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Cage-Free Housing: Used Vs. New?

Many growers have gotten their feet wet in cage-free by converting existing housing, but that may be starting to change, some say.



By Edward Clark, Editor

Barrie Wilcox illustrates what many egg producers have done for housing when first investing in cage-free egg production. When the Roy, Wash., producer first went cage-free on part of his production six months ago, “we converted an old layer house that had not been in use for a number of years,” Wilcox says.

“We completely remodeled it, taking the old cages out,” says the president of Wilcox Farms, whose family has been in the egg business since 1909.

After visiting cage-free operations both in the United States and Europe, Wilcox decided to install a three-level aviary system, which allows the birds to perch, nest, and have access to feed. And because his production is also organic, his laying hens have access to the outside.

Wilcox had been buying and marketing cage-free eggs from other growers, but he says he decided his farm “should walk the talk.” Since switching 30,000 birds of his 1.2 million total to cage-free, he says there have been no insurmountable challenges thus far, and says that in his marketing area of the Pacific Northwest, demand is still outpacing supply, and he hopes it stays that way. “We don’t want (cage-free, organic eggs) to become a commodity.”

Converting Old Houses

On the housing front, Wilcox’s example is fairly typical of what egg operations—including very large ones—have been doing; converting old egg houses, or unused broiler houses to cage-free production, says Rick VanPuffelen, sales and marketing manager for Chore-Time Egg Production Systems, Milford, Ind.

“There’s a significant amount of broiler house conversions to cage-free,” VanPuffelen says, which is a low-cost way for producers to enter the business. For the most part, nests for the birds in these remodeled older facilities are placed down the middle on the floor. Farmers will take an old house and put in new nests, new feeding systems, new watering equipment, and new ventilation systems as needed.

One recent example is one of the nation’s largest egg farms, in the Midwest, which has converted eight or 10 houses

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Cage-Free Housing

to cage-free by taking out all cages, and put in new slats and a feeding system, plus nests down the middle of the floor, in addition to a scratching area.

VanPuffelen estimates that while aviary systems are popular in Europe, only about 30, such as what Wilcox is using, exist right now in the United States. Their advantage, he says, is that “you can get more birds in the same housing space.”

He adds that most cage-free systems are not free range, such as what Wilcox has, however, which “takes a whole new level of management.”

“The bar is higher for organics,” he adds. VanPuffelen states that all major egg companies have invested in cage-free

Draaijer says that his company’s aviary systems are increasing in popularity. He says that 30,000 birds per house is the average flock size of an aviary unit today. And because more birds can fit into a house, he says “the cost is going down per bird with aviary units.”

Mimicking Natural Behavior

Draaijer adds that what his company has tried to do is to mimic what the birds look for naturally, so the nests in an aviary unit are similar to a tree.

He agrees that more management is involved in a cage-free system, and animal husbandry is more important, as are issues of light and even heating. One problem he has observed is birds that lay too early in the morning, but this can be

Size of Market

How big is the market? VanPuffelen estimates that 4% of eggs produced today are cage-free, and that is likely to grow to 10% within five years.

Wilcox says that the market is growing most rapidly on coasts, such as Seattle, Portland, and San Francisco, while far less rapidly in the nation’s heartland. In his market, there is big demand along the coast, but not so in Eastern Washington, which is still largely agricultural.

The biggest change in cage-free, VanPuffelen says, is management: a shift from managing equipment to managing birds, which means houses must be walked a lot more, checking for floor eggs, to see if some nests are not being used, and so forth.

“The expectation is for birds to act like they’re caged. Well, they won’t. They will have to learn how to find feed and water. In a caged system they went into a cage after 17 weeks and they didn’t need a teacher to teach them a whole lot, but under a cage-free system, it’s different.”

In a cage-free system, for example, the birds may all be huddled up in a corner due to cold drafts in the house. That’s where walking the house frequently comes in. Problems such as this need to be identified and corrected soon, or production will decline, he says.

One advantage a collapsible perching system has, VanPuffelen says, is that the perches can be raised as birds grow, but this means paying attention to detail to make sure that the perches are not too high for the birds.

One key to any system of cage-free, he says, is to avoid drafts and to use lighting to draw birds to the nests. Another key, he says, is that bird cannibalism can be a problem—the term pecking order exists for a reason. **EI**

Most cage-free systems are not free range.

production, either through their own output, or through purchasing and marketing cage-free eggs from other producers.

