

**THE
MACARONI
JOURNAL**

**Volume 44
No. 4**

August, 1962

Macaroni
Journal



AUGUST, 1962



Summer Salads

A NO-NONSENSE APPROACH TO PACKAGING

A Rossotti-produced macaroni package is a modern marketing tool. It will do these things for you, efficiently, without fuss or fanfare.

It will give you a sensible, hard selling package not only at the point of purchase but all through the cycle of distribution. It will run trouble free on your equipment. It will yield cost-cutting economies, without sacrificing quality or service.

How can one sales tool do so much?

Because it utilizes the proper size and construction factors for your market. Because it is convenient to stack and convenient to use.

**ROSSOTTI
PACKAGING
PUTS MORE
MACARONI
HERE!**



BETTER MERCHANDISING **ROSSOTTI** THROUGH PACKAGING
LITHOGRAPH CORPORATION
EXECUTIVE OFFICES: NORTH BERGEN, N. J.

ROSSOTTI CALIFORNIA LITHOGRAPH CORP. SAN FRANCISCO 24 CALIFORNIA · ROSSOTTI MIDWEST LITHOGRAPH CORP., CHICAGO 10, ILLINOIS

Because its recipes reflect the geographical taste patterns of your own consumers. Because its design is geared to an increasingly value-conscious customer.

Also, because it's been created by people who have seen the inside of a macaroni plant... who have worked in it... who know macaroni production. And, because Rossotti is a name your company, and others like it, have trusted for three generations.

No nonsense speaking, Rossotti gives modern macaroni marketers **better merchandising through packaging!**

The Macaroni Journal

Volume 1
Number 1
August 1962

Official publication of the National Macaroni Manufacturers' Association
104 North Ashland Avenue, Palatine, Illinois. Address correspondence to:
The Macaroni Journal, c/o National Macaroni Manufacturers' Association, P.O. Box 516, Palatine, Illinois.

Officers

President	Robert J. Korman, Jr.
1st Vice Pres.	Victor R. Williams
2nd Vice Pres.	Fred Spaldatore
3rd Vice Pres.	Leo J. Casady
Secretary	Francis M. Gorman
Recording Sec.	James J. Westing

Directors

Eastern Area	
Robert J. Cowen	Edmund Rinzetti, Jr.
Vincent F. LaRosa	H. Edward Tomer
Joseph Pellegrino	Paul Vermeylen
Central Area	
A. Irving Gross	Ralph Sali
Albert Ravarino	Peter J. Vitano
	Albert S. Weiss
Western Area	
Paskey DeDomemico	Edward DeRocco
Vincent DeDomemico	Fred Spaldatore
At Large	
Saverio Arena	Henry D. Rossi
Arvill E. Davis	Nicholas A. Rossi
Kenneth J. Forbes	Jerome L. Timpane
Raymond Guertzi	Robert Williams
	J. T. Williams, Jr.
Past Presidents	
Honore P. Giona	C. Fred Mueller
Lloyd E. Skinner	C. W. Jack Walter
Peter LaRosa	Louis S. Vaccaro

Subscription Rates

Domestic	1 Year	\$1.00
Foreign	1 Year	\$1.50
Single Copy		15¢
Back Copies		\$1.00

August 1962

In This Issue

Summary	1
1962 Outlook	2
Industry News	3
Research Management and Marketing	4
Plant, Machinery and Laboring Devices	5
Macaroni Factories	16
Dinner, Cereals, Spaghetti, The Real Market	20
How to Make Packaging News	28
Industry Items	32
Way-By-Whom	33
Index to Advertisers	

Cover Photo

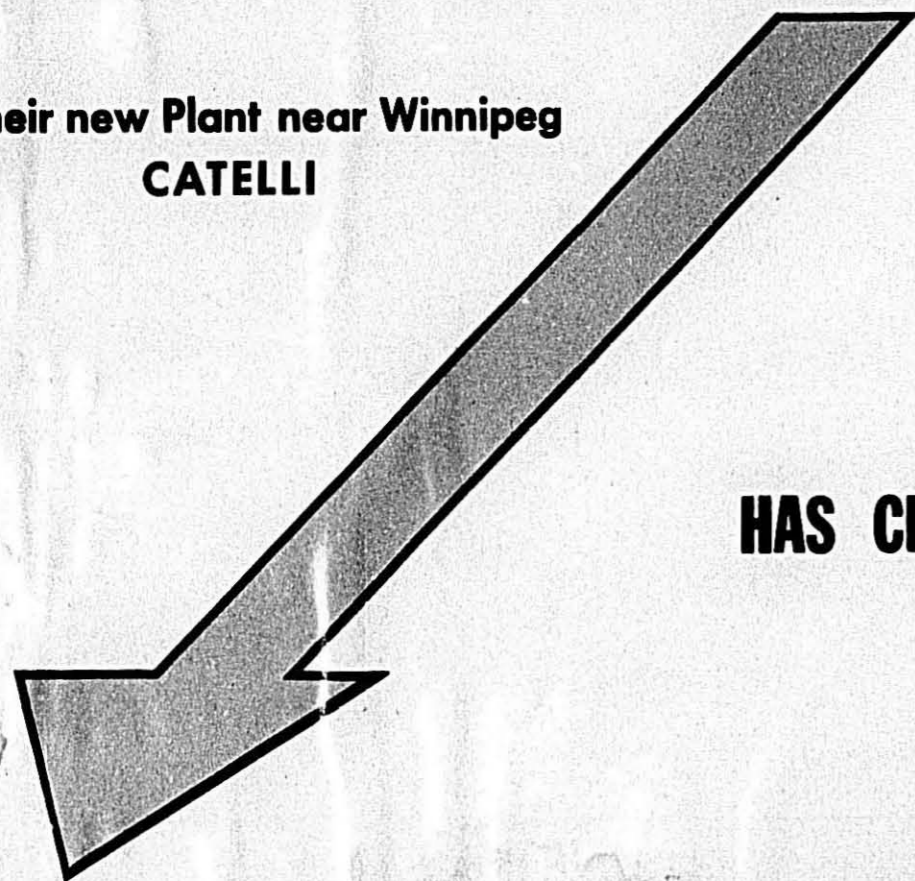
Macaroni product made light of the salad and low eating. So, we should not be surprised to find the salad light but the product heavy. The salad is made of lettuce, tomatoes, and other vegetables. The product is made of macaroni, cheese, and other ingredients. For more information, see the article on page 16.

The Macaroni Journal is published monthly by the National Macaroni Manufacturers' Association, 104 North Ashland Avenue, Palatine, Illinois. Second-class postage paid at Palatine, Illinois. Postmaster: Please send address changes to The Macaroni Journal, c/o National Macaroni Manufacturers' Association, P.O. Box 516, Palatine, Illinois.

CATELLI

FOOD PRODUCTS LTD., MONTREAL, CANADA

For their new Plant near Winnipeg
CATELLI

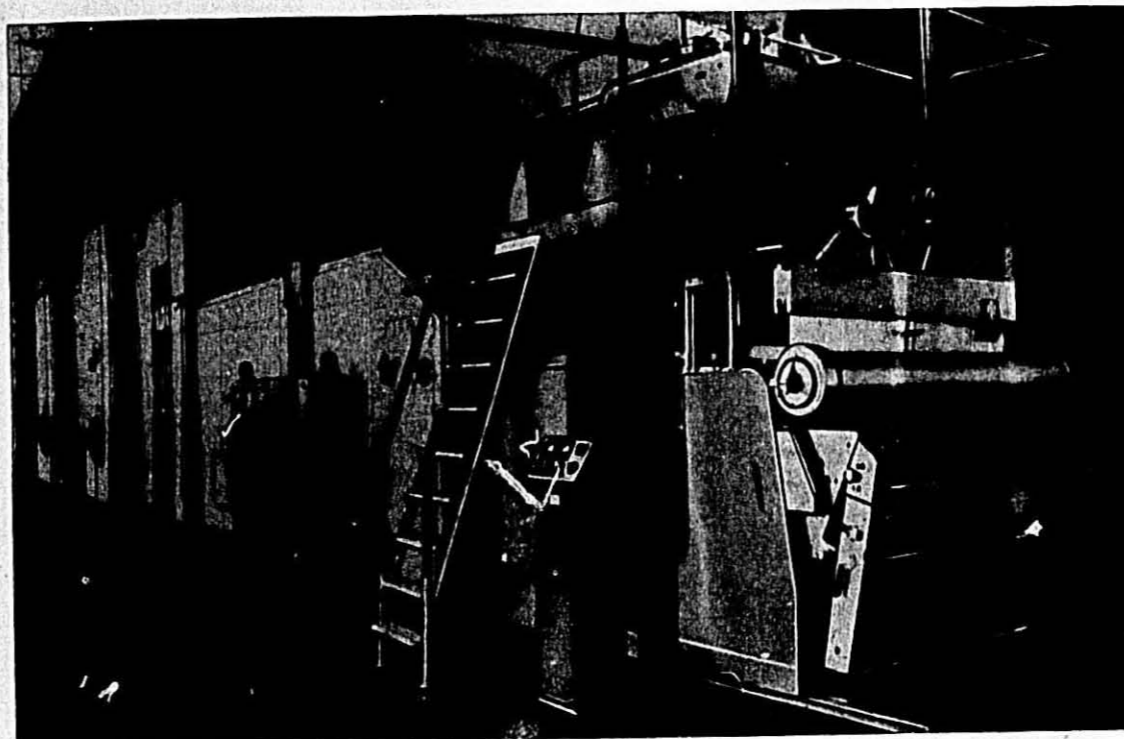


HAS CHOSEN

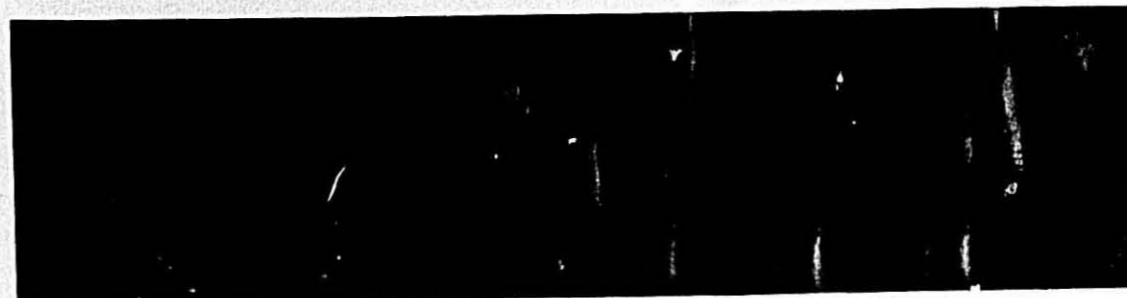
Braibanti

Largo TOSCANINI, 1 MILAN ITALY Tel. 792.393/4/5 — 790.531 — 794.703

THE MACARONI JOURNAL



CONTINUOUS AUTOMATIC LINE FOR LONG MACARONI GOODS



1—Automatic Braibanti Press for long macaroni products.

2—Braibanti Spreader with special die-head and device for quick change of dies.

AUGUST, 1962

3—Automatic Dryer GPL/5/200 for pre- and final drying of long macaroni products.

4—Stripper and multiple Cutter with device for automatic return of empty sticks to spreader.

Summer Salads

ON A PICNIC or on the patio, cooling salads are fine eating for warm weather menus, and the imaginative homemaker finds there is no end to the many ways they can be prepared to enhance meals. A basic and favorite salad ingredient is elbow macaroni—the bland flavor making it a flavor mate for a host of other foods. Meats, fish, poultry, fruits, vegetables, cheese are all delicious mixed with macaroni. Team together macaroni, ham, chicken, tomato and lettuce—arrange in an attractive salad bowl and serve with French dressing. You will agree, as will the family, this is eating at its best, and especially appealing for summer.

Hot foods are a part of summer menu planning, too, and skillet dishes are a good selection. Elbow macaroni, chicken and vegetables are a tasty combination in a skillet recipe designed for homemakers who want to serve appetizing meals, and keep kitchen time to a minimum.

Regardless of season, macaroni products are a staple item with wise homemakers. Whether it's hot or cold—if the thermometer registers zero or 90—they depend upon elbow macaroni, spaghetti and egg noodles to use in dishes which are flavorful, economical and nutritious.

Meal-In-One-Macaroni-Salad

Makes four to six servings

- 1 tablespoon salt
- 3 quarts boiling water
- 2 cups elbow macaroni (8 ounces)
- 1 cup diced cooked ham
- 2 cups diced cooked chicken
- 4 tomatoes, cut in quarters
- Lettuce
- Parsley
- French dressing

Add one tablespoon salt to rapidly boiling water. Gradually add macaroni so that water continues to boil. Cook uncovered, stirring occasionally, until tender. Drain in colander. Rinse with cold water. Drain.

Arrange macaroni, ham, chicken and tomatoes on lettuce. Garnish with parsley. Serve with French dressing.



Macaroni Summer Salad

Makes six servings

- 1 tablespoon salt
- 3 quarts boiling water
- 2 cups elbow macaroni (8 ounces)
- 2 6-1/2-ounce cans chunk-style tuna, drained
- 1/3 cup seedless raisins
- 1/3 cup walnuts
- 1 medium-sized red apple, cored and sliced
- 1/2 cup chopped celery
- Salt and pepper to taste
- Mayonnaise

Add one tablespoon salt to rapidly boiling water. Gradually add macaroni so that water continues to boil. Cook uncovered, stirring occasionally, until tender. Drain in colander. Rinse with cold water and drain again. Chill.

Break tuna into large pieces with a fork. In a large bowl, combine chilled macaroni, tuna, raisins, walnuts, apple slices, celery and salt and pepper to taste; toss lightly but thoroughly. Chill. Just before serving, add enough mayonnaise to moisten; mix lightly.

Elbow macaroni combines well with cucumbers and seafood in a sour cream dressing.

Carried on a picnic, it can be served with Vienna sausages, olives and pickles, as pictured on the front cover. Dessert will be fresh fruit followed by hot coffee.

Macaroni Norwegian Salad

Makes four to six servings

- 1 tablespoon salt
- 3 quarts boiling water
- 2 cups elbow macaroni (8 ounces)
- 2 cups sliced cucumbers
- 1 cup sliced onions
- 1/2 cup vinegar
- 3 tablespoons water
- 1/4 cup sugar
- Salt and pepper to taste
- 1 cup sour cream
- 1 3-3/4-ounce can sardines, drained

Add one tablespoon salt to rapidly boiling water. Gradually add macaroni so that water continues to boil. Cook uncovered, stirring occasionally, until tender. Drain in colander. Rinse with cold water and drain again. Chill.

Combine cucumber, onions, vinegar, water, sugar and salt and pepper to taste, set aside for one hour. Drain vinegar mixture from cucumber and onions; add cooked macaroni and remaining ingredients. Toss lightly but thoroughly and chill well before serving.

There is something special about Macaroni products made from

King Midas

Let's have "something special" is the phrase that is heard more and more often from New York to L. A. Let's have a different kind of meal—but with lots of appetite and health appeal. Let's have a meal that satisfies all the family all the time.

Everyone knows that macaroni products are economical—but do they know that they can be "something special" dishes too.

They meet all the requirements of big-family budgets to the most exacting taste of the gourmet.

To obtain that "something special" in your products use the finest—use King Midas.



King Midas DURUM PRODUCTS

MINNEAPOLIS MINNESOTA

PLANT OPERATIONS FORUM

FOR THE past dozen years the Hoskins Company of Libertyville has held a macaroni Plant Operations Forum in Wieboldt Hall of the Northwestern University Chicago campus.

Plant Problems

This year's session started out with a review of drying theory and practice with application to modern continuous high temperature dryers by Charles M. Hoskins, industrial consultant. He observed that drying times are being reduced by accurate control of humidity and temperature, improved air circulation and dryers, continuous drying, and high temperature drying.

Elmer Glabe, of Food Technology, Inc., in discussing the relationship of raw materials and additives to the texture of macaroni products observed that macaroni manufacturers are mechanical experts but chemical novices. He said reaction equations are needed to know more about starch chemistry of wheat and what additives can and cannot do.

Perry Anderson, chief chemist of Food Technology, Inc., outlined testing methods for quality control and requirements for a macaroni factory laboratory. This is reported on page 16.

