

StaleyNews

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Decatur, Illinois/September, 1978

Staley employees asked to respond to United Way fund drives starting soon

"Thanks to you, it works for all of us," is the national theme for the United Way community fund drives, which get under way in Staley communities in late September and early October.

Although the Decatur campaign does not officially begin until the first week of October, plans for the Staley drive have been completed.

No dollar goal has been set for the fund-raising efforts which instead will seek increased participation from employees. "If we all pull together, we can get things done," said Art Schoepfer, production manager, syrup/dextrose, company chairman. "We choose to concentrate on raising the number of 'fair-share' givers and attracting new contributors."

Efforts a year ago at Staley/Decatur brought in \$101,299, including the corporate gift. During that campaign, 1,654 employees participated with 754 of them giving fair shares.

"We approach this campaign as a company," said Schoepfer. "The results last year were very good. For that reason we decided to continue our goal of increased participation." He continued, "Toward this end, we have an additional labor representative among our co-chairmen plus we plan to increase the number of solicitors throughout the plant to assure more personal contact to 'get the story across' to each individual."

Named as co-chairmen of the campaign are Bob Hull, rigger leadman, and Cecil Barker, cleaner, 101 building, representing Local 337, Allied Industrial Workers, and Bill Anderson, director, purchasing division. Hull will head up solicitors for the plant employees in industrial manufacturing while Barker will concentrate his efforts with solicitors among the agriproduct's plant employees. Anderson will oversee solicitations made in 62 and 63 buildings.

Staley lands spot in top 100 products of the year

"Starpol" 100, Staley's new corn-derived polymerizable starch, has been named one of the top 100 most significant new technical products of the year by "Industrial Research/Development" magazine. This is the first time that a Staley product has been singled out for the honor in the 16 years of the magazine's recognition program.

Exhibits of the winning products will be shown beginning on September 21 and running through October 15 at the Chicago Museum of Science and Industry. Staley's display will feature potential markets seen for Starpol. These include special coating and film applications for various paper products, metals, wood and miscellaneous packaging materials; thickeners for paints and cosmetics, and adhesives for furniture, plywood and paper or paper board type products like boxes and cartons.

For more information about this highly versatile product, read the story entitled "Building blocks made from a renewable resource" found on pages one and three of this issue of the "Staley News".

Bill Strohl, president of Local 837, Allied Industrial Workers, has reaffirmed the union's support of the United Way campaign:

"All union members can be proud of the continuing support they have given the United Way. We recognize that our efforts help build better communities for us and our families."

Hull, a veteran of many Staley United Way drives, said, "People would really be surprised at all of the services available to them through the United Way agencies. In fact, 69 out of every 100 people in this area will be touched in some manner by a United Way function or service this year."

Looking at some of the 18 local organizations and agencies that share in the funds generated by the annual campaign, Hull said, "The American Red Cross helps keep blood available to save lives. The Association for Retarded Citizens and the Cerebral Palsy Association work with one of the most tragic problems we have. Serving our youth exclusively are the Boys Club of Decatur, boy and girl scouts and 4-H clubs."

Taking over the conversation on agencies, Schoepfer continued, "Both Catholic Charities and Family Service finance counseling services. The Visiting Nurse Association uses much of its funds to help

(Continued on Page 2)

More entertainment for 1978 Staley Day

Voluptuous Honey Bears will add their own special pizzazz to pre-game entertainment at Staley Day, October 21.

That's just the beginning of what \$5 can buy. The package for that price includes spirited entertainment, toe-tapping or foot-stomping live music, plenty of fried chicken, trimmings and good cheer plus a football game thrown in for good measure.

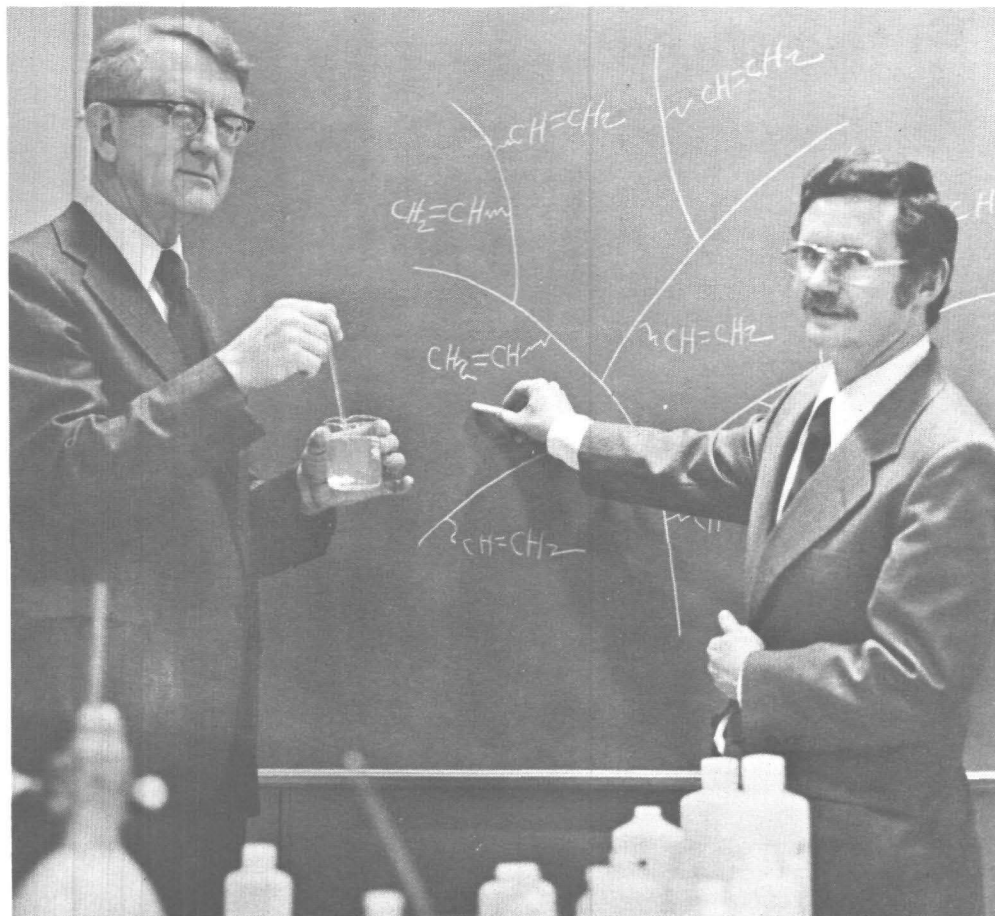
Going along with the adage, "the more the merrier", employees from five locations are being included in the event. Besides the local crowd, families will be going to Champaign from Oak Brook, Decatur, Lafayette and Frankfort.