New Housing

Erik Draaijer, North American sales manager for Netherlands-based Vencomatic, says that while the first wave of cage-free housing has been the conversion of old housing, that’s changing.

“The bigger companies are starting to build new housing,” he says, although it does not differ much from other layer housing. Most, whether 40 to 60 feet wide, or 300 to 600 feet long, are regular floor systems, with a nest, roost, and scratching area. Speaking of aviary systems, he says that the rule of thumb is that “you can double bird numbers per house.”

solved by having more lighting at the end of the day, so she’ll lay later the next day. Draaijer adds that birds will also migrate to different areas of the house if it’s too cold.

He adds that most people who switch to cage-free enjoy it: they get to interact more with the birds, and if they do it right, the birds will reward them. In his view, going cage-free “is when the fun begins,” because it’s more of a challenge.

One difference between the United States and Europe, he says, is that Europe has developed very generous bird space requirements, due to the political environment.

In the end, the consumer will dictate production practices to the egg industry, simply by the choices they make in the supermarket, he says.

Egg Industry

published monthly by Watt Publishing Co.
122 S. Wesley Avenue, Mt. Morris, Illinois 61054-1497 USA
Tel: (815) 734-4171, Fax: (815) 734-5649, <http://www.wattpoultry.com>

SUBSCRIPTIONS:

Subscription print edition prices: USA \$84.00/yr, Canada \$102.00/yr, Outside USA & Canada via Airmail \$144.00/yr; \$14/copy unless marked. Digital edition sent by e-mail: \$36.00/yr. Prices in US Dollars. Business or occupation information must accompany each subscription order.

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► Organic Egg Sector Grows Rapidly

U.S. eggs and poultry are among the fastest growing food products in the organic foods sector. Organic egg sales were \$161 million in 2005, up from \$140 million in 2004, with an average annual growth rate of 19% between 2000 and 2005, according to a report on organic eggs and poultry by USDA-ERS. Even so, organic egg sales accounted for only 1% of the fresh egg market in 2004, according to an ERS analysis of ACNielsen Homescan data (retail scanner data for 8,533 households).

In 2003, consumers purchased 51% of organic eggs in mass-market channels, 45% in natural food stores, and almost 3% direct from the producer or through other channels.

Growth in the specialty egg market is rapid, the report says, and organic eggs are the fastest growth part of this sector. Factors boosting demand for organic eggs include consumer concerns for health, and animal welfare. Although conventional eggs are the second biggest private label, or house brand, item in the supermarket, organic eggs have historically been sold as branded items.

Data for organic eggs in 2003 show that the sector is fairly concentrated, with the top five companies holding approximately 55% of the market, and the top two companies holding approximately 33% of the market. But for now, "conventional egg companies have not significantly expanded into the organic egg sector," the report says.

Looking at organic production by states, four states produced 54% of all organic eggs in 2005: North Carolina, 15%; California, 14%; Pennsylvania, 13%; and Iowa, 12%. In

2000, by contrast, the top-four list consisted of North Carolina, Pennsylvania, California, and Virginia, for a 73% share of total U.S. organic egg production.

USDA notes that premiums for organic eggs at the retail are usually well above 200%. The report also says that the data show that prices for organic eggs are relatively constant compared to regular table eggs.

► USEM Obtains Third Export Order

United States Egg Marketers (USEM) has approved an export order of 300 containers (about 243,750 cases) of eggs for delivery beginning mid-February through March 9 to Germany, Italy, the United Kingdom, Israel, and Japan.

This is the third export order since mid-October for a total of 690 containers (566,850 cases).

Because flock sizes remained the same from October-February, the export orders have had a major impact on shell egg prices during the period, and to a lesser degree, breaker stock prices, according to United Egg Producers officials.

► Ohio EPA Fines Ohio Fresh Eggs

The Ohio Environmental Protection Agency has fined Ohio Fresh Eggs \$13,250 for "numerous violations and poor operating conditions" at its Croton operation, one of several it operates in the state.

The violations include: connecting pond wells to potable water systems, which can result in cross contamination; not maintaining water softeners and chlorinators; failing

to monitor for total coliform; failing to collect four repeat samples within 24 hours of being notified of a total coliform positive sample; failing to monitor for organic chemicals; failing to monitor for volatile organic chemicals; and failing to monitor for inorganic chemicals.

Ohio EPA says that by this May, Ohio Fresh Eggs must correct violations to comply with drinking water monitoring and reporting requirements.