Dr. Edward L. Holmes, executive director of the American Sanitation Institute, proposed that the macaroni industry adopt sanitation standards for equipment similar to those started by the baking industry in 1952.

Warehousing and in-plant handling is a neglected area, charged Hoyt Cramer of Rapids-Standard Company. In a slide presentation he showed how conveyors from the packing room to the loading dock can automate handling and institute first in-first out storage control for finished goods.

Mass Feeding

Problems of the restaurateur were outlined by Mary Ann Warner, manager of Food Services, Art Institute of Chicago. She observed that cooking is one of the fine arts. Her presentation appears on page 12.

Freeze dried products expand the possibilities for dry macaroni dinners said Ross J. Carey, of Freeze Dried Products, Inc. Most shrimp served in restaurants now are freeze dried to



1962 Plant Operations Forum. Back row, left to right: Bob Raaf, Tharinger Division, V. LaRosa & Sons; Carroll Bruson, National Food Products; Russell Houston, Delmonico Foods, Inc.; L. T. Heikkila, General Mills, Inc.; Leonard Bergseth, Kellogg Company; Albert Bone, Jr., John B. Conepa Company; George Heckbush, International Milling Company; Joseph DeFrancisci, DeFrancisci Machinery Corporation; Ed Napoleone, Vimco Macaroni Company; Oreste Tomel, Diederichs & Griffin Company; Leonard DeFrancisci, DeFrancisci Machinery Corporation; Elmer Glabe, Food Technology, Inc.; M. V. Vagnino, American Beauty Macaroni Company.

Middle row: Gerard Ziffer, Amaco, Inc.; Dan Cornett, D'Amico Macaroni Company; Pete Kolb, Goch Food Products Company; Wilmer Hogener, Goch Food Products Company; Victor Bagnas, Jenny Lee, Inc.; Alfred Toal, A. Goodman & Sons, Inc.; Bob Cowan, Jr., A. Goodman & Sons, Inc.; William Julian, Archer Daniels Midland Company; Dick Yessels, General Mills, Inc.; Grover Foote, Milprint, Inc.; Jack Ness, Triangle Package Machinery Company.

Front row: Edith Linsley, Hoskins Company; Robert M. Green, NMMA; S. F. Maritato, International Milling Company; Dave Wilson, Jr., Russell Miller-King Midas Mills; Frank Viole, Golden Grain Macaroni Company; Ralph Maldari, D. Maldari & Sons, Inc.; Fred Duncan, Archer Daniels Midland Company; Jack Ziegler, Golden Grain Macaroni Company; Art Bauman, Tharinger Division, V. LaRosa & Sons, Inc.; Perry Anderson, Food Technology, Inc.; Ed Vagnino, American Beauty Macaroni Company; Charles Hoskins, Hoskins Company.

save costly preparation time. Cost runs about 10 cents per wet pound downward dependent upon the product. The speaker felt that here was potential opportunity for macaroni producers.

Packaging Review

A review of packaging equipment presented largely through movies and slides was made by A. L. Gausman of the Hayssen Company; Walter Muskat, Triangle Package Machinery Company; Leonard D. DeFrancisci of DeFrancisci Machinery Corporation; Gerard Ziffer of Amaco Corporation, representing Hoefliger & Karg; and Oreste A. Tomel of Diederichs & Griffin Company, representing Fr. Hesser.

Alfred Rosotti of the Rosotti Lithograph Corporation and Grover Foote, production manager for films and pa-

pers, Milprint, Inc., discussed materials and printing techniques. Don McGillan, field technical representative of Milprint, also took part in the discussion on how modern processes of printing, extrusion coating and film production can be used to perfect packages mechanically and to improve their appearance and sales impact. Mr. Rosotti's comments appear on page 10.

Registrants to the seminar received a manual to take home for reference and future study.

Life is made up, not of great sacrifices or duties, but of little things, in which smiles and kindness, and small obligations given habitually, are what preserve the heart and secure comfort.—Sir H. Davy.

Again in 1962



takes top honors
for quality and
versatility in

Color Printing and
Packaging.

16



6



22 Awards

We like to talk about the awards we have won, but even more to report on the twenty-two sales success stories that stand behind these awards. The next time your U-S sales representative calls, ask him for details on our award winners . . . ask him to explain how the U-S formula for success can be applied to your packaging and merchandising needs.

UNITED STATES PRINTING AND LITHOGRAPH • DIVISION OF DIAMOND NATIONAL CORPORATION
EXECUTIVE OFFICES: NEW YORK 17, N. Y. • SALES OFFICES IN PRINCIPAL U.S. CITIES

AUGUST, 1962

9

Printing, Paperboard and Cartons

Alfred Rossetti, President, Rossetti Lithograph Corporation

I WANT TO be a little bit nostalgic about the progress of packaging in the macaroni industry in the last 40 years! I have had the particular good fortune, together with my family, to have grown up with the progress of packaging in the macaroni industry and to have made a few contributions to its fantastic development.

Early Days

In the early days, the macaroni manufacturers were, with very few exceptions, owned and operated by families a great many of whom had migrated to this country from Europe, and whose management potential was confined to the problem of operating a business with as many of the family as possible and with a fiercely dedicated desire to make good macaroni and spaghetti. Their products were manufactured with systems and equipment that went back to the screw press type with old hand-operated dryers and with a packaging concept that concerned itself with 20-pound wooden boxes and with an attempt to enhance the quality and the color of the macaroni products with a beautiful blue paper lining the interior.

It was certainly well known that there were manufacturers of inferior products. Almost any price possible could be obtained by the retail store from the type of macaroni manufacturer who did not concern himself with the element of quality. There was also the highly scrupulous macaroni manufacturer who took a great deal of pride in his product and demanded a decent price. He also demanded being paid promptly and it was no secret that when accounts became inflated to the extent that the good manufacturer would not sell them, the grocer bought from a less scrupulous manufacturer and substituted his products in the 20-pound cases of the quality producer.

This situation also lent itself to serious credit problems and the poor macaroni manufacturer had to bulldoze the situation along and hope for the best.

Cracker Shells

In the early '20's there were a few macaroni manufacturers who started to use the cracker shell, chipboard type of box and wrapped in a paper wrapper. They were strictly in the minority however, and their packaging equipment was rather of the primitive type which has since been almost 100 per



Alfred Rossetti

cent replaced. It was into this background that our company started to concern itself with the serious promotion of consumer demand, first by introducing the use of a brand name. Secondly, we promoted the type of packaging that would be more than just a container. We attempted, thereby, to provide macaroni manufacturers with a formidable tool for the continuity of sales and distribution. This, with public acceptance of the brand name, tied in with the brand quality and gave the manufacturer a new and more valuable corporate identity.

Along with the packaging advantages of the one-pound carton there were introduced premium promotions which gave sales a tremendous push on the known brands. It sent sales soaring to the extent that the establishment of individual packages by individual manufacturers was considered a MUST.

It is needless to state that our company was intensely interested in this because we were so intimately identified with the success of the newborn industry. We found ourselves personally involved in the development of the one-pound package of macaroni products. At that time practically all of the folding boxes produced in the United States were reproduced by the letterpress process with varying degrees of success. We had no serious requests for quality reproduction involving screens such as we have today and letterpress printing at least trans-

ferred printing ink to the board with an undeniable result of describing the brand name of the product. We found ourselves at that time with the great responsibility of deciding whether letterpress was the printing method that we should use or direct the packaging into the sphere of offset lithography. We decided after many deliberations to stay with offset lithography and that is the process with which our company produces its packaging today.

As you know, I take great pride in my status as a professional craftsman in the field of lithography. I like to think I am identified, through this field, with my heritage from the great Italian Renaissance craftsmen—the artists, the early mathematicians and physicists, and the craftsmen of other fields.

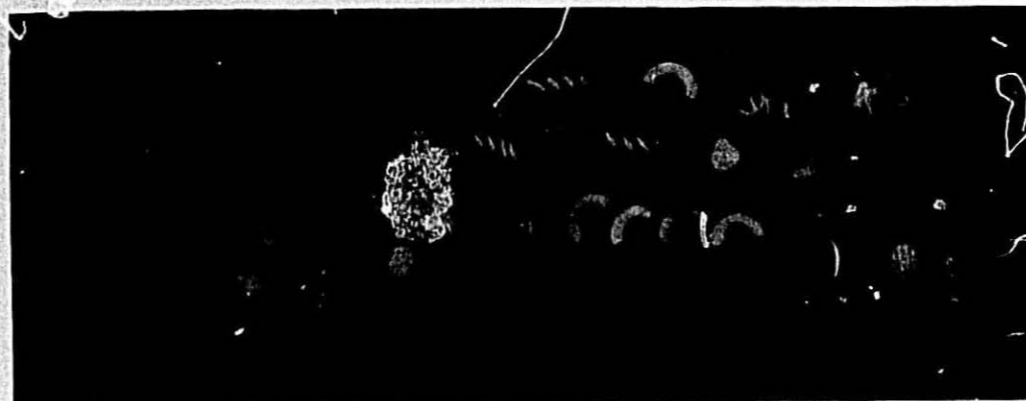
Offset Lithography




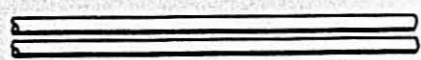











Offset lithography, in my personal opinion, has many distinct advantages and assets over its competitive processes, namely, letterpress and rotogravure. I do not propose to embrace the whole graphic arts sphere with a dissertation on the competitive processes but to confine myself to some of the assets and advantages of offset.

One of the important assets of offset is the flexibility that the process has with respect to the surfaces of box-board being used. Because of the use of a rubber blanket we produce a resilient impression that penetrates into all types of imperfections in the surface of the sheet giving a reasonably smooth effect. The present drastic specifications required in some of the appetite-appeal color reproductions seem to be satisfied more so by the ability of offset reproduction than any other method to transfer ink to paperboard with the tonal quality so necessary. We at Rossetti have so concerned ourselves with the important relationship of packaging design and requirements that we actually started our complete packaging program with color photography that directly ties in with the offset lithographic process. It has been an element of great satisfaction to me personally and to my company, that the confidence that we have had in the offset process has been justified by the installation of this type of equipment in practically every carton company of any consequence in America. In the city of Chicago 90 per cent of the equipment being manufactured by the

(Continued on page 30)

THE MACARONI JOURNAL



TO INSURE THE QUALITY  IN ANY MACARONI PRODUCT  ALWAYS SPECIFY  **AMBERI** WHETHER YOU'RE MANUFACTURING LONG GOODS  OR SHORT , EGG NOODLES  OR OTHER SPECIALTY SHAPES,  YOU'LL FIND  **AMBERI** IS ALWAYS UNIFORM IN COLOR AND GRANULATION.  BECAUSE OF OUR UNIQUE AFFILIATIONS IN THE DURUM WHEAT GROWING AREA,  WE CAN SUPPLY  THE FINEST DURUM  WHEAT PRODUCTS AVAILABLE. AND WE SHIP EVERY ORDER  AT THE TIME  PROMISED. BE SURE... SPECIFY  **AMBERI**



AMBER MILLING DIVISION

FARMERS UNION GRAIN TERMINAL ASSOCIATION
Mills at Rush City, Minn.—General Offices: St. Paul 1, Minn.

TELEPHONE: Midway 6-9433

Restaurant Management and Macaroni Products

Mary Ann Warner, Manager of Food Services Art Institute of Chicago



Mary Ann Warner

I HAVE been in the restaurant business, foods research, sales promotion of food products ever since I left college. I was not educated in this business of food service. I chose it deliberately after I left school. I am proud of my business and enjoy my working life.

The restaurants which I now manage serve 3,000 guests per day through the facilities of a student cafeteria, a public cafeteria, fine dining rooms, snack bars, private dining rooms and banquet rooms. Our menus include everything from baked beans to boneless breast of chicken in wine sauce. Our customers' buying budgets vary from the very, very low to the price of anything they desire. They come from all walks of life and from all over the world.

Our restaurants are not subsidized. My experience in the use of macaroni products should be reasonably extensive and representative. Therefore, I choose to base this discussion on my purely personal observations. It just might be an entirely different viewpoint. I bring it to you, not as an expert, but in the hope that I can leave here with ideas by which I can do a better job.

Tough Business

It has been said that the restaurant business is not truly a business. It is a way of life. Not so very long ago many decided to go into the business because Mama was a good cook and Papa could

count money. Many of those that started in this small way have become the famous restaurants of our time. Many, many more just did not make it.

A restaurant is one of the most costly of business properties. It is also a most complicated business. Untrained operators and owners do not have much chance today. If some of us sat down and really thought through the vast number of business practices that we must be knowledgeable in we would quit in sheer fright.

We are a manufacturing plant, producing a finished product from the raw material. You know all the details involved in this. We must organize and train our own sales organizations. How does your sales personnel get along with production? Ours don't either. Our product is consumed on the premises on which it is produced and in which it is sold. We have to keep production traffic, sales traffic and customers traffic moving along smoothly and together. The planned or unplanned use of trim, cuttings, unsold remainders can be the difference between profit and loss. We cannot specify a run, produce for storage and future sale, close down the presses, lay off the production staff and wait for sales to catch up. We produce many items which vary from day to day and all must be controlled by standardization.

Rapid Cycle

The complete cycle of production, sales and consumption must be completed in a matter of hours. All of the details of running a factory, a store and a home are part of our daily routine. In addition we have to provide decor and atmosphere.

Did you ever have a dreadful minute when you imagined that all of your customers who might be unhappy with your product, something that one of your employees did or said, the lighting in your plant, your prices, the color of the walls, the air, the parking lot, could demand to see the manager right now. Can't you just see them standing in line? Anyone of them can have a complaint any minute. There is no escape. How many customer complaints or suggestions do you handle personally?

As a matter of fact, do you know the customers that buy and use your products? What kind of folk they are,

skilled or unskilled, efficient or inefficient? Do you ever think of your customers personally as individuals? And while you are at it, did you ever think of your customers as individuals? This is a mighty mass of people all with their own peculiar and personal likes and dislikes.

This is your market, the people who cook, sell and eat macaroni. It seems to me that you are largely dependent on so very many for the good things in your life, the things that volume and profits can buy for you. I cannot remember when anyone ever sold me a pound of macaroni. I cannot remember when anyone ever came into my office with a few suggestions as to why I should buy more macaroni with ideas as to how I could use this product for more volume and profit in my restaurant. My volume adds to your volume. My profit adds to your profit. I could use a little help.

Evasive Profits

It is becoming increasingly difficult to make a fair profit on pasta menu items. These products are flavor carrying foods. Most generally they must be accompanied by a sauce or they are used as one of the ingredients in a mix. They are used as extenders of the so-called expensive food items. The cost of the merchandise we sell is the sum total of the cost of the raw material and the working time to produce the finished product. Usually spoken of as food cost and labor cost. These two costs of production are inseparable. The skilled management of them is the most important factor in success or failure. These are controllable costs. They are entirely separate from the gross labor cost of an operation, the serving, the dishwashing, the cleanup costs. Purchase price of raw food is little variable in today's market. The real cost of food is controlled only through skillful use and menu planning.

A cook can trim and prepare a round of beef, ready for roasting in 30 minutes. He places it in a temperature controlled oven for a definite period of time and forgets it until he hears the signal that informs him it is done. He now has 150 orders ready for serving of a high raw food cost item.

It takes this same cook three and one-half hours to prepare 150 orders of baked lasagne. This item also requires

high priced cooking skill and experience. Prepare the ingredients, cook the sauce, cook the noodles, and arrange all by hand in the baking and serving pans.

A precedent in selling price has been established for many food items. The buying public is thoroughly convinced that pasta menu items are an economy dish. To get volume sales on our diversified menu we have to sell the baked lasagne for less than the roast beef, but our cost to produce an order of these two items is almost exactly the same. It is imperative to balance a menu carefully with those items of high food cost and low working time and other of low food cost and high working time.

Because a great many restaurant managers are still thinking of food cost per menu item and labor cost as the percentage of gross labor per menu item, their products are marked up for sale unrealistically. Every restaurant selling a varied menu uses macaroni products. They appear in all types and in every degree of quality, ranging from very poor to excellent. The selling prices range from high to low. To get a fair price for a truly high quality product is becoming most difficult.