Preparing for the clash between the Fighting Illini and the Purdue Boilermakers, festivities will get under way at 9:00 a.m. at the Round Barn restaurant, 1905 West Springfield, Champaign.

Bus transportation will be provided for those traveling from Oak Brook, Lafayette and Frankfort. Persons driving to Champaign from Decatur on Route 72 should take the Champaign exit. At the first stoplight, make a right hand turn and drive south approximately two blocks to the Round Barn. Cars may be left in the restaurant's parking lot during the game.

Transportation from the Round Barn to and from the game will be provided by buses, which may be caught well before game time to avoid the rush. Buses to the stadium will run every 15 minutes beginning at 11:00 a.m. and continuing until 1:00 p.m.

(Continued on Page 2)



Scientists at work -- At the chalkboard, Dr. Harry Young, research associate, right, points to the award winning "Starpol" 100 molecule, which has polymerizable groups on its backbone. Demonstrating a possible application, Dr. Frank Verbanac, senior scientist, stirs starch encapsulated pigment, which is envisioned as a means for controlling the release of fertilizers and pesticides.

Search for the future called "new opportunities" research

Most industrial research and development is geared for results today. At Staley this involves customer service, manufacturing service, applications and new product development which all pay dividends in the near term.

A small but important portion of the program is directed toward identifying major future profit opportunities. Its objective is to find new outlets for our raw materials, products, and processes. Staley's program is practical, achievable and within our capabilities.

Research for the future requires a meshing of technology, business climate, economics and need. The timing must be right.

An example of timing is a starch-based component, methyl glucoside, for foamed insulation, on which research began as far back as the late 1930s.

From the back burner onto the fire again

In the early days, most of the processes for methyl glucoside started with dextrose, a relatively expensive raw material. But Staley saw a different way, and in 1940 received an early patent for a process which makes it directly from starch. A more recent process improved the economics but conditions in the marketplace were not right.

Recently, the market for foam insulations has been booming with the push for better insulated structures and appliances that conserve energy. Last year, the market for rigid polyurethane foams amounted to 400 million pounds, and is growing about 15 percent a year. If growth continues at this rate, the market will double in five or six years.

In view of the present market potential, Staley re-examined this project and returned

it to the front burner. The commercial aspects of the material were studied by William A. Bomball, research chemist, William M. Kimberly, senior development engineer, and Paul D. Doolen, research technician. Customer evaluations on laboratory samples have shown that the product meets their requirements.

Methyl glucoside has valuable process and performance advantages over its cheapest competitor, sucrose, and other more expensive initiators. It could comprise 15 percent to 30 percent of the foam, the remainder being petrochemicals. Excellent insulating properties combined with light weight and strength make rigid foams ideal for use in refrigerators, tank cars and trucks. Commercial buildings and homes can also be insulated with these foams with reduced material and labor costs while taking advantage of the best insulation properties available. The European building industry is already successfully using foamed insulation in pre-modular home construction.

The time is ripe for a Staley renewable resource, starch, to step into the energy gap and play an important role in the exploding market for insulation.

Showcasing the new opportunities approach to research is a new product that is being tested by the R-and-D staffs of 60 companies as a possibility for adhesives, coatings, thickeners and self-supporting films. It's an award winner already.

Building blocks made from renewable resource

Clean up an oil spill? Make highly absorbent diapers? Produce a water-insensitive starch adhesive? Revolutionize fire-fighting techniques with starch? Perhaps. And that's just the beginning of a long list of possibilities for Staley's new corn-derived polymerizable or chain extending starch called "Starpol" 100.

Starpol is an outgrowth of Staley efforts to find new ways in which starch, a renewable resource, can be used. Versatility was what Staley researchers were looking for and that's just what the product has, bridging the gap between natural and petroleum-based chemical products.

