Work continues on a multimillion dollar, full-size feed mill and research facility at Iowa State University south of Ames. The ISU Kent Corporation Feed Mill and Grain Science Complex is scheduled to open in 2023. Photo submitted

New ISU structure to train workers in feed production

University will fill need for agriculture industry

BY TOM LAWRENCE
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AMES—Livestock feed is a major industry in Iowa, with more than $20 billion in sales and more than 58,000 jobs connected to the industry.

But finding trained people to produce that feed has increasingly become a challenge.

Iowa State University plans to address that by opening a full-size, operating feed mill and research facility adjacent to its Ames campus in the summer of 2023.

The ISU Kent Corporation Feed Mill and Grain Science Complex is being constructed on 10 acres by the southwest intersection of Highway 30 and State Avenue in Ames. The land has been managed by the College of Agriculture and Life Sciences for more than 50 years and used for crop research, seed operations and crop yield performance trials.

The Iowa Board of Regents approved a $24 million budget, but the final figure may be closer to $30 million. All the money is from private sources.

The Kent Corporation paid $8 million in 2017 for the naming rights. The Iowa Corn Promotion Board committed $4 million. The Iowa Crop Improvement Association committed $1.5 million.

Sukup Manufacturing Co., a large grain storage firm, provided $3.1 million of in-kind support, as well as the cost of erecting the grain storage facility.

The California Pellet Mill of Waterloo kicked in another $2.6 million of in-kind donations to provide the roller mill, hammer mill and other pieces of equipment. Todd & Sargent of Ames committed $1 million, a blend of cash and in-kind donations. There are more than 40 donors to the

See **MILL** *on page D6*

BY TOM LAWRENCE NEWS@NWESTIOWA.COM

HARVEST 2022

VARIABLE

DRY CONDITIONS PREVENT REPEAT OF ROBUST 2021

REGIONAL—Iowa State University Extension and Outreach field agronomist Leah Ten Napel said the 2022 harvest can be summed up in one word: variable.

"I hear reports from growers like last year, where they are surprised to have yields as high as they did. However, I am also hearing reports of lower-than-average yields across my counties," said Ten Napel who serves Cherokee, Ida, Lyon, Monona, O'Brien, Osceola, Plymouth, Sioux and Woodbury counties out of her Le Mars office.

"The hot and dry growing conditions absolutely contributed to the lower yields we saw," she said. "Areas that received more rainfall and timely rainfalls seemed to be on the higher end of the yield reports. All crops were affected by the lack of moisture, and growers saw those effects in their pastures, hay fields and row crop fields."

Charles Hurburgh, who manages the Iowa State University Grain Quality Research Laboratory and the Extension-based Iowa Grain Quality Initiative, said repeating 2021 was highly unlikely.

"They had everything going for them last year, that's true," said Hurburgh, who has been studying Iowa agriculture for four decades.

"But it was not what we

See **HARVEST** *on D6*

NWS: 2022 on pace to be driest year ever

Parched conditions impacts area yields

BY TOM LAWRENCE
NEWS@NWESTIOWA.COM

Glisan

Sorenson

Ten Napel

Licht

REGIONAL—How dry is N'West Iowa farmland?

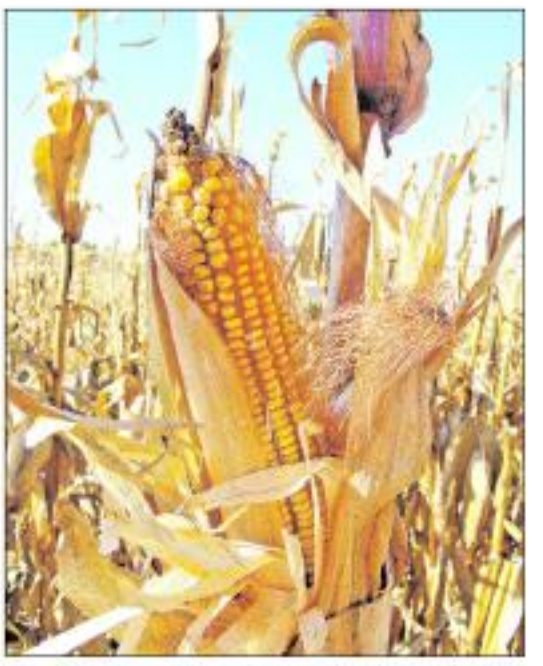
Iowa state climatologist Justin Glisan said it is "definitely very dry" after a hot summer and fall without normal rainfall. He said 2022 is in the top five driest years on record for this corner of the state.

The desiccated conditions impacted the 2022 crop and is raising concerns about the 2023 growing season.

Iowa State University Extension and Outreach field agronomist Gentry Sorenson of Algona said there is justifiable concern going into the 2023 growing season.

"Subsoil moisture is low. Currently in the water year, which started on Oct. 8, we see that we are behind in rainfall already for the water year. Rainfall would be helpful for the 2023 growing season before the ground freezes

See **DRY** *on page D5*



Corn prices continue to remain strong despite concerns about rising input costs. Still, operating margins need to be taken into consideration when weighing costs of production. Photo submitted

Harvest, prices down from '21, farm economy remains strong

Drought hinders production, but forecast looks promising

BY TOM LAWRENCE
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REGIONAL—The year 2021 was a dream one for Iowa farmers, with excellent growing conditions, a record harvest and high prices.

In 2022, economic conditions were not quite as dreamy, but they were not a nightmare, either.

Iowa State Extension and Outreach farm management specialist Gary Wright of Spirit Lake said farmers have done well in recent years.