The company has had its operational licenses pulled by the Ohio Department of Agriculture, but has appealed the case before the state's Environmental Review Appeals Commission. Being one of the nation's largest egg producers, how the case is resolved could impact egg prices this year.

► Major Ag Policy Shift Unlikely

The takeover by Democrats of both houses of Congress is unlikely to bring major farm policy shifts, in the view of Randy Green, a Washington, D.C. representative of the United Egg Producers (UEP). But the shift in power makes it unlikely that a farm bill will be crafted in 2007, he said at UEP's board meeting held in conjunction with the International Poultry Expo in Atlanta. "The farm bill could well take until early 2008," he said.

"Ethanol is the central issue in farm policy," Green said, even more so with President Bush's call in his State of the Union Address for a five-fold increase in the use of renewable fuels. UEP is seeking an ethanol summit with other livestock producer groups in light of the dramatic increase in feed costs the upsurge in ethanol demand has caused. Mike McLeod, another UEP Washington representative, said that right now, "being anti-ethanol is a bit like being anti-motherhood."

Overall, however, Green doesn't see a lot of change in farm policy. On the House side, he noted that the new chairman of the House Agriculture Committee is Collin Peterson, D-Minn., a conservative democrat. He said Peterson may be able to draft a bill that the House can pass before the end of this year, but that will be more difficult in the Senate. Tom Harkin, D-Iowa, is chairman of the Senate Agriculture Committee. "There will have to be a lot more compromising in the Senate on farm policy," Green said. One reason why is that Harkin is more supportive of farm payment limitations, which could create a regional, North-South split.

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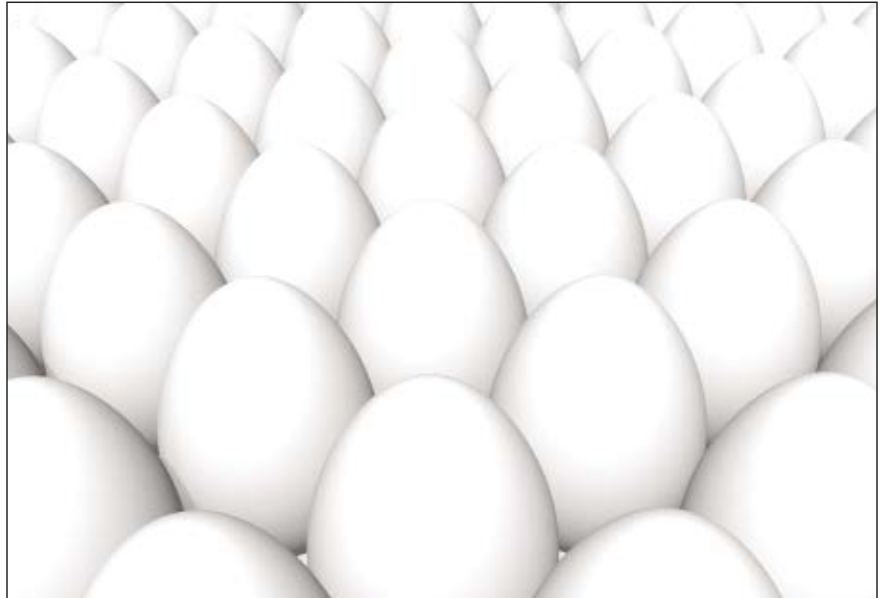


High Egg Prices Due to More Than Just Exports

Environmental issues will become even tougher in 2007, Barrie Wilcox, Environmental Committee Chairman, said at the United Egg Producers board meeting in Atlanta. UEP vice president Chad Gregory reported that the Environmental Protection Agency is finalizing work on its new CAFO regulation that hopefully will be ready by June. UEP continues to meet with EPA to make suggestions regarding the final rule.

Gregory emphasized that producers need to decide in 30 to 60 days whether or not they actually need the permit that will be required in the final rule. There are still some aspects of the rule that are undetermined as to whether or not a producer will be required to have a permit, which relates to discharge. Most producers do not discharge, and according to Gregory, will not require a permit.

The air quality study that the American Egg Board (AEB) is funding is expected to begin in March. There are three sites—West, Midwest and East. UEP is trying to organize farm visits with the EPA prior to the start of the



study. Gregory also reported that the issue of particulate matter is still not dead and the EPA is expected to clarify the language on it.

bers were the lowest since 2003, he noted. Some of this is due to the supply side action that was taken prior to Christmas. He also said that feed prices have soared due to the ethanol demand. Corn could rise to \$5.50/bu. and dramatically continue to impact the cost of producing eggs.