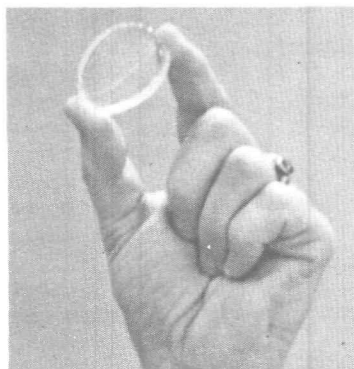
"We wanted a product that would take us into new areas. We were looking for one that would be salable in today's markets but not competitive with our present line of

(Continued on Page 3)

In the News...



Plan/P2



Research/P3

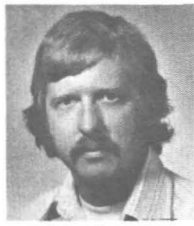


Learn/P4

On the move...



George Baldwin



Dave Castor



Charles Cox



Frank Smith

INDUSTRIAL

GEORGE BALDWIN, from shift foreman, packing and loading, dry starch, to assistant foreman, Satellite III, syrup refinery and dextrose

KATHY BROWN, from chemical price and file clerk, administration, to senior inventory reconciliation clerk, administration

DAVID CASTOR, from relief night superintendent, to assistant foreman, Satellite V, dry starch

CHARLES COX, from production department relief foreman, to technical supervisor, sweeteners

EUGENE GEORGE, from draftsman, Morrisville, to engineering assistant, Morrisville

PAUL JELKS, from assistant foreman, machine shop, to night maintenance supervisor, manufacturing

FRANK SMITH, from product manager/starches, to product manager/starches, chemical specialties

DON WALLER, from production department relief foreman, to shift foreman, Inositol

CORPORATE

LUAN HINDS, from data input trainee, to data input operator, corporate information systems

DON LATSHAW, from draftsman, corporate engineering, to surveyor, corporate engineering

CONSUMER

BEVERLY LUND, from secretary, engineering/packaging and research, to executive secretary, consumer

AGRIPRODUCTS

DALE MARKS, from operating supervisor, to operating general foreman, Des Moines

Joining the leisure life . . .



Elsie Haskell



Claro Carter



Ernest Boen



Joe Grossman

EFFECTIVE JULY 31, 1978

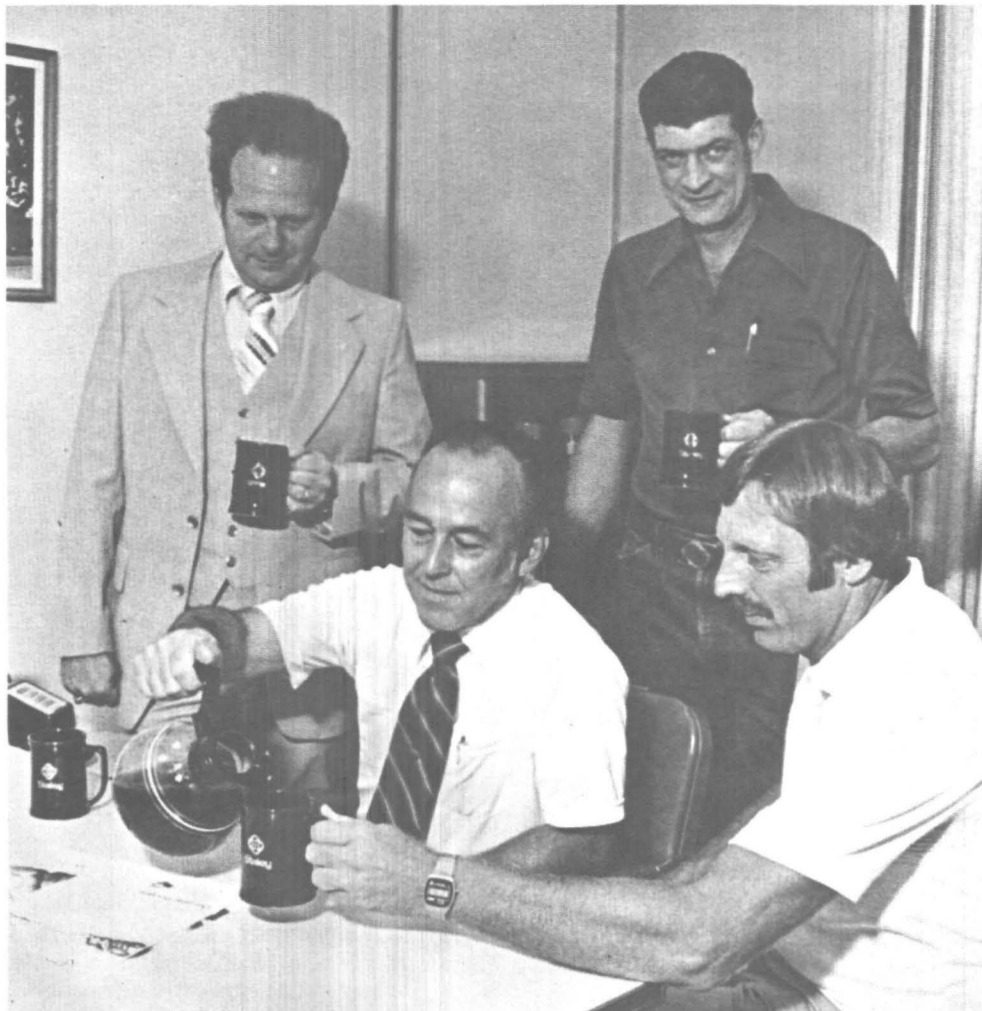
ELSIE HASKELL, administrative clerk, Monte Vista
CLARO CARTER, senior mechanic, riggers