Useful Macaroni

Macaroni products are very useful to provide an appetite satisfying meal for a big appetite. They are valuable in preparing attractive and appetizing dishes for the gourmet. We try to upgrade our selling price and to merchandise an attractive menu by using the lesser known pasta forms. Customers will pay more for something different. When Lent started this year I anticipated introducing a new and extra special dish on my menu. Lasagne Verde. Wide spinach noodles, fresh shrimp and cheeses. A delicious dish and a real treat for which I could get a fair price. Precedent purchase price has not been established in this market. A menu item that could build volume and a reputation.

Do any of you know where I can buy spinach lasagne noodles? I did not make any money on that one because I have not yet been able to find them.

How many times I have wished that the manufacturer would enclose in the carton, a simple sheet with simple drawings of the sizes and shapes of the products he has available. This along with the name by which they are designated at his order desk.

The volume in our restaurants fluctuates, seasonally, from day to day and week to week. We buy macaroni in 10 and 20 pound cartons. The amount we use from this carton in the formula and on the day varies greatly. How

many times I have wished that I could use a part of a carton, keep the remainder fresh and sanitary without having to empty it into a canister. Would it be too costly or difficult to pack the product in perhaps four-five pound plastic bags to the 20 pound carton? Many restaurants do not have perfect storage facilities. Some are careless about storage, especially of opened cartons. This can cause real trouble especially in the summer months.

Cosmopolitan Dish

Why do we merchandise pasta products as nationally Italian and in national Italian cookery? They are not and have not been for a long, long time. These products are one of the most cosmopolitan of all menu ingredients. Does the rice industry tie their product to Oriental national cookery? Do the corn products manufacturers claim national American cookery? Italian tomato sauce—if I remember my history correctly—tomatoes came from the new world, Mexico—Peru. I would like to be able to understand in good old U.S.A. terms the differences in the ingredients in pasta products that makes one good, better or best. I would like to use a formula I found in a Mexican cook book for Mexican macaroni, put it on my menu as such, without feeling a little silly.

Restaurants specializing in national Italian foods use a large volume of macaroni products. They are the experts and they know their pastas. But is it not true that the schools, universities, factory restaurants and dining rooms all over and of every type serving a varied menu, use the greatest volume? I suspect it might be as much as 90 per cent of it. Those of us who use these items as one of so very many cannot make the complete investigation as to quality and methods of handling new and improved products, new and improved methods of preparation and use. We just cannot all be experts in all things. We must have help, informed help that understands our problems.

It is quite possible that I have missed this help. Perhaps I am not on the mailing list. Perhaps I have missed the articles in the trade magazines, maybe I did not attend the meeting at which these speakers on the subject of merchandising macaroni products appeared. But I do remember vividly, the demonstration of macaroni products in restaurant cookery and menu planning given at the National Restaurant Association Convention somewhere back in 1957 or 1958. I still have the brochure that became available immediately thereafter. I paid \$1.00 to get it.

I remember that this presentation created a great deal of interest and for many of us was a great success because it was helpful.

The rice producers association keeps me informed, but good. The Idaho potato growers don't let me forget them. These are, or I should say were, always considered to be fattening foods. Everybody knows now that they are not. The producers are helping me plan low calorie menus using these products. Is macaroni fattening? Or is this, too, "It's what you eat it with that makes you fat items"? I would like to see some comparisons, with breads, rice, potatoes, figures that I could use to sell macaroni menu items to calorie counters and weight watchers.

Our production manager is giving some time and attention to an experiment to save working time in cooking macaroni products and to perhaps produce a more appealing dish. The problem is . . . the exact ratio of seasoned liquid and macaroni which will achieve complete absorption of the liquid and seasoning in a definite period of time and temperature for a perfectly cooked product. We know that one measure of rice will cook perfectly in exactly three measures of liquid in a definite time and temperature. This knowledge is most helpful. It eliminates one handling, overcooking and pot watching.

Cooking Problems

We are also experimenting with cooking macaroni in the pressure steam cooker. We have made some progress but we have a long way to go. Perhaps we are wasting our time. Has any of this work been done in your laboratories? Do you know the answers we seek? If you do, I and many others would like you to share them with us.

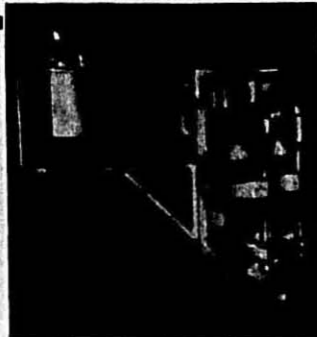
About a month ago a restaurateur of long experience and top reputation, called me and asked, "Why do we wash macaroni in cold water immediately when done? I've just always done it and now an employee I am teaching wants to know why."

Just a day or two later I was in my own kitchen storming up and down because the macaroni was overcooked. Sometimes it was right and sometimes it wasn't. Why? Why? Why? The young cook assured me that he cooked it the same length of time, every time. Then I remembered the question and the answer I gave my friend, and asked the cook, "Do you wash it in cold water immediately after taking it off the stove?" Well, yes, he washed it but admitted it wasn't always immediately. I explained to him that we did this to stop the cooking action. That it kept

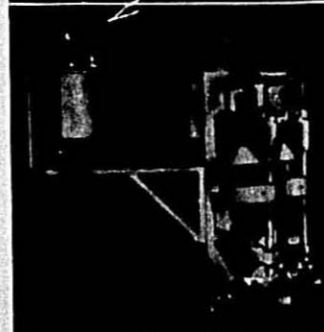
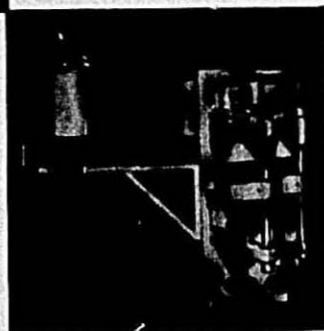
(Continued on page 34)

**2000 lbs. per hour
DEMACO'S NEW TWIN DIE SHORT CUT PRESS**

*with the same quality
of the present 1000 lb.
(or more if quality is
not essential).*

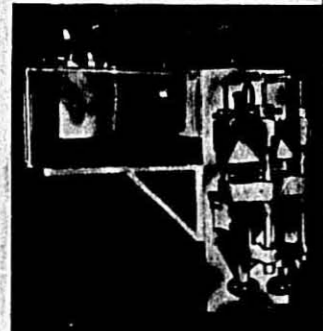


The new Demaco Short Cut Press with two extrusion heads assembled in one compact unit will produce over 2000 pounds per hour of short cuts. Here the accent is on quality, production with slow, slow extrusion over two dies. Before you buy, investigate the many outstanding features offered by Demaco. This new Demaco 2000 pound per hour press is planned for tomorrow's needs, today. This is the key to better production capacity needed today. Over the past 20 years, the outstanding performance of the 1000 lb. Demaco short cut presses have proved their value in longest service and lowest operating costs. Demaco's 2000 pound per hour press has even higher standards of quality and still lower maintenance costs. For more information write or call De Francisci Machine Corporation.

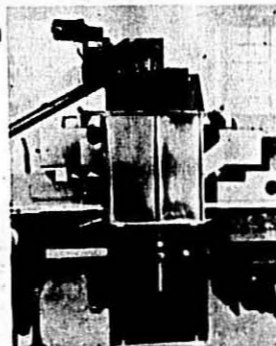


DEMACO
the full line:

SHORT CUT PRESSES, AUTOMATIC SPREADERS, SHEET FORMERS, SHORT CUT DRYERS, NOODLE DRYERS, LONG GOODS PRELIMINARY DRYERS, DRYING ROOMS, EGG DOSERS.



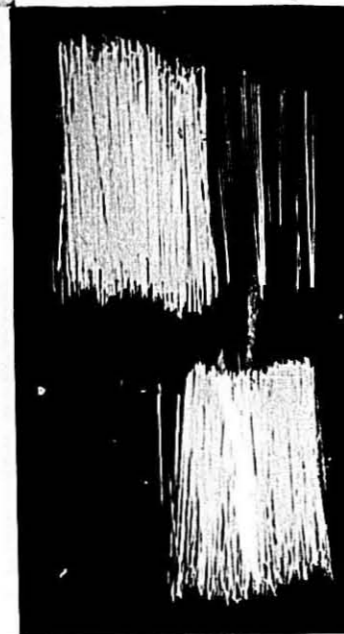
**COME SEE IT IN OPERATION -
THE NEW DEMACO SPAGHETTI WEIGHER**



*weighs
all
types*

Reduce packing time and increase productivity. Demaco's new Spaghetti Weigher has all the time savings innovations that will reduce your packing time — here's why — **Speed** — average over 40 packages are accurately weighed per minute. **Versatility** — can handle the full range of dried goods: straight, curved, hooked and short ends. Now weighing Spaghetti, Spaghettini, Macaroncelli, Perchatelli, Vermicelli, Linguini and Linguini Fini. **Adaptability** — designed for all standard carton packaging machines. Can be supplied with a completely automatic feeding and conveying system direct from stripping machine. **Accuracy** — is maintained by Demaco's unique strand per strand dribble mechanism. Final weight is insured by highly sensitive opto electrical principle of frictionless weight indication, scales.

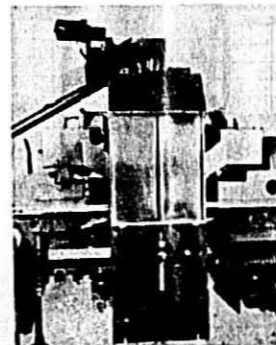
Demaco Spaghetti Weigher can also be adapted for 1/2 pound packages, 2 pound packages or 3 pound packages.



De FRANCISCI
MACHINE CORPORATION

45-46 Metropolitan Avenue
Brooklyn 37, New York

Phone: EVergreen 6-9880



*weighs
all
types*

Testing Methods and Laboratory Designs for a Macaroni Factory

Perry Anderson, Chief Chemist, Food Technology, Inc.

IN A MODERN macaroni plant, laboratory tests on raw materials and finished product are essential if a manufacturer wants to turn out goods of top, consistent quality.

Without proper controls, inferior macaroni packages in the hands of the consumer can result in greatly diminished sales. For example, if your package specified 10 minutes cooking time and the housewife finds it not too done, she will try someone else's macaroni next time. The increased cooking of the macaroni may have been due to a change in the raw material which would have been discovered in the laboratory before the product was shipped out.

Check Materials

A laboratory also makes it possible to check up on suppliers and raw materials. Tests on incoming raw materials enable you to make sure of obtaining what you are paying for. A semolina that has six or eight per cent flour is not really a semolina. It is a durum granular and therefore should not cost as much. Eggs that have 43 per cent solids are not worth as much as 45 per cent solid eggs. Some raw materials are subject to variation from day to day and supplier to supplier. A modern plant must have the means for seeing that the raw materials that go into his product are as consistent day after day as it is possible to make them.

Another example of the value of a laboratory is the conducting of moisture tests on the finished product. A short cut product, under ordinary circumstances, will stand up well in the package, if it has been properly dried to 12 per cent moisture content. If the product is dried further, let's say to 10 per cent, the decrease in moisture is costing you money, as the water in the product is selling at around 10 cents a pound. Generally, closer control of moisture content in finished goods can result in substantial savings, often enough to off-set the cost of setting up and maintaining a laboratory.

Locating the Lab

There are a number of factors to be considered in the location of a laboratory in the plant. It should be located in a part of the building that is relatively quiet and free from vibrations. It should be reasonably free from excesses of heat and moisture. The lab-



Perry Anderson

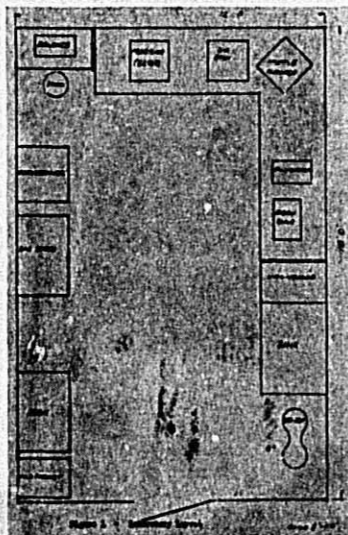
room is more desirable than a square room. A room 12 by 18 feet would be considered minimum space for a laboratory. This would provide enough space for essential testing but would not be sufficient for a well rounded experimental laboratory.

Essential Equipment

The following principal pieces of equipment should be provided for:

1. Ro-Tap sifter
2. Analytical balance
3. Beam scale
4. Moisture tester
5. Gas stove
6. Muffle furnace
7. Air oven
8. Photometer
9. Refrigerator with freezing compartment
10. Desk
11. Bookcase
12. Sink
13. Cabinets for storage
14. Hand Grinder.

Figure 1 is a rough sketch of the layout of a laboratory containing equipment for essential testing. You will note the wall space has been well utilized and that actual working space is at a minimum. Additional work space can be obtained by placing a table mounted on casters, or in the center of the room. The table can easily be moved to where it is needed or set to one side, out of the way.



THE MACARONI JOURNAL

The analytical balance has been placed in a corner and is mounted on a separate table to minimize vibrations and air currents.

The sink should have a double well and can either be porcelain enamel or stainless steel. The drain board and splash board should be made of stainless. It is desirable to have a peg board on the wall above the sink so that glassware can be "hung up" and allowed to drain and dry after washing. Cabinets under the sink can be used to hold cleaning supplies. A standard sink trap is sufficient for a laboratory of this type. Where corrosive chemicals are used, however, a special sink is required. Generally, this type of sink is made of "Alberene" which is an acid proof stone. The corners of the sink are sealed with an acid resistant lead putty and the drain plug and trap are made of lead.

The stove should be a gas range containing an oven. Bottled gas can be used if there is none available in the plant. An electric stove is not satisfactory for accurate work as the heat cannot be adjusted between the switch settings. A gas stove can be adjusted to virtually any heat desired.

Shelves and Cabinets Desirable

A bookshelf on the wall above the desk or a book case near the desk is desirable. These would contain plant and laboratory records, Food and Drug regulations, and books pertaining to official testing methods, such as, Cereal Laboratory Methods of the American Association of Cereal Chemists and Official Methods of Analysis of the Association of Official Agricultural Chemists. Copies of the Macaroni Journal and other journals can also be kept here as well as other reference books. The bookcase or shelf should be enclosed to keep out flour and dust.

Cabinets may be placed on the walls above the countertops as well as below the countertops. The counter tops can be of any standard material such as wood, linoleum or formica. These cabinets will hold the various chemicals, glassware, cooking utensils and other items necessary in conducting the numerous tests.

Utilities are standard with gas, water and electricity required. A gas outlet should be placed at one of the benches for a burner. This would be in addition to the gas stove and would be used for a small, concentrated flame. Electricity is needed for the various testing instruments, as well as the stove and refrigerator. Adequate lighting is important and should be supplied by overhead, reflector type fluorescent fixtures or recessed lights. The laboratory should have hot and

cold running water as well as distilled water. The purchase of distilled water in five gallon bottles is most practical for a small laboratory. The bottles can be placed on a wall shelf and the water dispensed by means of a siphon arrangement.

The type of chemicals, glassware and other chemical apparatus needed in a laboratory would of course depend upon the extent of testing to be done.

The initial cost of equipping a laboratory is not cheap, but it can save costs in many ways and lead to consistent quality products.

Estimated Cost

In trying to arrive at a cost figure for a laboratory of this type it must be understood that this would only be an estimate as many factors are involved. The extent of testing determines the type and amount of equipment necessary. I have tried to break down the various costs to some extent and the figures are based on new equipment and supplies.

The sum of \$4,000 would be the approximate initial cost in setting up a newly equipped laboratory. Once the laboratory has been established, replacement costs on broken glassware and chemicals would be normal.

The major expense in operating the laboratory, after it has been established, would of course, be the personnel. The time required of a technician in the laboratory would depend on the extent of the testing program. This might require all or part of the individual's time. Again, the extent of the testing program would determine the type of technician necessary. The technician could be anyone from an experienced chemist to a part-time, intelligent, high school student. The job can either be full time or combined with other duties in the plant.

None of the tests that will be recommended for the basic laboratory are beyond the scope of an intelligent high school graduate. It is important that the technician have a thorough, intensive training period to become familiar with each basic test. It is also recommended that the technician be included in the activities of setting up the laboratory and the calibrating of the various equipment.

So much for the setting up of the laboratory. The next phase will deal with the testing program that would be carried out by the laboratory.