Truex reported first on *Salmonella*. He said that because there is a lower incidence rate of *Salmonella* on egg farms, it is not necessary for the U.S. Food and Drug Administration to visit them. Motions were made and passed to appoint board members to coordinate UEP's position on the renewable energy issues and to form a committee with other livestock groups for a summit to discuss the ethanol situation and its impact on production costs. Board members said that forming a summit committee with other livestock groups would be the strongest way to approach the problem and create a document that could be presented to the U.S. government.

On the animal welfare front, Animal Welfare Audit Subcommittee Chairman Mike Bynum said the audits for 2007 will begin soon. A letter from Cal-Maine Foods that outlines the company's basic principles for managing the UEP Animal Welfare Program was discussed. The program is basically using the seven principles of HACCP incorporated into

▶ Environmental pressure will be even tougher in 2007.

study. Gregory also reported that the issue of particulate matter is still not dead and the EPA is expected to clarify the language on it.

Not Just Exports

Roger Deffner, Marketing Committee Chairman, said that the \$1.30-plus current egg price is not solely due to the export orders. On Dec. 1, bird num-

bers were the lowest since 2003, he noted. Some of this is due to the supply side action that was taken prior to Christmas. He also said that feed prices have soared due to the ethanol demand. Corn could rise to \$5.50/bu. and dramatically continue to impact the cost of producing eggs.

Deffner reminded the group that methods of price discovery have not been updated since 1974 and that with costs going through the roof, new formulas should be instituted. On exports, he said that 34 more container loads of eggs will be shipped by United States Egg Marketers, and urged that more producers join the organization.

Government Relations Chairman Ron

Ethanol: Hot Topic in the Egg Industry

By John Todd

Egg producers put the price tag on ethanol at 6 to 20 cents per dozen from increased corn costs. Corn prices so far have doubled and prices could go even higher, producers and speakers said at the United Egg Producers (UEP) board meeting in Atlanta, GA.

Other Feed Stocks

One Midwest egg producer, where the ethanol impact seems to be the greatest, said that possibly other feed stocks could be substituted for corn, such as wheat and milo. In the Midwest, there is now one ethanol plant being converted from corn processing to cellulose. This would use many other plant products for making ethanol, but not as efficiently as corn.

A West Coast egg producer said the ethanol problem is not as important in his region. The cost of feed is already very high there and this situation may cause producers to think twice before expanding their operations, which would be a good thing, he said.

UEP's Government Relations Committee of UEP, held prior to the UEP Board of Director's meeting, devoted more than an hour to ethanol. The presentation by Randy Green of UEP's Washington staff opened with some basic numbers. Corn futures are double the 2005-06 price. One bushel of corn yields 2.8 gallons of ethanol. A typical ethanol plant can produce 50 million gallons a year which will use 18 million bushels of corn from 125,500 acres at average corn yield. Ethanol's energy value is about two-thirds that of gasoline. From a price standpoint, ethanol is much higher than gasoline. Ethanol is competitive only because of a substantial tax credit that equals a \$1.43/bu. subsidy. It's possible that other crops could be included, such as peanuts and cotton.

\$5/bu. Corn?

Green, who said that some suggest corn prices could rise as high as \$5/bu., said that agricultural prices rise and fall but they usually do not rise and then keep on rising. In the past, Green said, permanently higher prices have been predicted and they eventually fell back. Also, there is the possibility that rising feed costs

could spur additional consolidation of livestock and poultry operations.

The UEP committee made a motion which was passed by the UEP Board of Directors the next day. The motion calls for UEP to approach other livestock commodity groups, and together, create a livestock summit on ethanol. There will be a UEP Board member appointed to oversee this effort and be able to report back to the Board of Directors on

the progress and recommendation.

Ethanol will be central in discussions of a new farm bill in Congress. UEP Washington attorney Mike McLeod, who works with several other commodity groups, stated that he felt the idea to form a livestock summit meeting was a good one. He hopes that all livestock groups stick together with legislators in a non-partisan way to accomplish a solution to the ethanol situation. **EI**

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the UEP guidelines. Mitch Head of Golin and Harris Public Relations Co. presented their program for 2007. Efforts will include several national forums relating to animal welfare. Culinary, grocers, food marketers and food service organizations will also be included in the agency's work to counter the activities of activists. This will include advertising in food related publications.