EFFECTIVE AUGUST 1, 1978

ERNEST BOEN, laborer, Champaign plant

EFFECTIVE AUGUST 31, 1978

JOE GROSSMAN, senior buyer/construction equipment/maintenance, purchasing



During a recent planning session for the Staley/Decatur United Way Drive, co-chairmen try out the new fair-share gifts—blue mugs trimmed with a gold Staley logo. Seated, from the left, are Art Schoepfer, production manager, syrup/dextrose, company chairman, pouring coffee for Bob Hull, rigger leadman. Looking on are Bill Anderson, director, purchasing division, at left, and Cecil Barker, cleaner, 101 building.

United Way drives

(Continued from Page 1)

pay for "mobile meals" and the "home health aide" programs. And funds of the Decatur Day Care Center defray the cost of looking after more than 100 children every day."

That's just naming a few of the agencies that have a great influence on the quality of life in this community," Schoepfer said. "Try to imagine a community without a Bloodmobile, scout organizations, or any of the other services that your one gift makes possible."

Strohl emphasized that "the AIW has long been a leader in supporting the United Way concept. It recognized early the value of one campaign aimed at the overall needs of a community. . .one campaign which would guarantee that each dollar was raised in the most economical fashion and spent in the most needed way.

"That's why I'm confident that AIW members will once again respond with enthusiasm to this year's United Way campaign," the union president said.

Each fair-share giver at Decatur and participating locations will receive two matching blue mugs trimmed in gold with the Staley logo. By giving a fair share again next year, that employee will receive another two mugs, making a set of four. Specially made for the occasion, these 10-ounce mugs have a retail value of \$7 each but cannot be purchased in retail stores. In addition, each employee who gives to the campaign in Decatur will be eligible for the drawings for gift certificates to the Blue Mill restaurant.

Schoepfer emphasized that gifts made at Staley/Decatur can be transferred to recognized United Way agencies elsewhere for the convenience of employees living outside of Macon County. This request should be made at the time of the solicitation.

At Decatur, the minimum fair share gift continues to be four-tenths of one percent of the annual base pay, qualifying any employee to receive the mugs. Contributions may be made through payroll deductions or by cash.

Plans for the campaigns in other locations are being made. At Morrisville, Bill Brewer, personnel assistant, and Charlie Mohn, chairman of the union bargaining committee, will head up the drive.

Champaign's effort is chaired by Ralph Sentency, senior merchandiser. In the community campaign, Hank Parker, plant manager, again will be a solicitor for the industrial division.

Co-chairmen for the campaign at the Des Moines plant will be Bill Camp,

merchandiser, who will handle office-salaried solicitations, and Tom Mason, chief steward, in charge of hourly participation.

In the Chicago area, the fund drive is called the Crusade of Mercy, which also gets rolling in October. At Vico, Myrna Alvarado, office manager, will be chairman of the fund-raising program. Cicero, Broadview and Oak Brook employees also get involved in the crusade, but their plans have not been formulated.

The United Way efforts at Lafayette and Frankfort are still in the organizational stages. Mike Kerber, Frankfort plant manager, is president of the Frankfort United Way this year and was drive chairman in that community a year ago.

Harold Says, office manager, is chairman of the employee drive at Gunther Products, Galesburg. He will be assisted by Roger Bjork, production manager.

The Fostoria plant fund-raising effort this year is being directed by Bill Allen, lab supervisor.

Whether it's called a United Way campaign, United Fund, Community Chest or Crusade of Mercy drive, its goal is the same—people pulling together to help one another.

Decatur retirees to hold annual meeting Oct. 27

Planning is under way for the Staley Retirees Association's Third annual meeting, which will be held on October 27 in the Masonic Temple. Doors will open at 5:15 p.m. with serving to begin at 6 p.m.

Ira Cox is chairman of the dinner arrangements and is assisted by "Skeeter" Moore. Entertainment for the evening is being planned by Roy Hornback. The incoming president, Claude Cox, will be master of ceremonies.

A slate of officers will be presented at the meeting by the nominating committee headed by Norman Lents. His committee included Moore and Hornback.

Some 881 invitations have been sent to retirees and surviving spouses. Those planning to attend should make reservations with Pauline Cable, secretary-treasurer of the organization, by October 15. Trudie Hebert, a member of the executive committee, is assisting with correspondence.

Retirees with questions about the meeting should contact either Earl Beals, president of the association, 429-7199 or Lents, a member of the executive committee, 877-5836.