The tests to be described are basic tests that should be included in any macaroni laboratory, regardless of size. These tests can all be conducted in the laboratory we have just finished discussing.

Before doing any testing on incoming raw materials it is important that representative samples be obtained. The flour in each bag in a carload will not contain exactly the same moisture or ash content. For this reason, a sample should be removed with a flour trier from ten bags in various parts of the car. The samples of flour should then be blended together and this representative sample would then be used for testing purposes. A long flour trier can be used for sampling bulk cars at several points.

Basic Tests

1. Granulation Test

This test is the basic means of determining whether a durum sample is to be considered a semolina, granular or flour. If not more than three per cent of the material passes through a 100 mesh screen, the material is considered a semolina. A premium is paid for semolina and if it contains more than three per cent flour it should be cheaper.

The particle size distribution in the given flour or semolina can also be determined by this test. In general, a flour having a preponderance of larger particles will produce a better quality product.

The apparatus required for making the granulation test is the Ro-Tap sifter. It is recommended that U.S. Standard Sieves No. 20, No. 40, No. 60, No. 80, and No. 100 be used. Starting with the pan on the bottom, assemble from the bottom up the No. 100 mesh, 80 mesh, 60 mesh, 40 mesh and 20 mesh sieves. A 100 gram sample of the flour is weighed on the beam scale. The flour sample is placed on the 20 mesh sieve. The assembled sieves, with the cover, are placed on the Ro-Tap shaker and agitated for two minutes. The agitation is accomplished by a one-quarter horsepower motor and is a combination of horizontal circular motion with vertical tapping impulses.

After agitation the material on each sieve and in the pan is weighed separately on the beam scale. The weight on each sieve is termed per cent on the mesh size and the weight of material in the pan is the per cent through 100 mesh and is classified as flour. All material must pass through a 20 mesh sieve.

The apparatus required for the granulation test besides the Ro-Tap sifter is a beam scale, weighing pan and small scoop.

2. Ash Test

The ash test is a partial measure of the quality of the flour. In general, the percentage of ash increases as the grade of flour is lowered. The ash test,

(Continued on page 20)



*where top
performance
counts...*

**YOU CAN COUNT ON
COMMANDER LARABEE**

Fishing for new ways to bring you faster, "on-demand" delivery is a full time job at Commander Larabee. Yes—with thousands of shipments of all kinds and sizes, Commander Larabee is constantly angling for more efficient routes and shipping methods to serve you better. You'd be amazed at the lines they'll untangle to bring an order to your door on time. So, next time you're casting around for top quality durum products—delivered to your door on time—why not drop a line to your Commander Larabee salesman (a phone call's OK, too)—and watch him run with the bait.



ADM

COMMANDER LARABEE DURUM DEPARTMENT

ARCHER DANIELS MIDLAND COMPANY MINNEAPOLIS KAN. 55 011

Laboratory Testing—

(Continued from page 17)

In conjunction with other tests, can predict whether the flour is of good or poor quality. The Standards of Identity specify that durum flour must have an ash content, calculated on a moisture-free basis, of not more than 1.5 per cent. Semolina must have an ash content of not more than 0.92 per cent. In some instances it is desirable to know the ash content of the finished macaroni. The Quartermaster Corp. has specifications for moisture and ash on the macaroni products they purchase. Other purchasers of macaroni products maintain similar specifications.

A three-five grain sample of the material to be tested is weighed into a silica or porcelain crucible. The crucible is placed in an electric muffle at not over 425 deg. C. and the temperature is gradually increased to 575 degrees to 590 deg. C. The material is incinerated until a light gray ash is obtained or to constant weight. This should take four-five hours time. The crucible is then cooled in a desiccator and weighed soon after room temperature is reached. The weight of material after ashing, divided by the initial weight, times 100 is recorded as the per cent of ash. This is usually reported on the basis of 14 per cent moisture.

The apparatus required for the ash test, besides the muffle furnace, is the analytical balance, crucible, crucible tongs and spatula.

3. Moisture Test

Moisture tests in the macaroni industry are extremely important. A manufacturer is paying for semolina or flour on a 14 per cent moisture basis. If the product contains over 14 per cent moisture, he is getting less flour than he pays for, the difference being made up in water. Flour over 14 per cent moisture is subject to deterioration and spoilage.

Macaroni products, according to the Standards of Identity, should contain not more than 13 per cent moisture. Good practice, to prevent deterioration of quality and checking, dictates that the final moisture content of long goods should generally be between 10.5 and 11 per cent and on short goods about 12 per cent. As mentioned before, a manufacturer is only losing money by selling a product that is top dry.

Moisture tests should also be conducted on product leaving each of the drying units in the plant. This will determine the effectiveness of drying and keep some control over the drying at various stages.

Moisture tests can be made in one of three ways. The simplest and quick-

est method is the Brabender Moisture Tester. The apparatus is semi-automatic and requires only two steps. First, a ten gram sample is weighed on a special scale into a calibrated dish. Secondly, after drying the sample 20 minutes, the balance is released and the moisture content of flour or granular material can be obtained in approximately 25 minutes.

When the moisture content is desired of wet macaroni, taken during the drying process, the macaroni must first be air dried, preferably overnight. After drying sufficiently, the macaroni is reweighed and then ground in a mill and the moisture determination made. The sum of the moisture lost during air-drying plus that lost during the moisture test represents the total moisture in the original wet macaroni. This method must be followed regardless of which moisture method is used.

The second method for determining moisture is the air-oven method. This method requires the weighing of a two gram sample into a previously weighed covered metal dish. The sample is uncovered and the dish, cover and contents are dried at 130 deg. C. for one hour in an air-oven. After drying, the cover is replaced and the dish is transferred to a desiccator to cool. The loss in weight, divided by the initial weight, times 100, gives the per cent of moisture in the sample. This method takes about two hours.

A third method of determining moisture is the Marconi Tester. This instrument measures the conductance of the macaroni material and by devising a calibration curve, the moisture content of the sample can be determined. This method is very rapid and is particularly valuable where moisture distribution studies are being made.

The instrument requires periodic calibration and is accurate when the same raw material is used. Where raw materials differ, the accuracy is not as great.

The Brabender Moisture Tester Method is recommended over the air-oven method particularly where numerous samples are to be tested. Its simplicity greatly reduces chance of error and it has sufficient accuracy. Although the Brabender Moisture Tester requires a considerably greater initial investment, it does the air-oven method, the savings in time and labor will offset this at once.

The Brabender Moisture Tester comes completely equipped with balance, oven and dishes and requires no other apparatus. Apparatus for the air-oven method consists of the oven, moisture dishes, spatula, desiccator and the analytical balance. Where moisture determinations are to be made on macaroni,

a hand grinder will be needed for both methods.

4. Speck Test

This test is a measure of the dirt and bran in a sample of semolina. A macaroni product that has been made with dirty semolina will have a dirty color and/or specks.

The test is simple and consists of first, filling a 10 in. by 10 in. by one-half in. box with flour. The flour is leveled off to the sides and a lined glass cover plate, ruled in 100-one-in. squares, is pressed on top of the sample. The number of specks is then counted and recorded.

As in many of the other tests on macaroni and its raw materials, standards have not been established for this test. The value of the speck test will come after a number of tests have been made so that the plant has a standard of comparison of one shipment with another.

The apparatus for the speck test is a home-made box, ruled glass cover plate and a flat piece of wood for leveling.

5. Grit Test

The grit test is used to determine the amount of sand or sediment in a sample of flour. Sand can lodge in the die and cause splits and streaks in the extruded product. Being an abrasive, sand can also wear down the die. The grit test along with the speck test and filth test is a measure of the sanitary condition of the flour.

One hundred grams of the sample are weighed into a separatory funnel. Four hundred ml. of carbon tetrachloride are added to the separatory funnel and the mixture stirred. The grit settles to the bottom of the funnel and is drawn off into a weighed evaporating dish. The carbon tetrachloride is poured off without disturbing the sediment. The sample is washed once with a small amount of carbon tetrachloride which is again poured off. After the carbon tetrachloride has evaporated, the evaporating dish is reweighed and the difference in weight is the per cent of grit in the original sample.

There are no standards for the grit tests, as with the speck test, and its value will arise only after enough tests have been made to give a comparison.

The apparatus required for the grit test is carbon tetrachloride, 500 ml. separatory funnel, evaporating dish, ring stand, clamp, analytical balance and beam scale.

8. Egg Color Test

The color of egg is important as a premium is paid for darker colored yolks. This test is a means of checking

your supplier to make sure you are getting what you pay for.

There are two generally accepted methods for the determination of color in egg and both depend on the use of the photometer or photoelectric colorimeter. The egg sample is diluted in acetone and the transmittance of absorbance of light through the solution is measured. The color of the sample is then read from a previously determined calibration curve.

In one method, B-carotene is used for the color comparison while in the other, potassium dichromate. Both methods are essentially the same and give rapid, accurate and dependable results. B-carotene is more reproducible when different photometers are used.

The apparatus needed for the egg color test consists of a photometer, analytical balance, potassium dichromate or B-carotene, filter paper, pipettes and other glassware that is included in the over-all equipment list for the laboratory.

7. Color Test on Macaroni and Semolina

Color of semolina or flour is important with respect to the finished macaroni. With proper processing, a good colored semolina will produce a good colored macaroni. There are no processing techniques that will put color into macaroni other than that in the raw material.

For this test, a photometer is used as in the egg color test. The method of testing is also similar except that n-butyl alcohol is used to extract the color in semolina or ground macaroni. The amount of color is read as micrograms of B-carotene and is obtained from a calibration curve.

This test, as with some of the other tests, has no specific standards and its value can only be obtained after a number of determinations have been made. Once standards have been set up, the color test becomes a rapid method for determining whether a semolina has a good or poor color.

The apparatus needed for the color test on macaroni and semolina is identical with that used in the egg color test with the exception of n-butyl alcohol.

Some pigment is destroyed in the press through oxidation caused by the enzyme, lipoxidase. The amount of destruction can be measured by measuring pigment in the raw material and the finished macaroni product. The lipoxidase activity can be measured to predict pigment destruction before the raw material is used. This is an important test, but it is not listed as one of the basic tests because a high school graduate would have difficulty running it.

8. Egg Solids Test

The egg solids test is primarily made to determine whether the eggs being purchased meet the guarantee furnished by the supplier.

Generally, the solids content of frozen egg yolks is 45 per cent; frozen whole eggs, 26 per cent; frozen egg whites, 12.5 per cent; and dried egg products, approximately 95 per cent.

A three-five gram sample is accurately weighed into a previously weighed, covered dish. The dish is placed in an air oven at 100 deg. C. for 16 hours with the cover removed. After cooling in a desiccator, the dish is weighed, and the weight of dried sample, divided by the initial weight, times 100, gives the per cent of solids. When using liquid eggs, most of the water should be driven off in a steam bath before placing the dish in the oven.

Apparatus required for the egg solids test are the analytical balance, covered dish, spatula, water bath and air oven.

9. Cooking Test on Finished Product

The cooking test is probably one of the most important yet the least standardized of any test made in a macaroni plant. A manufacturer should make periodic cooking tests on his products to make sure that high quality is maintained. Cooking tests should also be made on competitive products to see how they compare with his own.

Considerable time has been spent in our laboratory to develop a cooking test where numerical values can be assigned to individual characteristics of macaroni. We call this the "Cooking Test Profile" and it is normally carried out by three people.

Spaghetti to be tested is cut into four in. lengths and 50 grams are put into one liter of boiling distilled water. The cooking time is the time when the internal core of uncooked dough disappears. In the case of spaghetti, this is determined by pressing between two glass microscopic slides and observing when the line of uncooked dough disappears. Cooking evaluations are made one minute after the cooking time and also at cooking time plus six and plus 12 minutes. These latter evaluations are for the purpose of determining how the macaroni resists over-cooking, and to some degree, a measure of its ability to withstand deterioration on steam tables.

At each of the cooking times, a small amount of the product is removed to small white plates and is evaluated by the members of the panel. Figure 5 shows a Cooking Test Profile Score Sheet that is filled out by each member of the panel. You will note that the various characteristics that go into

making up a good macaroni product are included. These are color, both yellow and gray or brown, stickiness, slime, odor, taste, texture and doughiness or lack of elasticity. Each characteristic is assigned a maximum value according to its importance. Certain characteristics are never given a perfect score, such as color, because there is always room for improvement. Other characteristics can be given a perfect score, such as slime, because if the product has no slime, it cannot be improved.

Cooking tests of this type require some experience, but after this has been gained, a means is available of comparing samples and keeping quality up to standard.

Three to four cooking tests can be made at one time and are recommended where direct comparisons are being made.

Apparatus needed for the cooking test are a beam scale, liter graduated cylinder, stainless steel or aluminum cooking pans, gas stove, white colored plastic plates, tongs, forks, box of microscopic slides and distilled water.

10. Dry Product Evaluation

The appearance of the dry macaroni product is important because this is where the buyer or cook obtains his first impression. If the product is broken or checked, or has white streaks, it is not very appealing and will not be purchased a second time. It is important for finished goods to be consistent from day to day so that a retail customer always knows what to expect when she buys a package of a certain manufacturer's product.

Dry product evaluation can be scored as indicated in the following table:

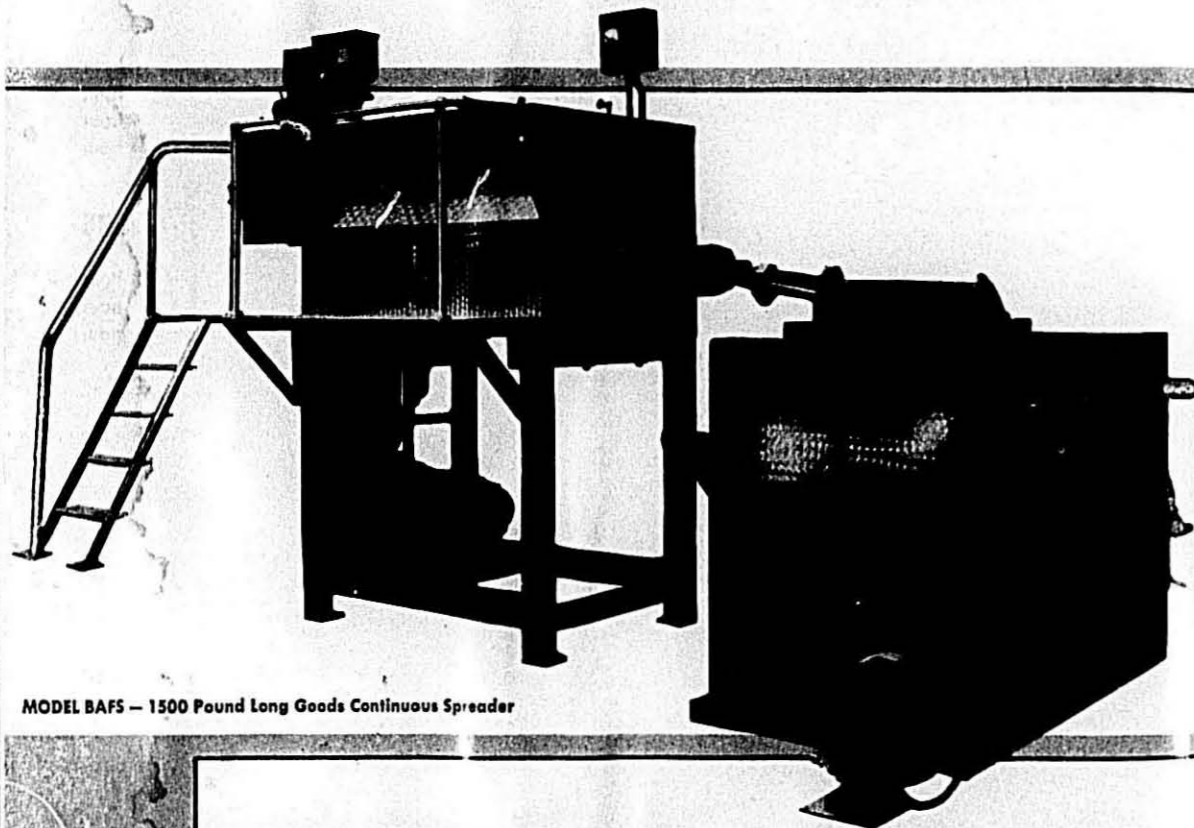
Serious Flaws	Range of Demerits
Checked	(0-20)
Split	(0-10)
Deformed	(0-10)
Color	
Gray or Brown	
(10 = Very Dark)	(0-10)
Yellow	
(5 = No Yellow)	(0-5)
Appearance	
Large bubbles	
(Poor Predrying)	(0-5)
Small bubbles	
(Poor Vacuum)	(0-5)
White Specks	(0-5)
Dark Specks	(0-5)
Rings	(0-5)
Streaks	(0-10)
Roughness	(0-10)
TOTAL DEMERITS	(0-100)

(Continued on page 24)

**ANOTHER
FIRST!**

NEW SANITARY CONTINUOUS EXTRUDERS

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



MODEL BAFS — 1500 Pound Long Goods Continuous Spreader

***NEW
**NEW
NEW**

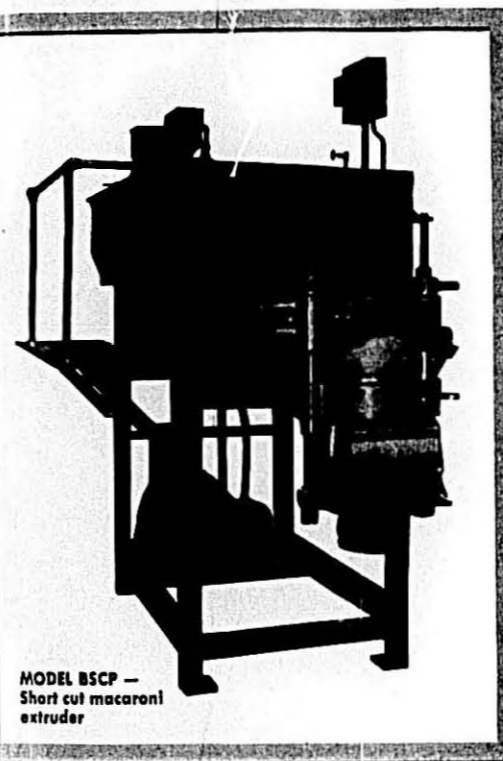
POSITIVE SCREW FORCE FEEDER improves quality and increases production of long goods, short goods and sheet forming continuous extruders.