Another animal welfare issue was discussed that the Board of Director's addressed. A small group of producers that have not participated in UEP's Certified Program have proposed another plan to USDA which does not include the 100% rule. The group is seeking an audit from the Agricultural Marketing Service called a Process Verified Program (PVP).

Animal Welfare Audits

At the Board meeting, UEP President Gene Gregory introduced a proposed letter from UEP to AMS with two points for them to consider with respect to any requests they may receive to audit PVPs or otherwise provide auditing services. The first is that



Dolph Baker, left, chairman of the United Egg Producers board of directors, and Al Pope, outgoing president and CEO of the United Egg Producers. Pope was honored for his 30 years of service to the industry at a gala retirement celebration dinner Jan. 24 attended by 300 in the industry.

any PVP producers must comply with 100% of their production instead of just having a partial number complying with the balance doing something different. The question was asked whether it would be misleading if only a portion of production was under the PVP audit. The second point made in the letter to AMS is that the standards for any PVP that make or imply claims about animal

husbandry should be based on science. This includes molting methods, bird space, and the practice of back-filling. All these and many more requirements have been established through extensive scientific research and any deviation from them could lead to problems with the UEP program as well as any other. The Board approved the sending of this letter to AMS.

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Dr. Maynard Hogberg from Iowa State University made a presentation to the board regarding the proposed formation of the Egg Industry Center. The proposal was originally made to the American Egg Board in November and invites the industry to establish the center at Iowa State University to strengthen coordination and leadership in university-based applied research, extension and education to address the needs of the American egg industry. The Iowa Egg Council has made a \$1 million investment to support the center.

According to Hogberg, 12 land grant colleges with poultry programs have committed to the center. The center would identify and work on challenges to the industry using scientific approaches from the colleges that participate. Just a few of the challenges that have already been identified by leaders of the industry include bird health/infectious diseases, animal welfare, and emissions. Hogberg is seeking the endorsement of UEP and with it, he said it will confirm the national effort. Dr. Don McNamara, head of the Egg Nutri-



Chad Gregory, left, vice president of the United Egg Producers, and Mark Oldenkamp, secretary, of the UEP board, at UEP'S board meeting in Atlanta in late January, held in conjunction with the International Poultry Expo.

tion Center, and who introduced Hogberg to the board, suggested that the center will foster more interest in poultry programs at the university level. The board, through a motion, endorsed the concept of the center and will see the progress made with the AEB March meeting. Further discussion will occur

at the May UEP Legislative meeting.

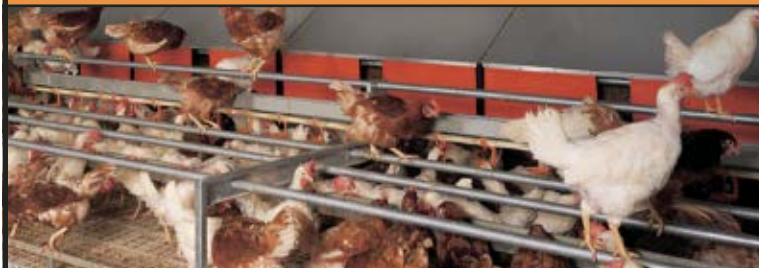
Egg Nutrition

McNamara said several areas of research showing positive results include the fact that adding an egg to the diet each day has no negative consequences and has increased benefits with the over-70 population group. This means no additional cholesterol and a lower risk of heart disease. He also said that benefits to weight loss are shown with consumption of eggs. In addition, it is proven that children eating a good breakfast with eggs are doing better in school. The members of the ENC staff are very active with seminars and symposiums throughout the world. Dr. Hilary Thesmar, head of the Egg Safety Center is continuing her work on the avian influenza updates.

Several promotions were announced during the UEP meeting in addition to Gene Gregory becoming President. Howard MagWire is now the VP of Government Relations and Chad Gregory is Senior Vice President in charge of the environmental issues and representative to the International Egg Commission. **EI**



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What Was New at the IPE & IFE

Exhibitors at the International Poultry Expo and the International Feed Expo showcased their products in Atlanta.

► *Editor's Note: Egg Industry's John Todd visited suppliers at the IPE and IFE show in Atlanta to get a look at their latest products for the egg industry. The following product descriptions are based on company interviews at the show, but do not represent an endorsement by this magazine.*

Omega Protein, Houston, TX www.omegaproteininc.com

Omega Protein is the world's largest producer of fish oil and North America's largest producer of fish meal. Their products serve as an additive to the basic feed ration for laying hens. The brand name is Virginia Prime Gold. The company is vertically integrated from the actual catching of the fish to processing and marketing. According to the company, fish meal serves as a high quality protein source, providing the best overall amino acid profile of any single source protein. The company owns and operates 50 refrigerated fishing vessels, 40 spotter aircraft and four strategically located processing plants on the Atlantic and Gulf coasts of the U.S.