Staley Day activities

(Continued from Page 1)

Setting the pace for the rousing pre-game celebrations are four of the Chicago Bears' own cheering squad known as the Honey Bears, who will lead the group in a couple of cheers. They'll also be on hand to autograph Honey Bears' posters, to be sold for \$3 each, and to pose for photographs with any of the party-goers. Taken by a professional photographer, these four-by-five inch, colored polaroid shots will be priced at \$3.00 each.

Proceeds from the sale of posters and photographs go to the George Halas Scholarship Fund. Earnings from this fund will be used annually to provide several U of I scholarships.

Specially invited guests include Governor Jim Thompson and sports dignitaries, some of whom were members of the U of I's first Rose Bowl Team of 1946.

Adding a touch of class to the occasion, the special guests will be chauffeured in two Rolls Royces loaned for the occasion by Exotic Motors of Decatur.

Three bands have been hired to provide their own special music as background for the fanfare.

"Fierce Country", a popular Decatur and down-state Illinois group, is made up of Staley employees. They again will take up their posts in the Convention Center. Members of this group include Larry Landwehr, systems maintenance analyst, corporate information systems, rhythm guitarist and lead vocalist; Sam Jackson, assistant buyer, purchasing, rhythm guitarist, harmonica player and vocalist; Jim Guthrie, systems software analyst, corporate information systems, bass player and vocalist; Charlie Knorr, senior draftsman, corporate engineering, steel guitarist, lead guitarist, yodler and vocalist; and Jordan Smith, foreman, riggers, sheetmetal and brickmasons, drummer and vocalist. This group has expanded its former country-western format to include modern country, country classics, and standard pop tunes that date back to the 1920's.

Another well-known Decatur twosome—C. B. Kelton and his wife, Terri—will entertain in the upstairs dining room. C. B., who has recorded in Nashville, plays a combination electric organ and electric piano with background tapes with his wife accompanying him on the flute. Their style is anything from country western to modern music.

Rounding out the musical entertainment in the tent will be the U of I's Medicare Dixieland Band who played at Staley Day a year ago.

Food and beverages will be served in all three spots where the live bands are playing.

Extra attractions, to be announced that day, are in the making. In fact, extensive media coverage is expected for the events.

If you plan to attend this popular outing, be sure to purchase tickets when they go on sale in early October. Only 2,000 tickets have been earmarked for Staley employees, 300 more than a year ago.

Partners for profit

For the first time in several years, two Staley food brands are being linked together in a special promotion. A 15-cents-off coupon for "Staley 100% Natural Syrup" will be featured on "Wagner Breakfast Orange Drink" beginning in September and running until supplies are exhausted.

The repositioning of Wagner as a breakfast drink lends itself to a tie-in with syrup, another breakfast product, according to John Reynolds, assistant product manager. "It's a good vehicle to get a breakfast coupon to someone sitting at the breakfast table when a person is likely to use the product."

Wagner and Staley 100% Natural Syrup both connote high quality, resulting in a back-home goodness position of the two products—another linkable vantage point.

While this partnership is a way to get consumers to try Staley syrup, it is also a means by which Staley brokers can encourage grocers to display these products side-by-side since they are both breakfast items.



Dr. Frank Verbanac holds lens-like material prepared in seconds by passing ultraviolet light over the "Starpol" 100 solution.

Building blocks versatile (Continued from Page 1)

starches. We felt it should be reactive rather than play the traditional functional role of starch in its end use," said Dr. Thomas F. Protzman, director, engineering research.

Several years ago, Dr. Frank Verbanac, senior scientist, began studying a number of new starch derivatives. During his study, Dr. Verbanac came up with a new type of starch possessing far different properties than previously available. He and Dr. A. Harry Young, research associate, determined that the new starch was copolymerizable and photocurable with other systems like petrochemical monomers—a first for starches. (Monomers are molecules that can be chemically joined as units of a polymer from which plastics are created.)

They described these starches in a presentation before the American Chemical Society in 1976. This paper has since been incorporated in a book, *Chemistry and Properties of Crosslinked Polymers*, by Academic Press. The company has received three patents on Starpol, one of which was granted this month.

"Starpol's potential importance rests with the fact that these starches combine the properties of natural products and synthetic monomers," said Dr. Verbanac. "Now starch can replace all or a significant portion of synthetic petro-based materials with a renewable natural polymer that can improve properties and lower cost.

"This starch is cured or changed to an insoluble polymer by adding an initiator to the Starpol/petrochemical system that is activated thermally or by absorption of ultraviolet light. The starch can be converted to a flexible composite by internal plasticization with synthetic monomers," Verbanac said.

The chemistry provides opportunity for a wide-variety of products, tailored to specific non-food end uses, giving Starpol its place in adhesives, coatings, thickeners and self-supporting films.

According to Dr. Young, "Starpol functions well in applications which require low viscosity, high solids and excellent adhesive characteristics of starch and dextrans. Preliminary applications studies indicate the starch-containing coatings have good flexibility and offer potential for water-resistant coatings for paper, textiles, aluminum, and as an ultraviolet curable adhesive for paper and nonwoven fabrics."

Sensitivity changeable

Traditionally, starches are used as thickeners, adhesives and coatings, which, in most cases, are water sensitive. Although water soluble, Starpol is as changeable as a chameleon's colors in that its water sensitivity can be controlled from highly absorbent to completely water resistant.