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

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

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

*patent pending
**patented



MODEL BSCP — Short cut macaroni extruder

by *Ambrette*

SHORT CUT MACARONI EXTRUDERS

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

LONG MACARONI SPREADER EXTRUDERS

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

COMBINATION EXTRUDERS

Short Cut Sheet Former
Short Cut Spreader
Three Way Combination

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

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

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

SANITARY..... Easy to clean tubular steel frames give you the first truly sanitary extruder.

For information regarding these and other models, prices, material testing and other services, write or phone:

AMBRETTE MACHINERY CORPORATION
126-166 SIXTH STREET, BROOKLYN 15, N.Y. PHONE: Triangle 5-5226
SINCE 1909

Laboratory Testing—

(Continued from page 21)

A cooking test profile can be made by evaluating the following characteristics:

Time	Characteristic	Scale
Gray or Brown Color (5 = Very Dark)		(0- 5)
Yellow Color (5 = No Yellow)		(0- 5)
Surface Irregularity		(0- 5)
Splitting or Breaking		(0- 10)
Stickiness		(0- 10)
Slime		(0- 10)
Odor		(0- 10)
Taste		(0- 10)
Too Soft		(0- 10)
Too Firm		(0- 1)
Sticks to Teeth		(0- 10)
Doughiness or Lack of Elasticity		(0- 10)

TOTAL DEMERITS (0-100)

A sample number should be given to the test as well as recording the diameter or width of the product, wall

thickness, cooking time and how it was determined, appearance of cooking water as to cloudiness, odor and yellow color.

Other tests that might be found useful under certain circumstances, might include:

- (1) Protein.
- (2) Filth.
- (3) Egg Solids in Noodles.
- (4) Farinograph
- (5) Amylograph
- (6) Canning Tests.
- (7) Bacterial Content of Eggs or Flour.
- (8) Lipoxydase.
- (9) Diastatic Activity.
- (10) Water Absorption and Solids Loss.
- (11) Small Macaroni Press and Dryer.

Some of these tests are rather complicated and require a trained chemist. In many instances, it is more practical to have these tests done by an outside laboratory.

While a laboratory might seem costly to install, it is a long term investment, and will prove itself invaluable year after year.

Approximate Costs in Setting Up a Laboratory

Beam Scale	\$ 25
Analytical Balance	350
Brabender Moisture Tester	725
Air Oven	75
Brabender Moisture Tester	725
Muffle Furnace	150
Ro-tap Sifter	650
Refrigerator	275
Gas Stove	275
Hand Grinder	50
Desk	150
File Cabinet	50
Sink with Cabinets	150
Fluorescent Fixtures	100
Glassware and Utensils	250
Chemicals	50
Cabinets and Benches	400
Reference Books	50
Total	\$4000

Nebraskan on the March

The State of Nebraska Division of Resources made this recent citation of Lloyd E. Skinner, president of Skinner Macaroni Company, Omaha, who at 47 has already established a long record of civic and business leadership.

During 1961 his accomplishments included building a new 88,000 square foot plant in the Omaha industrial area, raising more than \$60,000 to help send lay missionaries to Latin America, serving as chairman of the Durum Wheat Committee for the National Macaroni Manufacturers Association and president of the Nebraska Chapter of the National Arthritis and Rheumatism Foundation. He is scheduled to head the 1962 Cancer Fund Drive in Omaha.

Mr. Skinner's biography in "Who's Who in the Midwest" shows he is a graduate of Creighton University and started his business career as a sales supervisor for a hosiery firm.

In 1938 he joined Skinner Manufacturing Company which was established by his uncle, Paul F. Skinner, and his father, Lloyd M. Skinner, in 1911. He became president in 1950. His firm distributes macaroni and breakfast cereals in 27 states.

A leader in the macaroni industry, Mr. Skinner has served as president of the National Macaroni Manufacturers Association and is still a director of that group. He was an early advocate of the enrichment of macaroni products and, through his work in the Association, even encouraged his competitors to enrich their product because he believed "it would bring about important



Lloyd E. Skinner, president of the Skinner Macaroni Company, was awarded the Blessed Philippine Duchesne Missionary Medallion at commencement exercises held at Duchesne Academy of the Sacred Heart, Omaha, Nebraska. Mr. Skinner was honored for his work in organizing a drive which raised \$65,000.00 for Catholic lay missionary work in Latin America. The award was made by Archbishop Gerald T. Bergan. The citation was read by Mother Dorothy Clark, president of Duchesne.

improvements in the health of the American people."

During World War II, Mr. Skinner joined the Army as a second lieutenant. Serving in five European theaters, he attained the rank of major. Upon his return to civilian life, he helped organize the Nebraska Small Business Men's Association and served as its president from 1949 through 1958. He actively supported passage of the Nebraska Right-To-Work Amendment.

Mr. Skinner has served as a director of the Omaha Chamber of Commerce; campaign chairman for the Douglas County Red Cross Drive; fund drive chairman for the Omaha Safety Council, and president of the Campfire Girls. He was named Outstanding Young Man of the Year by the Omaha Junior Chamber in 1949.

He now serves as director of the South Omaha Youth Center and is vice-president of the National Small Business Men's Association. Mr. Skinner is married and has four children.

Small Grocers

Smaller and medium-size grocery enterprises will continue to compete vigorously with their chain competitors in years to come. This is the conclusion of those who have studied a recent survey which shows that when 1961 grocery sales reached an all-time high of \$54.5 billion the biggest gainers were "medium and smaller chains and independents."

This group increased sales six per cent over 1960. The larger chains reported sales gains slightly lower than the total retail food industry.

Independent retailers belonging to voluntary and cooperative groups, the survey shows, have "increased their share of food store sales from 29 per cent in 1947 to 49 per cent in 1961, making this the single biggest bloc in the nation's food retailing structure."

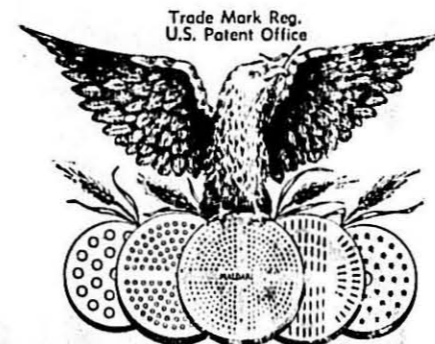
Grocery wholesalers did even better than the retail grocers.

—from Nation's Business

THE MACARONI JOURNAL

EXTRUSION DIES FOR THE FOOD INDUSTRY

Makers of



Macaroni Dies

D. MALDARI & SONS, INC.
557 THIRD AVE. BROOKLYN 15, N.Y., U.S.A.

America's Largest Macaroni Die Makers Since 1903 — With Management Continuously Retained in Same Family

Crop Prospects Good

Good news about crops during June continued by far to outweigh bad news. The moisture pattern which began in May extended through the month. A veteran crop reporting agent for the Northern Pacific Railway described the overall situation, saying that "the heavy vegetation makes one lush green carpet clear to the top of the hills. North Dakota and Montana look like the Emerald Isle."

The United States Department of Agriculture Weather and Crop Report in mid-June stated: "Crops continue to look very promising in all of North Dakota except the wet Red River Valley, but growth and development have been retarded by the cool, wet weather and are somewhat behind the usual for this date."

"The moisture situation is the best for the area since 1953. Both topsoil and subsoil moisture are adequate in all sections, while topsoil moisture ranges from plentiful to excessive."

"Small grains range mostly from the stalling to jointing stage and are somewhat behind a year ago. Durum development is retarded. Only eight per cent has reached the boot stage compared to 39 per cent last year. An estimated three per cent of intended acreage is not planted."

Seeding progressed very rapidly in the northern territory after the long delay from excess moisture conditions. Farmers Union Grain Terminal Association reported the reduction in seeded acreage not as great as had been anticipated, just a short time before more favorable conditions began to prevail.

43 Million Bushel Forecast

At June 1, Department of Agriculture Crop Report estimated durum production at 43,000,000 bushels, based on March 1 farmers' intentions to plant 2,400,000 acres, and using an estimated yield of 18 bushels per acre. Last years harvest was only 19,000,00 bushels, while the ten year average is 25,000,000. Estimated normal domestic requirements are between 28,000,000 and 30,000,000 bushels.

Prospects of a large crop and slow macaroni sales curbed activity in the cash durum market at Minneapolis. Receipts in the terminal market were very light and demand for the receipts just fair.

Jess Cook reported that there had been no export sales of United States durum for some time, even though at times there had been inquiries from importing countries. "These inquiries have been fulfilled at price considerably under our market by other countries that produce fairly large volumes

of durum wheat. It appears prices will have to work lower for the time being at least if we are to be competitive in the world market."

Domestic macaroni sales went swimmingly along through the first quarter in fine style but dropped like the bottom fell out with the end of Lent and a spell of hot weather around the country. There were some reports that retail business suffered because of quality complaints, and several users considered current levels attractive enough to increase durum usage. The Southwestern Miller reported the macaroni industry well covered for milled products, some into August, and users were more concerned about working off old contracts than giving any consideration to new buying. Shipping directions showed further cuts as plants prepared for vacation shutdowns.

Durum products output reported by the Northwestern Miller appeared as though it would be about five per cent below the previous year for the crop year ending June 30.

Argentines Spur Wheat Production

The Argentine Ministry of Agriculture in late May announced a sharp advance in guaranteed producer prices for wheat, as well as other grains, of the 1962-63 crop. The prices are 25 per cent higher on wheat to compensate growers for increased costs of production. The new rate will be 540 pesos per 100 kilos contrasted with this year's 430 pesos.

The price advance followed the action of the minister of agriculture in the preceding week in suspending further export wheat sales in the current season in order to conserve supplies for domestic requirements. This action was accompanied by a plea to growers to expand wheat acreage to a point where an export surplus of 129,000,000 bushels would be available from the 1962-63 crop, which would require a harvest of 257,000,000 bushels, contrasted with 189,200,000 this year.

Egg Rally Unlikely

Wholesale egg prices broke in June to a two-year low, and the trade saw little chance for any kind of a rally before fall.

"It's all a fault of the Government," complained one egg man. He said United States Department of Agriculture purchases of dried eggs, since resuming on March 23 were too small to have any influence on the market.

Eggs for months have been burdened with overproduction, glutted supplies, insufficient movements into storage,

and slowing down on the retail level. The average American ate 26.2 eggs in March this year compared with 31.1 in 1956.

Most dealers and the U.S.D.A. in its May "Poultry and Egg Situation" report expect prices to trail year-ago levels through the summer.

Some hope for Government buying to pick up prices before the fall elections. But the U.S.D.A. is more pessimistic: "With prospective egg supplies this fall probably not greatly different from last fall and with some further decline in the demand for eggs likely, fall egg prices are not expected to be higher than a year earlier."

Egg breakers ran at full blast through June, though receipts were declining and yields began to fall.

Current receipts in the Chicago market for shell eggs ranged 21 to 25 cents during the month. Frozen whole eggs were declining in a range of 23.5 to 22.25 cents. Frozen egg whites going counter to the trend after selling steadily for a couple of months at nine to 10 cents a pound, increased a quarter of a cent in June. Storage stocks are almost 5,000,000 pounds below 1961, and indications are there will be higher prices in the fall.

Frozen yolks of 45 per cent solids in No. 3 color traded in a range of 50 to 53 cents, while No. 4's were two to three cents higher. By the end of the month, color was becoming quite scarce.

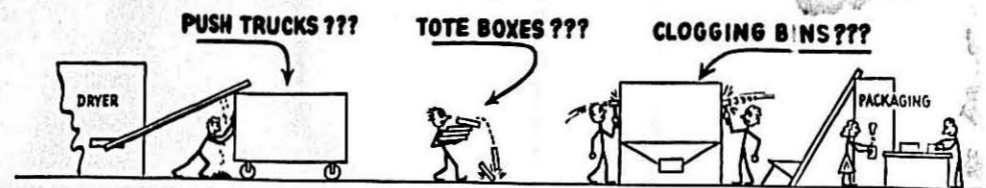
Dried yolk solids held steady in a range of \$1.09 to \$1.20 a pound, with frozen whole eggs at 98 cents to \$1.10.

Egg Processing Up in May

Production of liquid egg and liquid egg products (ingredients added) during May 1962 totaled 100,915,000 pounds, compared with 99,107,000 in May 1961 and the 1956-60 average of 96,953,000 pounds. The quantity used for immediate consumption was smaller than a year earlier. The quantities used for freezing and drying were larger.

Liquid egg used for immediate consumption totaled 5,497,000 pounds, compared with 7,458,000 pounds in May 1961. Liquid egg frozen totaled 64,408,000 pounds, one per cent above the production of 63,705,000 in May 1961 but 11 per cent below the 1956-60 average of 72,080,000 pounds. Frozen egg stocks increased 24 million pounds during May, compared with 28 million pounds during May 1961 and the average of 35 million pounds. Quantities of liquid egg used for drying were 31,012,000 pounds in May 1962 and 27,944,000 pounds in May 1961.

What's in the 'MIDDLE' in Your Plant-between dryer & packaging ??