Big Dutchman, Inc., Holland, MI www.bigdutchman.com

New at the Big Dutchman exhibit this year was the HV52b Butterfly Fan. This 52 inch fan is specifically built for use in floor bird, specialty egg production. It has a unique support system with a new extruded aluminum blade. It can be installed with or without louvered shutters. HV52s is the Model Number with louvered shutters. Also introduced at the show was StuffNix, dust filter system. This system is installed at the exhaust end of the poultry house. Because it is V-shaped construction, dust particles collect outside the consistent air flow which reduces maintenance and easy cleaning is designed into the system, as well. The company claims that up to 70% of the dust from the house is recovered.

Lubing Systems, L.P., Cleveland, TN www.lubingusa.com

A new 36 inch wide egg conveyor belt is new this year from Lubing. The "Soft-Ride" belt conveying system can deliver up to 425 cases of eggs per hour. It is powered by a single 7.5 HP inverter duty brake motor that can travel up to 2,000 feet with that single drive. Construction on the new system is all maintenance free stainless steel, the company says. Also included on the system are automatic pneumatic tracking controls for maintenance free tensioning. There is also an easy to adjust belt scraper which prevents buildup on the belt and rollers. The "Soft-Ride" Belt Conveyor System is another addition to the Curve Conveyor and Accumulation Table offered by Lubing.

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www.spartanchemical.com

With more emphasis placed on the environmental impact of agriculture in the U.S., Spartan's cleaning products continue to be biobased, made from renewable resources. The company's primary products for the egg industry are liquid egg wash compounds that clean and control foam without the use of a defoamer. In addition to the egg wash, Spartan also makes a PH Booster in a 2 product system for the egg industry. Controlling the PH helps keep the tank clean while allowing the plant to be in compliance with USDA regulations, the company says.

RubbAir Door Co., Ayer, MA

www.rubbair.com

RubbAir Doors are sold primarily to hatchery and production facilities. The impact doors are easily opened and are able to hold the correct temperatures in the rooms at all times, the company says. In the case of cooler doors in production facilities, the doors are bump-opened by the moving equipment and close quickly. By doing so, there is considerable time and effort saved, the company says. The moisture proof doors are a one-piece molded body which resists moisture from without and within, and they resist dust and all cleaning agents. More doorway clearance is gained with

the doors swinging 125 degrees in both directions. The sanitary, seamless door also works well for high hatchery traffic, the company states.

Sanovo Engineering U.S.A., Elk Grove Village, IL

www.sanovoeng.com

Sanovo introduced the new concept OptiBreaker. The system is available in 6, 8, 12 and 16 rows and will process up to 500 cases per hour. It features new plastic cups which are now in the approval process. New also is the scanning system which will identify smallest spots of yolk in the albumen. Fewer exchangeable parts are a feature of OptiBreaker which makes it easier and less expensive to maintain, and creates less downtime. Sanovo also owns Staalkat, the shell egg grading and packing equipment company, with capacities up to 100,000 eggs per hour. Included in the Staalkat line are the Farmpacker, Tray-stacker and Pallet Loader.

Poultry Management Systems, Inc., Saranac, MI

www.pmsi.cc

New at Poultry Management Systems is Atlas System which further enhances the efficiency of egg production and processing. Its messaging tools identify trouble spots more quickly in the processing plant and

laying houses. The comprehensive analysis of conveyor loads will provide tighter controls of egg movement. The crackless egg which monitors possible egg stress in the conveying and processing process has also been updated to be more reliable at a greater distance from the control. In addition, there is a new and improved version of the hand-held computer that retrieves and displays the information from the crackless egg instantly. Sensor Wireless Inc. is the manufacturer of the crackless egg and is highly compatible with the PMS control systems.

Diamond Automation, Farmington Hills, MI

www.diamondsystems.com
Michel Defenbau, President

Diamond Systems introduced their new Innova Egg Grading System at the show. Unique in this new machine are the servo-drive motors which insure perfect timing, the company says. According to Diamond, the motors talk to each other to accomplish this. All facilities for dirt detection, cracks, leaks and egg scaling are now located in a 9-foot area before egg drying. It is possible to totally wash down the entire infeed through to the transfer location. The new system is provided in capacities of 36,000 up to 182,000 eggs per hour (505 cases per hour). The Innova uses Windows XP and can easily be linked to other management computers

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and printers. Diamond Systems also manufacture egg breakers and farm packers as well as other conveying and egg packaging equipment.