Super absorbency

Some Starpol compositions have super high water absorption and can be cured in place on fibers or fabrics. After curing, the molecules of this coating absorb water and hold it in a gel-type mass until it evaporates. Fibers of this nature could be woven into

stay-dry T-shirts or at high absorbent levels would make excellent heavy-duty diapers.

"When converted to a very absorbent product, Starpol promises a host of practical applications not only in the soft-goods market but also in agriculture," says Robert A. Mooth, applications chemist. "There appears to be almost no limit to the number of roles for a highly absorbent starch in soaking up things including moisture-loving mulches for the garden. Seeds could be coated with highly absorbent starches to facilitate germination, and soil in irrigated fields could be dusted with this type of biodegradable product to retain moisture, especially helpful on arid land," Mooth said.

Coating uses

With shortages and higher costs of petrochemical-based raw materials, there is an increasing opportunity to develop raw materials for water-borne coatings and adhesives from natural-based materials such as starch. "High solids coatings containing 50 percent starch and possessing low viscosity can be formulated with petrochemical monomers," said Dr. Young. He continued, "The high solids systems require less energy to evaporate the excess water. Increasing solids from 20 to 60 percent decreases six-fold the amount of water per pound of solids that must be removed.

"The use of ultraviolet light to cure Starpol coatings is of great interest to the paper industry as it controls starch penetration and reduces energy requirements. One coating formula converts to a tough, water-clear, flexible film after only one pass under a UV light. (See the picture.) Ultraviolet light can also be used by the printer to harden a clear Starpol varnish and give the printed page a glossy appearance."

Binders

Starpol is a promising binder for such things as textiles and ceramics. As a binder for nonwoven fabrics, it can be cured with UV light to give interesting patterns. Or it can be whipped like cream and used as a binder for light-weight ceramics.

Other uses

Starpol could find its way into laminating adhesives, wood adhesives, foundry binders, abrasive papers and ceiling tiles and as a thickener for paints. Graphically it might be used in ultraviolet cure inks and varnishes, lithographic plates and silk screen stencils. The list could mention encapsulation for time-released fertilizers, foams, filters, filler for rubber and plastics, fire-fighting foams, glass fiber size and sealants.

Not a blue-sky concept but probably several years ahead of its time, Starpol is being evaluated by 60 companies ranging from paper, coatings, chemical, petroleum drilling, and graphics to building materials. Many of these companies like its potential. Some of them have requested Staley to develop Starpol into finished products, while others prefer to convert this starch to their own new products.

New starches generally are sold to companies for comparison with existing products in



The film, at left, held by Dr. Harry Young, is a starch petrochemical composition polymerized in seconds with light or heat from an otherwise useless mixture, which forms only a chalk-white, brittle powder, shown on the glass plate at right.

plant runs to see if performance improves the end product or process. Starpol is being sold at this time mainly to research people who incorporate it into their development programs. When these researchers come up with an application or product based upon Starpol, they will take it to their customers or their own manufacturing people to see if it is salable. Only after those results are in will Staley learn how big the market potential is for these new raw materials.

Starpol—a building block with an infinite number of possibilities, all awaiting a time to prove themselves—is definitely a product of the future, for which the applications research is being done today. You'll be hearing more about this innovation.

Wonder sweetener from corn bran?

Staley researchers think so. In its continuing search for sweeteners of the future, Staley has been looking at xylitol. This white, crystalline powder is equal to sucrose in sweetness and calories but possesses some remarkably different qualities.

For starters, xylitol produces a cooling effect when dissolved on the tongue. It goes into solution and absorbs heat giving a pleasant cooling sensation. Therefore, it enhances a minty flavor in candies, chewing gums or dessert products.

This sweetener has been suggested to help reduce dental caries or to repair newly developing tooth decay in studies conducted in Finland, a country using this sweetener for some time. Much research, however, needs to be done to substantiate these claims.

Though its caloric content is identical to sucrose, xylitol may aid weight reduction. It seems to reduce appetite and may, therefore, reduce the amount of food eaten.