Let Us ELIMINATE Labor, Handling & Breakage — INCREASE Your Floor Space

WITH ASEECO STOR-A-VEYORS

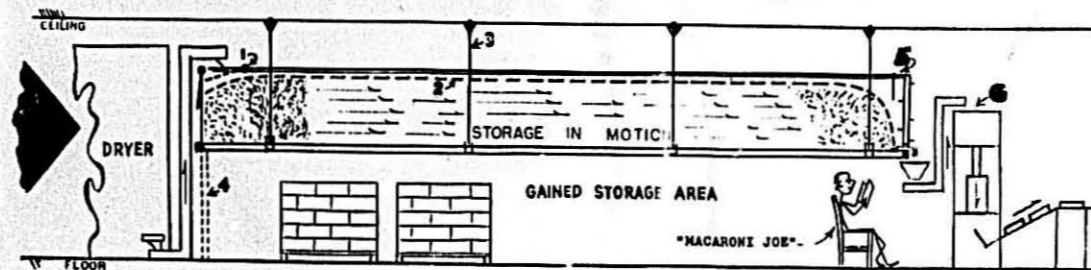


Suspend Your Storage in Space

Win the "Space Recovery" Race

SEE IN ACTION:

The ASEECO System for NOODLES



- 1- Mechanical Spreader
- 2- Fill Height Noodles

- 3- Ceiling Hanger
- 4- Leg (if Floor Mounted)

- 5- Pat. Draper Belt
- 6- Packaging Machine



1830 W. OLYMPIC BOULEVARD DU 9091
LOS ANGELES 6, CALIFORNIA

MANUFACTURERS' REPRESENTATIVE

Macaroni Equipment
PAVAN
Presses
Dryers
Dies

Packaging Machines
GARIBALDO RICCIARELLI
Carton Make Up
Carton Fill & Weigh
Carton Closing

How to Make Packaging News



C. W. Wolfe

Recently speaking at the American Management Association packaging seminar in Chicago, C. W. (Jack) Wolfe, president of Megs Company, makers of Pennsylvania Dutch Brand egg noodles and macaroni, told how visual packaging of noodle and macaroni products has revolutionized his industry and increased product sales.

Mr. Wolfe told almost 200 executives at the seminar that when his company broke with traditional packaging of egg noodles 31 years ago, it started a new industry trend.

At that time, Mr. Wolfe said, egg noodles were sold either in three and one-half to four-ounce cartons or in bulk, and most of the volume was in bulk. His company decided to pack its egg noodles in eight-ounce cellophane packages, breaking with both traditional package type and quantity at the same time.

Cello Packages Introduced

Because of cellophane, the consumer for the first time was able to see what the packaged product looked like before she purchased it. "Mouthwatering goodness tempts all of us and goodness that is seen is an advantage," Mr. Wolfe said, "So we made sure we purchased egg yolks and durum flour with the brightest yellow color."

Success with the eight-ounce package, which was twice the amount then being sold by competition in cartons, led Megs to a one-pound package and that too was successful.

This packaging and weight trend established by the company for egg noodles was adopted by about 80 per cent of the industry during the 1930's, Mr. Wolfe said. And as a result of visual packaging, "our entire industry was able to get the consumer to buy more at one time and spend more money for it."

Mr. Wolfe also told the seminar that news about a product, a package, or a brand can help a company gain a larger share of the market.

To buttress his argument, he told how his company brought these three points together dramatically by introducing a new product under a new brand name in a new package.

He said that his company, located in Harrisburg, Pennsylvania, had always "dreamed of having a Pennsylvania Dutch Brand for specialty items commonly made in Pennsylvania Dutch homes."

This dream was realized right after World War II when the company came out with Bott Bol (a thick, flat, square noodle) under the Pennsylvania Dutch Brand.

Bott Bol Noodles

To make the Bott Bol package look different from anything else then on the shelves, the design was based on authentic Pennsylvania Dutch folk art. It was largely white, colorfully decorated with barn signs and tulips, and the brand name was written out in traditional Pennsylvania Dutch style.

Bott Bol under the new brand name sold so well the company decided to package its egg noodles under the new brand. And this addition to the Pennsylvania Dutch Brand proved very successful too, Mr. Wolfe said.

The brand became so popular that it spread out from the original market in central Pennsylvania to all of Pennsylvania, New Jersey, New York, Maryland, the District of Columbia, Ohio and the states bordering them.

Eventually, because of its popularity, competitors' packages began to look very much like Pennsylvania Dutch packages, Mr. Wolfe said.

"Distelfink" Trademark

The company, therefore, decided to redesign the Pennsylvania Dutch Brand packages so they would again look distinctively different from those of competitors.

The new design was still based on the Pennsylvania Dutch folk art motif, but was simpler and more striking. The company also devised a unique and easily remembered trademark for the new package. The trademark was a simplified version of the two-headed distelfink, a bird design commonly found in Pennsylvania Dutch folk art decorations.

A packaging study also showed another design problem. Most manufac-

turers designed their packages vertically, but the packages were stacked horizontally on store shelves, making it difficult for the consumer to read brand names and other information.

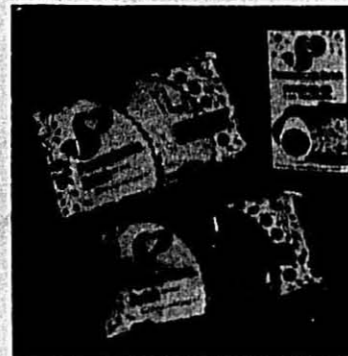
To solve this problem, the new Pennsylvania Dutch Brand packages were designed horizontally so that hurried store clerks as well as customers could easily find the brand. To make it even easier to find the packages, Mr. Wolfe said, the company put the product name, trademark and brand on all sides and butt end of every bag. "This way, essential data is conveyed regardless of how the packages are stacked. They could be upside down and still not lose their identity."

Design changes were also carried over into the cartons. The company found that cartons were sometimes stacked vertically, sometimes horizontally. To solve this problem, the new Pennsylvania Dutch Brand cartons had one vertical side and one horizontal side, permitting flexible stacking on shelves.

This new package design change proved highly effective, Mr. Wolfe told the seminar. "We found we had a news making factor in our design changes and when we have news, we believe in giving it headlines."

"As a result, advertising was used to introduce the new distelfink trademark to the consumer. Our new trademark is now on our shipping containers, as well as on bags and cartons. It is on all our business cards, letterheads and it is on the front of our plant."

"We don't subscribe to the old saw that no news is good news. No news is complacency," Mr. Wolfe said in conclusion, "and complacency has no place in business—if you want business."



Pennsylvania Dutch Brand new package designs.

PAVAN

Dott. Ingg. NICO & MARIO

MANUFACTURERS — ENGINEERS — DESIGNERS

MACARONI PROCESSING MACHINERY

Galliera Veneta — Padova — Italy

TELEFONO 99.155-99.176-99-149 TELEGRAMMI PAVAN - GALLIERA VENETA
C. C. I. A. PADOVA 50129 FF. SS. CITTADELLA

A REVOLUTIONARY DEVELOPMENT IN THE TECHNIQUE OF MACARONI PRODUCTION

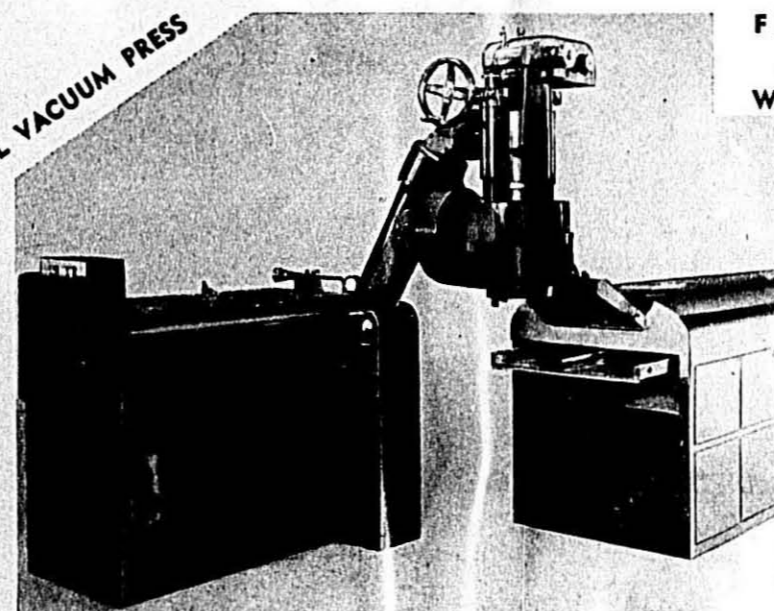
"THE LO BOY PRESS"

No Steps To Climb.

Accessible From The Floor.

Positively Controlled Vacuum Infeed of

A FULL VACUUM PRESS



FLOUR
And
WATER

LOW BOY PRESS PS-400

SHAKER DRYER TP-60

STANDARD MODELS

700 - 900 - 1600 Pounds Per Hour

Hi - Production Model

1800 - 1900 Pounds Per Hour

U.S. and Canadian Representatives PAVAN



1830 W. OLYMPIC BOULEVARD DU 5-9091
LOS ANGELES 6, CALIFORNIA

Printing and Paperboard—

(Continued from page 10)

biggest printing machinery house in the country is for the folding box industry in the form of offset equipment.

There are a great many other influences that have favored the lithographic process in the form of high speed feeding and high average production as well as many important short cuts that have been instrumental in speeding up production and decreasing costs.

The inks used in lithography by their nature and characteristics have a tremendous influence on the derivation of various tones of the primary colors. With these characteristics there are an immense number of colors that are possible.

Coated Board

Again, going back to the early '20's, the manufacture of boxboard for folding cartons was of an entirely different character than it is today. There were no elements in the quality of the boxboard that related to fine color reproduction and the consequent specifications so necessary. It was my experience that as early as 1925 we had to set up an entirely new set of specifications for the board mills and to attempt to educate them on the then strange requirements of offset lithography. It was a pretty tough job. It took a lot of doing and the process is still going on today. In those days there was a great deal of use of ground wood furnished in paperboard which not only was a short fiber material but turned yellow upon exposure to sunlight.

The mills were forced to take into consideration the surface strength of the fibers on which the ink was being lithographed. They were forced to go to virgin pulp, either domestic or imported of the character of bleached sulphite. A surface white liner of approximately four-thousandths in thickness covered a layer of unbleached pulp that in turn covered a layer of newsprint waste which finally resulted in what was called a cylinder sheet of white patent coated news. This type of boxboard has been currently used in the manufacture of macaroni and spaghetti cartons for many years until the advent of a new coating method very recently. This coating covers complete layers of waste papers which have been processed with cleaning agents and detergents and has brought the waste down to a degree of brightness that permits a fine clay coated application.

This new process has resulted in a remarkable improvement in the quality of coated newsback. It achieves higher degrees of brightness and im-

proved printability, luster of inks and more brilliant pictorials. The research that prompted the development of this sheet stemmed from the production of bleached sulphate or kraft. Ever since the bleaching of kraft was a commercial success in 1939, there has been a spectacular growth of competitive packaging material. At first, this bleached kraft was used in the fine paper field but with the combined development of the paper milk carton and the use of Fourdrinier machines for making light-weight boxboard, there developed a tremendous potential for this product.

In the years following the war this bleached sulphate kraft entered into the wet food field such as milk and ice cream; then it was butter, oleo, and then bakery packages. It also invaded the frozen food industry and absorbed much of its production. It was through the competition of this so-called Fourdrinier bleached kraft sheet that the present coated board we are using in macaroni cartons was developed. It has resulted in a very substantial economic advantage to macaroni manufacturers. This board has passed all the requirements of the Pure Food and Drug Administration for macaroni packaging, you will be glad to know.

I have in my possession various comparisons of our present coated boxboard with the bleached kraft sheet showing the high compression resistance and lesser bulge on the so-called cylinder made coated sheet that we are using as compared with the Fourdrinier bleached sulphate sheet presently being offered. If anyone would like to have copies of these bulletins, I will be very happy to send them.

The requirements of folding boxes with respect to proper top and bottom sealing and filling has changed considerably over the past 40 years. At the outset it was not an unusual thing to go into a macaroni factory to see girls inserting sticks and swords into folding boxes to open them and to apply an adhesive by hand on one end, fill the carton and then seal the other end. This type of packaging placed no important consideration or responsibility on the folding box as compared to the requirements of today.

Faster Filling

I have seen in my time the speeds of automatic filling machines run from 20 a minute to 150 a minute in both short goods and long goods and with a multiplicity of specifications necessary to properly and efficiently maintain the packaging line uninterrupted. The requirements of a good folding box today necessitate the complete pre-breaking of all of the four scores and

in a manner that will maintain the pre-breaking character almost on an indefinite basis. To look at a properly prepared folding box ready for the packaging machine would be almost to see it 25 per cent open prior to its application into the filling equipment. This important requirement is necessary because of the increased demands of speed and the facilities of the box to open instantaneously. It is of course understood that the box must be 100 per cent parallel with respect to its scores and other specifications. The scores must be properly prepared and made to offer the instantaneous fold and not a roll which sometimes results from the poor score.

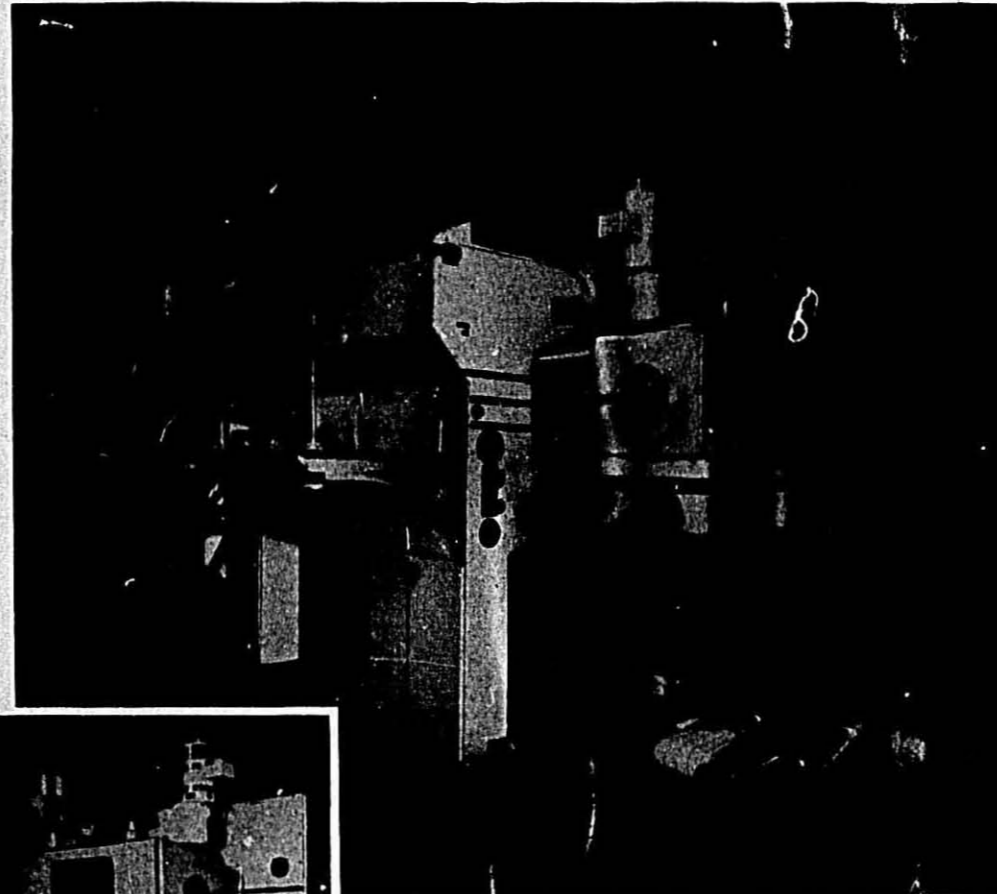
It is also of paramount importance that all folding boxes delivered to the manufacturer be housed in containers that do not subject the folding carton to unusual strains, stresses and bends which result in permanent curl and almost impossible means of filling. No amount of care can be too great to insure the arrival of a good folding box in the proper condition. In this regard there is also the anticipation of the customer's storage problems and in a great many cases, his desire to save space in stacking corrugated cases too high. We have had endless complaints in this regard and our company has taken a good hard look at the important item of expense of packing our folding boxes in corrugated containers of adequate strength and capacity. While I am on the subject of proper folding box specifications, I must say again that the inks used must also be of a character that will not scuff and accumulate on the belts or other points of contact in the filling machinery. This can be a source of great annoyance and result in many unprofitable hours of cleaning and removing inks that have been deposited over the machine.

I would like to also say that I became experienced in the early '20's to the problems of proper maintenance on the macaroni manufacturers' filling equipment. Never in my contacts in sales with the macaroni accounts in those days did I not carry with me an alemitte gun, shovel, screw driver and a number of other tools with which I had to function. I believe that not only with respect to the macaroni manufacturer but to all companies using machinery, a preventive maintenance program is absolutely essential, especially where there is the presence of adhesives which tend to fill up all holes and create unusual wear.

In conclusion, I would like to say that it has been one of the most interesting episodes in my life to have seen the progress that has taken place in the packaging of macaroni and spa-

(Continued on page 34)

CLERMONT'S TWIN HEAD PRESS PRODUCES 2,400 lbs. of **SHORTCUT** per hr.



