advisory Service, Bank of America.

"What a Doctor Wants to Know About Macaroni" by Dr. P. L. White, Council on Foods and Nutrition, American Medical Association.

Plus plenty of panel participation for macaroni manufacturers.

ON THE SOCIAL SIDE: Golf, sailing, excursions and parties designed to give the entire family a glorious vacation in the West's greatest seashore resort.

MAKE RESERVATIONS NOW! Write Gene Morgan, Hotel Del Coronado, Coronado, California, for room reservations. Write to the Secretary, N.M.M.A., 139 North Ashland Avenue, Palatine, Illinois, for convention details.

N. M. M. A. 54th ANNUAL MEETING

Avast, ye land lubbers!



Come aboard the S.S. Silvergate
for **General Mills** scenic tour
of fascinating San Diego Harbor

Occasion: 54th Annual Meeting of the National Macaroni
Manufacturers Association

Time of Departure: 2 p. m., Thursday, July 10

Place of Departure: Hotel Del Coronado Dock

Price: Only your smile and the usual friendly handshake

The General goes nautical! He's planned an exciting cruise aboard the Silvergate excursion boat to put you on your sea legs too. You'll set course for hundreds of thrilling sights—Uncle Sam's destroyers, aircraft carriers, submarines. You'll see the nation's largest Naval Air Training Station, ship-building and repair docks, giant tuna canneries—and more. When you drop anchor back at the hotel, you'll feel like an old salt, refreshed and ready to enjoy the evening's festivities.

We'll see you aboard, Matey.

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