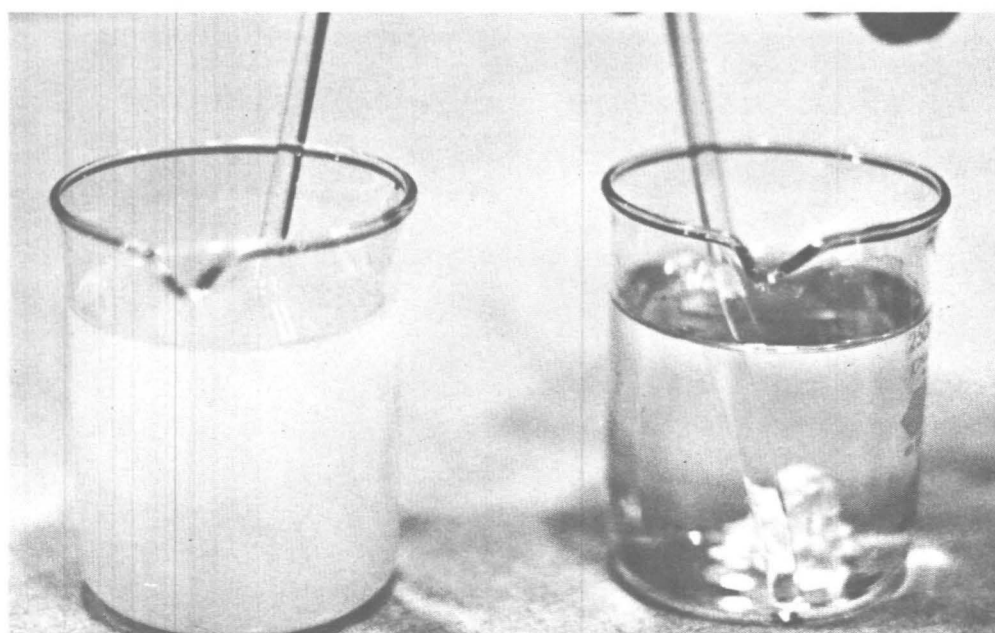
Natural for Staley

Currently, xylitol research priority has been reduced due to questions raised by the FDA concerning its safety. However, this product seems to be a natural for Staley inasmuch as a by-product of the corn wet milling process, corn bran, can be a major source of xylitol.

Xylitol is not made directly from this raw material. First, xylose is isolated from the corn bran and purified. The remainder of the process is hydrogenation, which Staley is now doing with oils.

Not a new product, this sweetener occurs naturally in about 50 fruits and vegetables but cannot be economically extracted from them. Finland relies upon birch wood as its source. Once plentiful corn cobs also have been suggested as a starting material.

Roland W. P. Short, senior research chemist, (Continued on Page 4)



These two beakers contain the same "Starpol" 100, but the one on the left shows material going into a polymerizing bath. Titanium dioxide is being encapsulated in this demonstration. These entrapment properties would be useful for encapsulating fertilizers or pesticides for controlled timed release.

Wonder sweetener

(Continued from Page 3)

and William S. Huebner, senior development engineer, have primary responsibility for process development.

"Xylitol is a unique development that is right down Staley's proverbial alley. We not only have the raw material in abundance, but also the people who have experience and a bag full of technology available for isolating sugars as well as hydrogenation experience with oils," said Jack Tuschhoff, senior scientist, food products, R & D.

Turning to the edible protein side of research, we find an exciting market prediction for soy proteins venturing into new food systems.

Wider, more extensive use of soy protein predicted

Likely changes in protein sources and new developments leading to advanced products are the contemplations and research endeavors of the "protein venture group". This group was formed two years ago with the directed objective of looking at the entire process from the soybean to the finished ingredient. They hope to unlock and utilize all of its potentials as protein supplements to many food systems.

Protein research is divided into two sections—protein venture (headed by Dr. Frank T. Orthoefer, research associate), and protein applications (headed by group leader, Dr. Michael F. Campbell). Orthoefer's staff takes a product to first base, and then Campbell's people bring it in home, ready for marketing.

In developing more sophisticated ingredients, Staley calls upon a number of feedback resources. Internally, they use the new meat laboratory and the expertise of Stephen L. Moore, meat scientist, and Gayle Hausmann, technician. Besides trying out and perfecting new processes for Staley ingredients, they are in close touch with the meat industry and the direction it is heading.

Offering further development assistance is the taste paneling facility of the sensory lab, utilized to indicate product preferences and qualities. This work is performed under the direction of Patricia Higgins, sensory specialist.

Customers are also a good source of information. They have a feel for what consumers want and can help fine-tune the development of a new product. They also enjoy the benefits of being in on the ground floor of an innovation, receiving the first crack at using it.

Soybean gets nod

After surveying the spectrum of possibilities offered by other vegetable proteins, the protein venturers concluded that the soybean was still the best bet for future products. It is the most widely available as well as the easiest to manipulate, said Orthoefer.

He explained, "Protein technology is less well understood and not as far along as sweeteners and starches. Not until the late 1960s was there much activity with proteins. Therefore, the group is performing basic research in conjunction with developing more functional products. Food scientists

like Dr. Lynn V. Ogden, Dr. William F. Lehnhardt and Charles E. Streaty must know the basics—why things happen and how to control them," Orthoefer said, "to successfully develop more functional proteins."

The intent of the protein venturers is to keep foods traditional but to utilize other ingredients for cost and nutritional advantages to the consumer. Staley's thrust in soy proteins goes beyond current technology to products that can be used at much higher extension levels.

"We want 'engineered foods' to have the same characteristics as traditional foods," Campbell explained. Taking meat for example, he said, "When extending the meat, we don't try to change its characteristics but try to give consumers more for their money in a form that is highly desirable. Following this train of thought, Staley has rejected the idea of a 100 percent replacement of foods by vegetable proteins at the present time."

In the area of meats, it is more efficient to make products from combinations of soy and meat than from meat alone. Although simulated meat products like imitation steak, veal and lamb chops were marketed the past few years, their textures and flavor didn't match the real thing. Current improvements in the process of flaking the difficult-to-use cuts of meat, blending and forming them into a steak-like shape, have brought simulated products to the point at which McDonald's is currently test-marketing a formed-steak sandwich.

Staley is studying processing innovations for extension of meats like flaking and "pumping". The latter is a means of injecting soy proteins into meat muscle such as ham, taking advantage of the meat's texture. This work is being performed in the new meat lab.