CLERMONT VA P-4-A-TWIN SHORTCUT MACARONI PRESS

Twin Head for **TOP PRODUCTION**
with slow extrusion for **HIGH QUALITY**
Large mixer and screw for **UNIFORM PRODUCT**

PHONE or
WRITE
FOR ADDITIONAL
INFORMATION

Clermont
MACHINE CO., INC.

Tel: 212 EV.7-7510 280 Wallabout St., Brooklyn 6, N. Y.

West Virginia Addition

Plans to build an addition to the Covington mill of West Virginia Pulp and Paper Company to house an extrusion coating plant and finished roll storage for bleached paperboard have been announced.

The extrusion coater and auxiliary equipment will occupy about one-third of the 42,000 square feet of floor space and the balance will be used for storage of in-process orders. The plant is expected to start operations in six months.

Carl O. Skoggard, Covington mill manager, said the new coating plant will process both bleached paperboard made locally and kraft paper and other packaging grades made at other company locations. He said the extrusion coating equipment also would be used extensively for experimental work related to new product development.

The storage area is designed for a new system of warehousing which will enable the mill to expedite deliveries to customers.

The Covington mill is one of the nation's major producers of bleached paperboard, which is used in the manufacture of folding cartons of all types, sanitary food containers and paper cups. The mill operates six paper machines with a rated capacity of 390,000 tons of paper and paperboard per year.

Automatic Checkweighers

The Wall Street Journal reports electronic scales gain in use to insure right weights for packages. Last summer a subcommittee of the Senate Judiciary Committee started investigating charges of inaccurate filling or labeling of containers, drawing public attention to the problem. Now, to avoid complaints from government agencies and consumers about short weight, a growing number of packagers are installing checkweighers in their factory conveyor lines. Formerly, many of these firms just spot-checked packages at random on conventional scales.



The Queen Loves a Prince. Imogene Coca, queen of comedy and star of Prince Macaroni TV and radio commercials, pauses for the photographers at Prince Open House and Pasta Party during the Super Market Institute Convention in Chicago. With her are (left to right) Robert M. Green, Macaroni Journal editor; Anthony Cantella, head of Prince's Chicago division; Harry Meicke, Prince executive vice president; and Darrell Kinkead, Prince's Chicago sales manager.

A typical checkweigher, which is about the size of an office desk, can be adjusted to reject packages over or under desired weight. It picks up boxes, cans or glass containers coming from a filling machine and rapidly weighs them. It automatically shifts underweights to one side, overweights to another and sends "on-weight" packages to the shipping department. Checkweighers range in price from \$2,000 to \$15,000.

Pin-point accuracy in weighing each container can work two ways. While helping the customer, by eliminating underweight packages, checkweighers also aid manufacturers by ending "product giveaway" through overweight packages. "Many companies overfill to avoid underweight," says W. A. Schuerer, president of Exact Weight Scale Company of Columbus, Ohio. "This is a loss of product and profit which they cannot recover."

Frank Di Bari, macaroni division manager of Buitoni Foods Corporation in Hackensack, New Jersey, says a checkweigher installed on one of his filler lines last year is reducing product

giveaway by more than 450 pounds a day.

Prince Macaroni Manufacturing Company has installed a hi-speed checkweighing system in their Lowell, Massachusetts plant. The new installation operates at a speed of 80 to 115 packages per minute, depending on package size and weight.

Brite-Pak Carton Representative

John St. Paul, III, has joined West Virginia Pulp and Paper's new Brite-Pak Carton organization as sales representative for the marketing area of several midwestern states and Chicago.

Mr. St. Paul has 14 years of packaging sales experience and recently was division sales representative with Great Southern Wirebound Box Company. Previously, he was associated with a box manufacturing division of Continental Can Company.

In his new post with Brite-Pak Cartons, Mr. St. Paul will make his headquarters at 35 East Wacker Drive, Chicago.

West Virginia Pulp and Paper initiated marketing of folding cartons under the Brite-Pak name one year ago. The cartons, made from solid bleached paperboard, serve dairy, dry foods, prepared meats, frozen foods, pharmaceutical and other packaging markets.

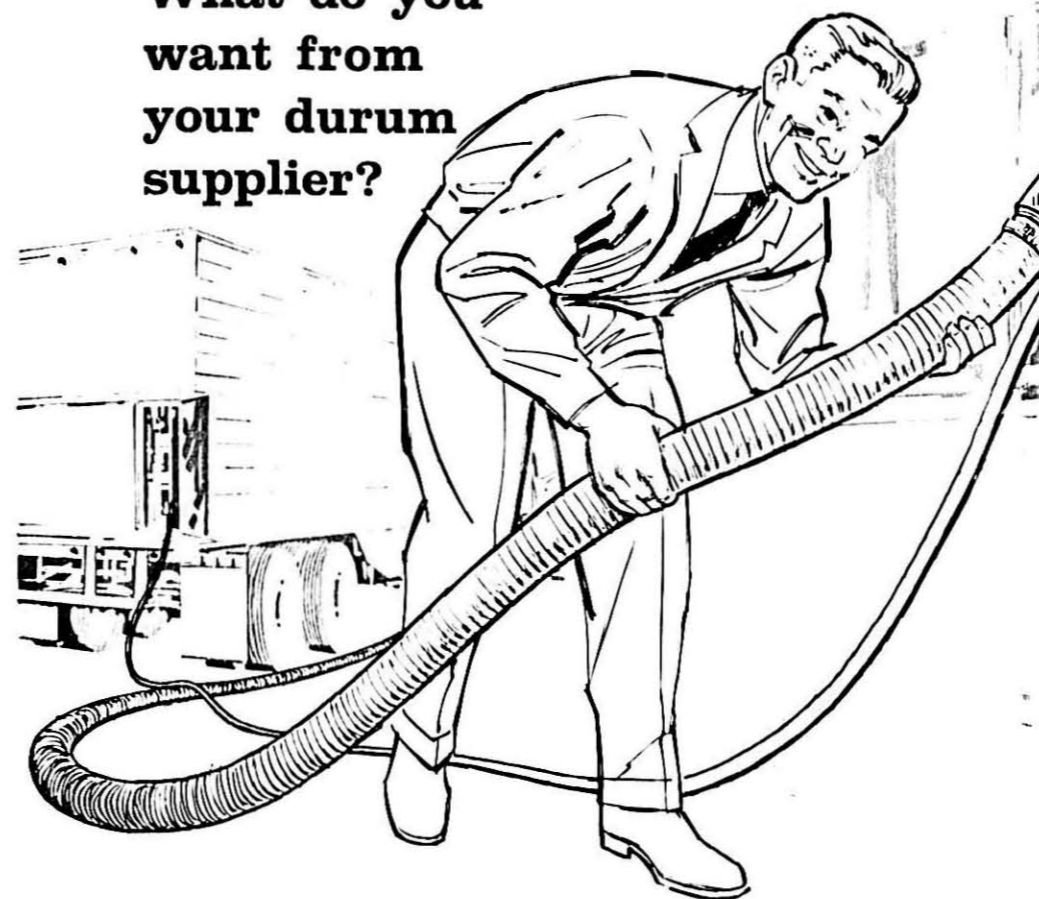
Test Marketing

Three barbecue products from Hesper Foods of Evansville, Indiana, are being test-marketed by Stokely-Van Camp. Pork and Beef Barbecue, pint jar size retails from 89 to 95 cents; Beanee Barbecue, one-pound can, sells for 39 cents; and Barba-q-Roni sells for 39 cents.



Packaging Panel at Hoskins Forum. Front row, left to right: Alfred Rossotti, Charles Hoskins, Don McGillon, George F. ... Back row: Oreste Teroni, Leonard DeFrancisco, Walter Maska, Gerard Ziffer.

What do you want from your durum supplier?



If it's **SERVICE**, you get it with a smile from International!



Saint Paul, Minnesota



Baldwinville, New York

International
MILLING COMPANY
DURUM DIVISION

GENERAL OFFICES: MINNEAPOLIS 2, MINNESOTA

Restaurants and Macaroni—

(Continued from page 13)

on cooking as long as it was in hot water. The larger the quantity the longer it took to cool and the greater the mass of mess. This is what I was taught and it works. This is teaching that should have been done when that cook put his first potful on the stove. Do you and I, all of us just assume that everybody, but everybody, knows how to handle this food product?

Quality and Convenience

The quality of the food I buy is important. The high quality of the finished product for sale on the menu is imperative for volume sales and lasting good reputation. The customer does not blame the cook for failures. He blames management. Unless management knows the answers he is quite likely to blame failures on the quality of the product as purchased.

There is much interest in the convenience foods. These are the many forms of foods that are prepared in whole or in part for time saving. There are many excellent products on the market, from those that require minimum of handling to those that are completely finished in portion packs for reheating only.

Many of us were carried away at just the thought of having some of the burden of costing, planning and portioning carried for us. Then many of us took a second look and now analyze the sales talk more carefully.

Our customers like ravioli. They very seldom get it on our menu. We have not found a good canned or frozen product for quantity service. We can make good ravioli but the cost in working time is very high—almost prohibitive. This product is most efficiently made by experts with the facilities for efficient quantity production. If someone offered me a really good freeze dry ravioli in bulk packaging I would be most interested. If it were realistically priced this item could and would sell on the labor-saving cost basis. The working time per order on this item is an appreciable cost, a cost that can be reduced only by experienced and skilled specialists.

I deliberately specified bulk packaging. Many of the really good pre-cooked convenience foods are portioned in individual portion packs. A very good lasagne is available in a nine-ounce portion pack. The manufacturer has size of portion inflexibly, which determines the selling cost of the meal. The size of a portion varies in our house depending on where and when it is served. The student cafeteria, the public cafeteria, the dining rooms,

at lunch, dinner offered a la carte or table d'hôte. As this item is portioned, packaged and sold the price is not too high, when it can be served in the dish in which it is cooked and packaged. But all volume users do not and cannot serve it as the manufacturer has predetermined it must be sold. In today's market and in the vast number of forms of restaurant service types, flexibility is important.

Some time someone is going to market a precooked convenience food in the standard sizes of steam table pans. I can hear the sales talk and I will listen. "Take it out of freezer, reheat it, serve it and throw away the pan." It's fun to think about and somebody is going to be smart enough to figure out how to do it profitably.

Habits Change

The eating habits of the buying public have changed. Everyone is diet conscious, weight watchers, health preservationists, old age preventionists, and the majority who are conversationalists. Customers do eat less. This may be because good nutrition education has taken effect or it may be because they simply cannot afford to eat as much as they did in the past.

It seems reasonable to think that macaroni has very close to some food values as has bread. But it is not uncommon to have someone refuse to eat spaghetti with meat sauce because it is too fattening and proceed to polish off a steak with a great big helping of garlic buttered French bread. They probably had nibbled through two or three bread sticks with butter with cocktails while waiting for dinner.

It all depends on the voice of the authority. This voice cannot be the restaurant owner. He doesn't count because he just wants to sell his product. He doesn't have a research laboratory. He cannot produce the testimonials of elite out of 10 doctors. World famous scientists do not confide in him.

Not long ago in a discussion of relative food values, I made the statement that the spaghetti we were eating was relatively low in sodium, in fat and in cholesterol. We had a worrier in the group. His immediate reaction was interest, "Where did you read that?" I mentioned a textbook on chemistry of food and cooking. He flattened me fast, "Oh, for heaven's sakes, it's 30 years since you came out of college. Things have changed since then."

Education has a tremendous influence on the buying public. Especially in the health and nutrition for agelessness field. It seems such a short time ago when we served very few orders of rice. Now we sell many more orders of it than we do of potatoes. Our recipe

file on menu items using rice is four times as thick as it was 10 years ago. Customers rarely ask to substitute it if it is offered on a plate.

Personal Views

If you remember I clearly stated that everything I had to say was my own personal viewpoint, from my own experience and observations. I know that nothing can be more irritating than to have a foreigner discuss a business about which they can know little. This is like the housewife on a committee telling me how to plan and handle a party for 300. I cannot argue with her. I have to be smooth and subtle in letting her think that I need her help.

At this point I withdraw all personal involvement. You do not have to be subtle in pointing out the fallacies in my thinking.

Restaurant Cost-Price Squeeze

Rising costs pinch restaurant profits; many raise their prices, reported Wall Street Journal recently. The National Restaurant Association says two-thirds of its members are operating at a loss. New local minimum wage laws are spurring a rash of restaurant price hikes in New York and Massachusetts.

Some restaurants press cost-cutting. At one midtown New York restaurant, only dinner customers now rate tablecloths; at other times paper mats are used. A Boston cafeteria operator boosts the price of a cup of coffee to 15 cents from 10 cents, explaining: "We can't afford to have someone take up a space at a table when our labor costs alone amount to 17 cents per customer."

Holiday Restaurants, a Denver chain, tries a different tack. Recently it added a second meat ball to its \$1.19 spaghetti dinner. "Spaghetti volume has since doubled," happily noted a Holiday official.

Printing and Paperboard—

(Continued from page 30)

ghetti in the past 40 years. We can indeed be proud of the mass illustrations of fine packaging in the supermarkets today which, with their tremendous appetite appeal and impulse buying qualities, create more sales. To you who have associations with sales, advertising and promotion, I say that this is a fulltime job as far as packaging is concerned. The very nature of our economy and the changes that take place from year to year in the jaded tastes of our American housewife makes it imperative to keep our packages modern.

THE MACARONI JOURNAL

SAVE WITH
MONARK



DRIED EGG SOLIDS

- **SAVE TIME**
Uniform high quality—
Easy to handle and use—
50 to 200 pound drums—
Order the size that's best for you.
- **SAVE MONEY**
No waste
No storage problem

Also for **PROMPT SHIPMENT**
FROZEN DARK YOLKS
or **WHOLE EGGS**

MONARK EGG CORP.
601 E. Third St. Kansas City 6, Mo.

For dependable
uniform quality

**DURUM
SEMOLINA
GRANULAR
FLOURS**




Call Ray Wentzel
CHapel 6-2101
New Richmond, Wis.

Doughboy

DOUGHBOY INDUSTRIES, INC.
Milling Division New Richmond, Wis.
Quality Since 1896

AUTOMATIC RAVIOLI MACHINE



PRODUCES
1,000 TO 3,000 RAVIOLIS PER MINUTE.
Ravioli Machinery Manufacturers

ALSO:
Western States Representative for macaroni factory suppliers and repairing specialists for dies and macaroni presses.

Bianchi's Machine Shop
221 Bay Street, San Francisco 11, Calif.
Telephone Douglas 2-2794

**JACOBS-WINSTON
LABORATORIES, Inc.**

EST. 1920

Consulting and Analytical Chemists, specializing in all matters involving the examination, production and labeling of Macaroni, Noodle and Egg Products.

- 1—Vitamins and Minerals Enrichment Assays.
- 2—Egg Solids and Color Score in Eggs, Yolks and Egg Noodles.
- 3—Semolina and Flour Analysis.
- 4—Rodent and Insect Infestation Investigations. Microscopic Analyses.
- 5—SANITARY PLANT INSPECTIONS AND WRITTEN REPORTS.

James J. Winston, Director
156 Chambers Street
New York 7, N.Y.

WAY BACK WHEN

40 Years Ago

• A Federal Committee of Agricultural Inquiry studying manufacturing costs and distribution of eight basic food commodities reported that profits on macaroni products in 1916 ran 12.32 per cent on dollar sales, but were entirely eliminated in 1920 which was a poor year. They bounced back in 1921 to 4.5 per cent.

• C. F. Keene of the American Macaroni Association stated an increase in demand must be brought about through consumer education based on the successful promotion of quality products. Campaign plans to sample 300,000 persons was outlined.

• Coal tar dye was outlawed by A. Goodman & Sons, Inc., in a campaign with suppliers. They also refused to use bleached flour.

• Italy dropped wartime curbs on exports, and macaroni imports to the United States increased. However, export business from the United States was good, so a balance was struck.

30 Years Ago

• The macaroni amendment to the Federal Pure Food Law to give the Secretary of Agriculture a right to establish a quality grade for macaroni products and to compel all sub-grades to be plainly labeled failed to pass Congress for lack of industry support.