Moba USA Inc., Lancaster, PA

www.moba.nl

New at the Moba exhibit this year was the Omnia 500 FT (Food Technology). This egg processing system will attain the capacity of 500 cases per hour of washing, grading and packing shell eggs. Moba equipment has always featured individual egg handling and it is continued on the Omnia 500. On the Omnia, the dirt detection, check and crack detection systems are all above the flow of eggs over the machine. This insures that rejected eggs will not become a contaminating factor. Ease of cleaning the Omnia 500 is possible because of the open frame construction. Total washdown is possible through the transfer. The Moba Co. continues its sales of the farmpacker, Mopak.

Interplast Inc., Terrebonne, Quebec, Canada

www.interplast.net

Leyenda Lee, Sales Manager

Interplast was recently acquired by Keyes Fiber in Washington. This acquisition makes it now possible for their products to be sold in the entire U.S. and Canada. This especially

helps the company serve West Coast customers. It is now in the long range plan to eventually build a manufacturing plant on the West Coast. The Interplast plastic, see-through cartons are popular with the specialty eggs now gaining popularity in the United States. The cartons are biodegradable.

Farmer Automatic of America, Inc., Register, GA

www.farmerautomatic.com

The third generation cage-free system by Farmer Automatic was shown at the show. They call it Combi-Matic, which means it can be used both as a cage-free or enriched-cage operation. On the Combi-Matic System, all watering, feeding and nesting facilities are available on each level. Because of this feature, company officials say bird performance is enhanced. A 24-volt, LED light tube ensures that birds can easily find feed and water. The nests on this system allow for the eggs to roll directly from the nests onto the egg collection belt. Plastic coated floor mesh provides a non-stick surface for manure handling. Farmer Automatic also introduced an egg collector that requires no timing. The new system is available on all existing cage systems.

Hy-Line International, West Des Moines, IA

www.hyline.com

Hy-Line International announced the appointment of Dr. John Greaves as President replacing Dr. Dennis Casey in that position. Dr. Casey has had a long and distinguished career as the head of Hy-Line. Also, Travis Slusher has been named Production Director of the company. The Hy-Line website has been updated to an interactive forum, making it possible to conduct on-line discussions with company geneticists and veterinarians. Also new is the Hy-Line lighting program available in many languages and adaptable in many countries. Hy-Line's market in China has doubled in the last 3 years. Home there is Shenyang City, which has a parent stock farm and hatchery with capacity to produce 3.2 million breeders per year.

Chore-Time Brock International, Milford, IN

www.ctb.world.com

Chore-Time introduced a new nest system for cage-free layers. The system includes a row of nests through the middle of the house. All feeding, watering and perches are in front of the nests. The nests are environmentally attractive to the hen which, in turn, helps to eliminate floor eggs. In non-cage type production, managers are no longer managing equipment, they are also managing the birds. Also new with Chore-Time is a unique manure drying system. Built outside the layer house, it utilizes air from the layer house, which passes over the manure on perforated belts. According to the company, manure can be dried from 70% moisture down to 20% in a 48 hour period. Chore-Time continues to be a major supplier of cage systems and feeding and watering units for them. **EI**

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Egg Protein Improves Yogurt

Egg white has several proteins with unique properties that may have interesting applications. Presently, the only egg white protein that is separated by the egg products industry is lysozyme. Lysozyme is separated using ion exchange resins. Lysozyme has been used in cheese to inhibit gas production. It has also been found to be effective against viral and bacterial infections in pharmaceutical applications. If efficient economical methods for fractionating egg white proteins are developed, new value added uses of these proteins may be possible.

In a recent study, Paredes *et al.* 2006 (*Journal of Food Process Engineering* 29:36-52) developed a process to separate ovalbumin from egg white. The scientists utilized poly (glycidyl methacrylate-co-ethylene dimethacrylate) resin to efficiently separate ovalbumin. Ovalbumin is the major protein in egg white, making up 60% of the total egg white complex. It contributes significant functional properties in various food applications.