Doors opened

Generally, soy protein is used to extend ground and flaked meats and loaf and sausage products. However, progress in the realms of textured and functional modifications and in the art of flavoring has opened the door for its uses in other areas. For instance, the company is looking at the dairy area, including cheese-like products, whipped toppings and coffee whiteners, and eggs as targets for future extension.

As nutritionists study soy proteins, they are encountering more and more favorable nutritional aspects, such as the possibility of reducing cholesterol levels in the blood by increasing vegetable proteins and decreasing animal products in the diet. If this is proven, the need and desire for dietary changes will increase the already growing demands for soy.

As food industries keep changing, so must our protein products to be of supplemental value. In developing these ingredients, Staley is attempting to make nutritional equivalents and not trying to fool either "mother nature" or consumers.

"We are looking at products that possess a marriage of functional properties and taste, flavor, odor, color, mouth feel and a positive psychological impact wrapped up with nutrition to supplement traditional animal, dairy and egg proteins for tomorrow's food systems," said Dr. Robert V. Schanefelt, director, food and agriproducts research.

53 mark anniversaries

45 Years

JOE GROSSMAN, senior buyer/construction equipment & maintenance, purchasing

35 Years

GEORGE CRISMAN, waste treatment chemist, quality assurance
PRENTIS HARLIN, hydrogenation operator, 29 building
LYNDELL WHITE, conversion operator, 5 building

25 Years

RONALD MCCOY, production planner/sweeteners, industrial administration
CHARLES MICHELS, JR., area foreman, Satellite II, syrup refinery & dextrose
JACK BROWN, carbon operator, 5 & 10 building
GARETH COWGILL, senior mechanic, I&C
OTTIS LIVINGSTON, lead operator, 9 building
EUGENE TIMMERMAN, JR., senior mechanic, pipe shop
MERLE ALCORN, lead operator, 9 building
WILLIAM BEALS, senior mechanic, I & C
BILLY WALKER, senior mechanic, electric
ROY HOPKINS, merco operator, 6 building
ED WOOD, conversion operator, 5 & 10 building
RICHARD NICHOLS, merco operator, 6 building

15 Years

JAMES BEALS, senior mechanic, brickmasons
ROBERT SMULIK, senior mechanic, electric
EVERETT ALLEN, senior mechanic, C-D extraction plant
DAVID DINGMAN, mechanic, sheetmetal
LEON NOLTING, quality superintendent, Morrisville
BARBARA SHEAY, secretary, administration, industrial
ROGER CLARK, shift foreman, bulk products, 17 building
LYNN HORN, senior tax assistant, corporate control
KAYE JONES, senior billing clerk, industrial administration
FRED BARDFIELD, specialist, plant traffic, agriproducts

10 Years

LOWELL MCKINLEY, staff accountant, control, agriproducts
KENNETH TOCA, shift foreman, boiler room, utilities, industrial
MORRIS SHAVER, JR., third-year apprentice, I & C
THOMAS BILYEU, production helper, 44 building
ROBERT SCHWENT, ion exchange operator, 5 & 10 building
HUBERT LINN, mechanic, round house
VICKI PICKEL, preparation operator, 101 building
LYNN STROYECK, track laborer, 48 building
SAMUEL WHITE, production helper, 44 building
PAUL ZECK, senior mechanic, sheetmetal
LEMUAL CREEK, extraction tower, 11 building
GARY STILL, mechanic, round house
FLOYD WILLIAMS, second-year apprentice, electric
DONALD CALDWELL, cleaner, 101 building
WILLIAM REYNOLDS, production helper, 44 building
WILLIE TAYLOR, cooler operator, 17 building



Joe Grossman



Prentis Harlin



Ron McCoy



Charles Michels, Jr.



Jack Brown



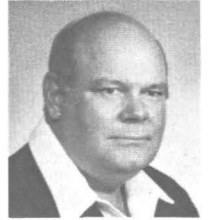
Gareth Cowgill



William Beals



Billy Walker



Richard Nichols

CHARLES WILLIAMS, tractor trailer driver, Chattanooga
FELIX SENA, operator, Morrisville

5 Years

ROSETTA JOY, stores dispatcher, maintenance, industrial manufacturing
JERRY ATKINS, transportation equipment coordinator, industrial administration
EDWARD KOMP, quality assurance technician, Morrisville
JOHN STOKES, operator, 111 building
WILLIAM BOYCHUCK, feed house operator, Morrisville
GEORGE SPRENGER, maintenance mechanic A, Morrisville
DARRELL BRENNER, maintenance mechanic A, Morrisville
PARKER PATTERSON, boiler mechanic, Morrisville
MARTIN MELQUIADES, hand stacker, Cicero

Staley News

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Royalty visits Staley -- Betty Ann Wulff, left, of Hinsdale, Miss Illinois Soya Princess, samples summer sausage incorporating "Procon" soy protein concentrate, while Gayle Hausmann, technician, R&D, discusses soy protein applications with her. A senior at Louisiana State University, Betty is majoring in broadcasting. She carries her "Soya Princess" title through 1978.



A. E. Staley Mfg. Co.
2200 E. Eldorado St.
Decatur, Ill. 62521

Address Correction Requested

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