• A lesson of hard times—women demand quality. They have learned that getting the most for their money doesn't mean quality at little cost, but quality at whatever quality must cost.

• The Association led the fight against the five cent package being used as a loss leader. Resolved, that the sale of an eight-ounce package of macaroni or a four-ounce package of noodles for five cents or less is an uneconomic trade practice, destructive to the welfare of the nation, contrary to the welfare of the consumer, and seriously harmful to both manufacturer and distributor, and should be discontinued.

Cowboys and Indians

Golden Grain of San Leandro is using as premiums western action figures of cowboys, Indians and scouts. One figure is packed to each and every package of Spaghetti Wheels and Rings, and is free with the purchase of the package. Television spots aimed through children's shows are being used in northern California.

• "We make our own prosperity," said Paul S. Willis, resident of the Grocery Manufacturers of America. "Run your own business. Do not contribute to the establishment of faulty trade practices simply because someone else is doing it."

20 Years Ago

• Caught in a price squeeze with a ceiling on prices of finished goods but no such ceiling on agricultural products used as raw materials, the Association sent a resolution of protest to Price Administrator Leon Henderson.

• The Quaker Oats Company won its case against the Federal Security Administration to market vitamin-enriched flour and farina even though these items were not specifically defined in standards of identity.

• The 1942 durum crop as of July 1 was predicted at 32,521,000 bushels, down 22 per cent from the year before.

• Cellophane window cartons were approved by the War Production Board following a fight by the Association and Rossotti Lithograph Corporation against their prohibition.

10 Years Ago

• There was great concern about the durum harvest because of weather which had ruined a bumper crop in 1951 and a new enemy, 15B rust, which was creating losses as high as 50 per cent in many fields.

• Convention in Montreal adopted resolutions asking the Food and Drug Administration to issue a statement of policy clarifying the limited interpretation some state officials had been giving to variety shapes of macaroni and egg noodle products. Clarification was also called for in the definitions of so-called "high protein" macaroni.

• The National Association joined the Shippers' Protective Committee to protest the \$1.50 surcharge on shipments under 5,000 pounds in the central states territory.

Western Globe Products of Los Angeles employ macaroni to sell macaroni with Play-Mac beads used as premiums for small-fry to make Indian ornamentations. Real live Indians are being used to sell the idea on television spots in Arizona.

Anything one man can imagine, other men can make real.—Jules Vern.

CLASSIFIED

ADVERTISING RATES

Display Advertising..... Rates, on Application
 West Ad..... 75 Cents per line

FOR SALE—Buhler Press, like new. Box 175, Macaroni Journal, Palatine, Ill.

FOR SALE—Ambrette Press with Spreader. Box 178, Macaroni Journal, Palatine, Ill.

FOR SALE—Used Senzani Spaghetti Cutter. Box 181, Macaroni Journal, Palatine, Ill.

INDEX TO ADVERTISERS

	Page
Amber Milling Division, G.T.A.	11
Ambrette Machinery Corporation	22-23
ADM - Commander Larabee Mills	18-19
Asseco Corporation	27
Bianchi's Machine Shop	35
Braibani Company, M. & G.	4-5
Buhler Corporation, The	38-39
Clermont Machine Company, Inc.	31
DeFrancisci Machine Corporation	14-15
Doughboy Industries, Inc.	35
General Mills, Inc.	Cover IV
Hoskins Company	37
Huge Company, Inc., The	37
International Milling Company	33
Jacobs-Winston Laboratories, Inc.	35
Macaroni Journal, The	37
Maldari & Sons, D.	25
Monark Egg Corporation	35
Pavan, N. & M.	29
Rossotti Lithograph Corporation	Cover II
Russell Miller - King Mides Mills	7
U.S. Printing and Lithograph	9

Elected

Robert M. Green, executive secretary of the National Macaroni Manufacturers Association, has been elected president of the Association Executives Forum of Chicago.

Italian Theme

Mr. and Mrs. Horace A. Giola, Giola Macaroni Company, recently sponsored "A Night in Capri" party at the Buffalo Athletic Club.

We Are Sorry

The name of G. R. F. Ill Barilla of Parma, Italy, should have been included in the list of members of the National Macaroni Manufacturers Association in the June issue.

Members of long standing, they are the largest manufacturers of macaroni in Italy.

THE MACARONI JOURNAL

JUST WHAT THE DOCTOR ORDERED:

Condensed coverage of the news on plants and people, production and promotion of macaroni, spaghetti and egg noodles for busy managers and representatives who want to keep up on what is going on.

Subscription is \$4 domestic, \$5 foreign for twelve monthly issues. Please allow four weeks time for changes of address.

Macaroni Journal, P.O. Box 336, Palatine, Ill., USA



BIRDS are a PROBLEM!



BIRDS are BAD

in food processing plants, warehouses, or anywhere food is involved:

The CURE

EXCELCIDE BIRD LIGHT



Permanently installed, Excelside quality engineered, revolving, "pulsating" sodium flame colored lights discourage nesting, chase birds out fast—and keeps 'em out!

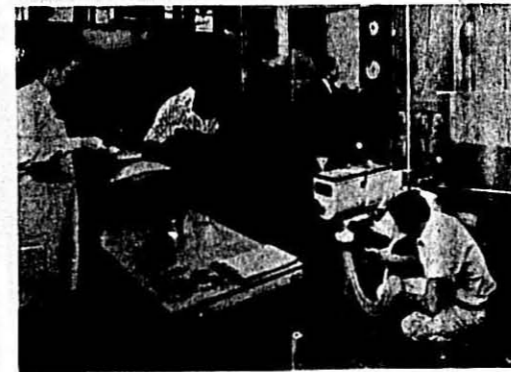
Large size covering area approximately 150'x150', \$85 each. Small size covering area approximately 100'x100', \$65 each.

ORDER TODAY

Other supplementary Excelside Bird Control tools such as chemical repellent and barriers. For further information write:

THE HUGE COMPANY, Inc.

884-886 HODIAMONT AVENUE, ST. LOUIS 12, MO.

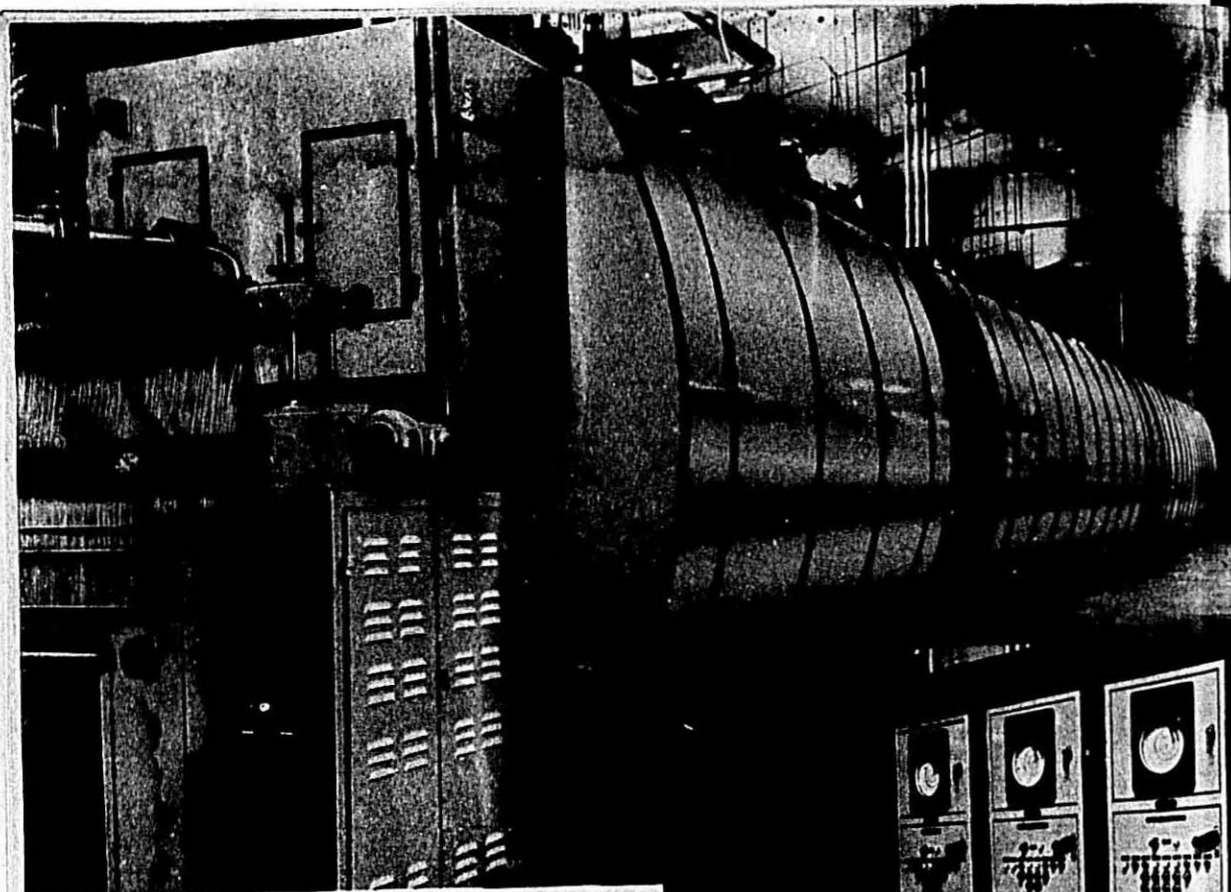


\$ RESEARCH MEANS PROFITS \$

Cash in on the trend towards CONVENIENCE FOODS by using the complete research facilities of the Hoskins-Food Technology, Inc. laboratory and pilot plant to develop new or better products.

HOSKINS COMPANY

Telephone: Empire 2-1031
 P.O. Box 112 Libertyville, Ill.



New BUHLER long goods dryer installed at the new Skinner Macaroni Company plant in Omaha, Nebraska.

New from **BUHLER** the industry's finest long goods **DRYER**

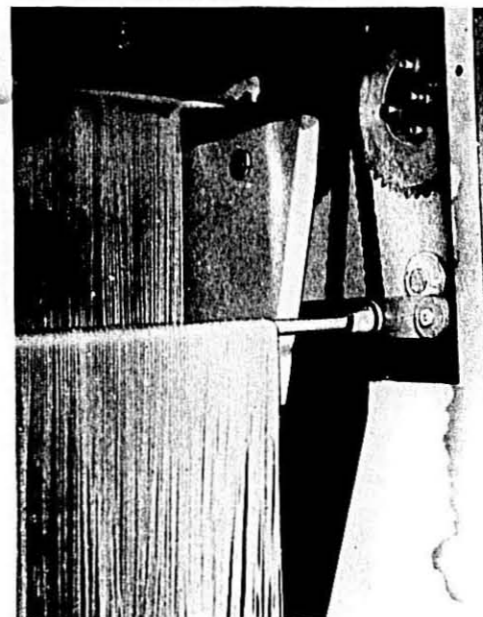
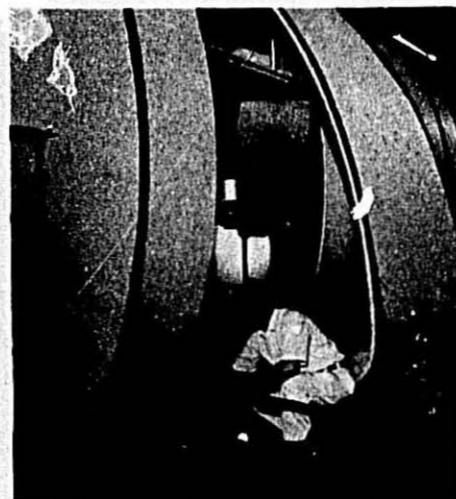
- Sanitary off-the-floor construction prevents condensation on the floor underneath and allows for easy cleaning.
- New positive-control stick elevator with special stick guides prevent rolling or slipping of long goods in transfer.
- Swing-out panels make inspection and cleaning easy.
- Centralized control panels contain unique climate control systems which allow the product to set its own drying temperature according to its water release capability, and also all electrical controls.
- Positive air circulation produces uniform controlled drying.
- New design paneling with special thick insulation stops heat and vapor.

Control center for dryer line at Skinner Macaroni Company.

Specially designed to produce long goods of finest **QUALITY**

Here is a long goods dryer that features the latest techniques and developments in the industry. Ultra modern and fully automatic, this new dryer was designed from the beginning with the quality of the long goods product in mind. Precise control of temperature, humidity, and air circulation insure the even and thorough drying necessary to producing uniform and sturdy long goods.

Custom-engineered. Buhler long goods dryers are custom-engineered to fit your floor space requirements and can be adapted to handle stick lengths from 54 to 80 inches with capacities up to 1500 pounds of long goods per hour. The entire long goods line need not be installed end-to-end. If floor space does not permit it is possible to arrange the various units side-by-side or on different floors.



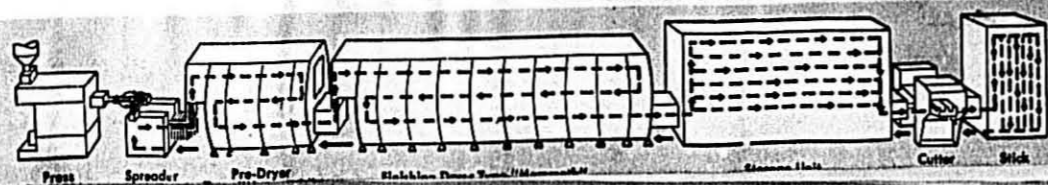
New positive-control stick elevator. This new stick elevator is an exclusive Buhler feature. The sticks are actually picked up by special stick guides which control them positively in transfer. Unlike conventional stick elevator chain devices, these guided sticks can't roll or slide from the chain at the transfer point to the drying tiers, thus practically eliminating mechanical breakdowns.

Swing-out panels for easy access. Individual panels on each of the dryer units swing out to provide quick and simple cleaning or inspection. It takes only seconds to get at the interior of the dryer. The panel swings out far enough to give sufficient room for cleaning and maintenance equipment.

Pre-dryer. Drying of the product begins immediately at the entrance to the pre-dryer to prevent stretching of the long goods on the drying sticks. The Buhler "Mammoth" pre-dryer handles up to 1500 pounds of long goods per hour and can reduce moisture by 10%. You can also improve your present drying

operation by installing a Buhler pre-dryer in your present production line.

Inquire now. If you are interested in producing the finest quality long goods while at the same time increasing the efficiency of your operation, call or write **BUHLER today.**



Complete
Macaroni Plants
by

BUHLER

THE BUHLER CORPORATION, 8925 Wayzata Blvd., Minneapolis 26, Minnesota. Phone: Liberty 3-1401
BUHLER BROTHERS (Canada) LTD., 111 Queen Street East, Toronto 1, Ontario. Phone: EMpire 2-2375
Sales Office, New York City, 230 Park Avenue. Phone: MUrray Hill 9-5446

BETTY CROCKER'S NOODLES ROMANOFF RECIPE FOR A VERSATILE DISH



Gourmet fare! Delightful blending of flavors. Use this recipe to promote your own brand of egg noodles.

- 1 pkg. (8 oz.) egg noodles
- 1½ cups cottage cheese
- 1 to 1½ cups commercial sour cream
- ½ cup finely chopped onion
- 1 clove garlic, minced
- 1 to 2 tsp. Worcestershire sauce (to taste)
- dash of Tabasco or red pepper
- ½ tsp. salt
- ½ cup grated sharp cheese

Heat oven to 325° (slow). Cook noodles as directed on pkg. Drain. Mix noodles lightly with cottage cheese, sour cream, onion, garlic, Worcestershire sauce, Tabasco and salt. Place in greased 2-qt. baking dish. Sprinkle with sharp cheese. Bake 40 minutes. 4 to 6 servings.

Just add meat or seafood—salmon, crabmeat or whatever you prefer—to make a complete main dish. Or serve "on the side"—with pot roast, for instance—to add a gourmet touch to the main course. At little cost.

As producers of Semolina and Durum flours, General Mills has a stake in the future of the macaroni industry. More consumer use of all macaroni products benefits us as well as the manufacturers of these products. Recipes tested in the Betty Crocker Kitchens have been made available for your use since 1928. For other Betty Crocker macaroni and noodle recipes, ask your Durum Sales representative. Or write:

DURUM SALES

MINNEAPOLIS 26, MINNESOTA