These scientists obtained a theoretical 83% yield of ovalbumin using the resin in a chromatographic separation. SDS polyacrylamide gel electrophoresis indicated that the separated ovalbumin was relatively pure. The ovalbumin was dried using a vacuum drying apparatus. They added 1% of the pure dried ovalbumin to the standard yogurt mousse formulation. This was reported to be equivalent to 2% of dried egg white.

Ovalbumin increased the yield of the mousse. The mousse was also observed to have a higher viscosity. Organoleptic evaluation also indicated that the textural properties of the mousse with ovalbumin were superior as compared to the control.

The separation process using the resin was claimed to be simple and satisfactory. The cost of the separated ovalbumin was reported to be \$40/Kg which, of course, is considerably more expensive than dried egg white.

It would have been interesting if these

scientists would have also investigated the addition of egg white to the yogurt mousse. Previous research has investigated the utilization of egg albumen as a partial milk replacer in yogurt-type products including Essary *et al.*, 1982 (*Poultry Science* 61:1461-1462) and Cunningham and Brant, 1984 (*Poultry Tribune* 90 no. 9:6, 8). Cunningham and Brant named their product "Eggurt". They indicated that 10% egg white was the optimum level. Eggurt was observed to have a superior taste and mouth feel as compared

to yogurt prepared with milk alone.

The significance of this research is that fractionation procedures for egg white proteins may have potential applications in the future. Of course, the process must be economical and the fractionated proteins must have satisfactory functional properties. **EI**

Dr. Froning is Professor Emeritus, Department of Food Science and Technology, University of Nebraska, Lincoln, Nebraska 68583-0919.

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INDUSTRY CALENDAR

2007

March

21-22: United Egg Board Meeting

Embassy Suites near O'Hare Airport, Chicago, Illinois. Contact: UEB, 1460 Renaissance Dr., Park Ridge, Illinois 60068-1340. Tel: 847-296-7043. Fax: 847-296-7007.

April

22-24: Urner Barry's Executive Conference & Marketing Seminar 2007

Bellagio Hotel, Las Vegas, Nevada. Contact: Urner Barry, P.O. Box 389, Toms River, New Jersey 08754. Tel: 732-240-5330. E-mail: maryann@urnerbarry.com. Website: www.urnerbarry.com.

May

20-23: Alltech's 23rd International Feed Industry Symposium

Lexington, KY. Contact: Paulo Rezende, Events Manager, Alltech, 3031 Catnip Hill Pike, Nicholasville, Kentucky 40356. Tel: 859-887-3328.

Fax: 859-881-2237.
E-mail: symposium@alltech.com.
Website: www.alltech.com/symposium.

21-24: The National Egg Quality School

Radisson Penn Harris Hotel & Convention Center, Camp Hill, Pennsylvania. Contact: Deanna Baldwin, Assistant Director. Tel: 410-841-5769. E-mail: baldwidl@mda.state.md.us.

June

6-8: National Safety Conference For The Poultry Industry

Savannah Marriott Riverfront Hotel, Savannah, Georgia. Contact: Kristi Spivey, Food Processing Technology Division, Georgia Tech Research Institute. Tel: 404-894-3412. E-mail: kristi.spivey@gtri.gatech.edu.

July

8-12: PSA • ADSA • AMPA • ASAS Joint Annual Meeting

San Antonio, Texas. Contact: Poultry Science Association, 1111 North Dunlap Avenue, Savoy, Illinois 61874. Tel: 217-356-5285. Fax: 217-398-4119. Website: www.poultryscience.org or www.adsa.org.

October

3-4: National Chicken Council Annual Meeting

JW Marriott Hotel, Washington, D.C. Contact: National Chicken Council, 1015 15th Street NW, Ste. 930, Washington, D.C. 20005-2605. Tel: 202-296-2622. Fax: 202-293-4005. E-mail: ncc@chickensusa.org.

2008

January

23-25: International Poultry Exposition 2008

Georgia World Congress Center, Atlanta, Georgia. Contact: US Poultry & Egg Association, 1530 Cooleedge Road, Tucker, Georgia 30084-7804. Tel: 770-493-9401. Fax: 770-493-9257. E-mail: expogeneralinfo@poultryegg.org. Website: www.poultryegg.org.

March

18-20: Midwest Poultry Federation Convention 2008

St. Paul, Minnesota. Contact: Midwest Poultry Federation, 108 Marty Drive, Buffalo, Minnesota 55313. Tel: 763-682-2171. Fax: 763-682-5546. E-mail: lara@midwestpoultry.com. Website: www.midwestpoultry.com.

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