"The most recent bullish price trend generally

See **PRICES** *on page D4*

Doug's Feed Service Inc. in Baxter has consented to a voluntary revocation of its grain warehouse license, effective Oct. 31, by the Iowa Department of Agriculture and Land Stewardship. The business, prohibited from storing grain after Nov. 30, is among five Iowa grain dealers to have had their warehouse and/or grain dealer licenses revoked or suspended or declared bankruptcy in 2022. Photo submitted

Five Iowa grain dealers sanctioned in 2022

Ag officials say that shows monitoring system working

BY TOM LAWRENCE
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REGIONAL—Fifteen Iowa grain dealers have had their warehouse and/or grain dealer licenses revoked or suspended or declared bankruptcy since 2009.

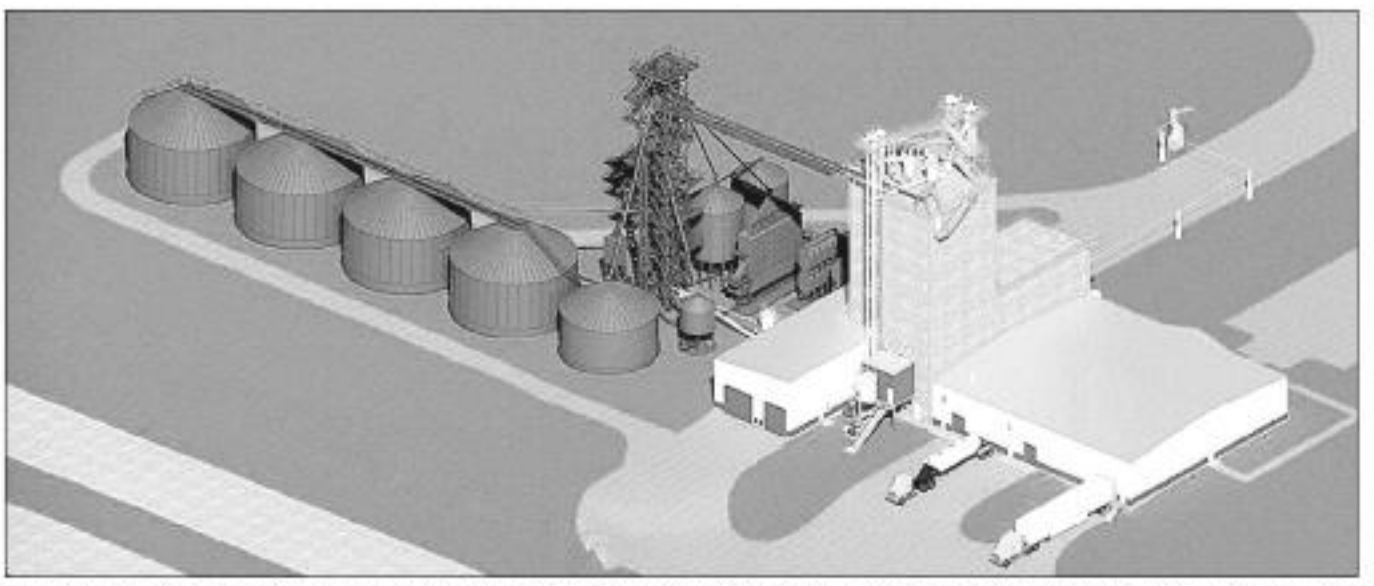
Five of those occurred this year.

Global Processing Inc., an organic soybean firm in Kanawha in Hancock County in north-central Iowa, had its warehouse and grain dealer licenses suspended by the Iowa Department of Agriculture and Land Stewardship in November. It did not have sufficient funds to cover grain checks owed to farmers. In addition, it had not filed required monthly financial statements.

The firm said it owed $10 million to at least 100 creditors.

Doug's Feed Store Inc. of Baxter in Jasper County in central Iowa agreed to a voluntary revocation of its warehouse license on Oct. 31 because of a failure to provide proof of insurance. Producers have until Nov. 30 to remove their grain, price it for payment or

See **DEALERS** *on page D5*



Iowa State University plans to address the challenge of finding trained people to produce livestock feed by opening a multimillion dollar full-size, operating feed mill and research facility adjacent to its campus located in Ames in the summer of 2023. Image submitted

ISU feed mill will be used for training, study

MILL

Continued from page D1

project, and donations continue being accepted.

"The feed, grain and livestock sectors are key to the success of agriculture in Iowa," Iowa State University president Wendy Wintersteen said in announcing the project. "As a top land-grant university, Iowa State is at the forefront of critical and cutting-edge research, education and Extension programs that support these important sectors. The Kent Feed Mill and Grain Sciences Complex will provide the space, facilities and technology to strengthen our ability to carry out our mission."

"The Kent Feed Mill and Grain Science Complex will be a world-class, state-of-the-art facility used by faculty and staff to prepare students, train industry professionals and conduct impactful research that will make Iowa State a recognized leader in support of the feed industry," said Daniel Robison, holder of the endowed dean's chair in ISU's College of Agriculture and Life Sciences.

Charles "Charlie" Hurburgh, who manages the Iowa State University Grain Quality Research Laboratory and the ISU Extension and Outreach-based Iowa Grain Quality Initiative, said facility has been needed for some time.

Hurburgh said feed for multiple species will be produced, including hogs, cattle, poultry, goats and even fish. But he said training young people to work in feed mills, elevators, ethanol plants and other facilities is the main objective.

Ray Klein

While ISU will hire a mill manager and an assistant manager, the majority of the work will be done by students. They will be compensated with internships, fellowships and tuition credits, in addition to regular pay, Hurburgh said.

Graduate students will engage in research work, he said.

Hurburgh, 65, operates a farm himself, and said one of the reasons for a shortage of workers is the reduced number of students who come from farm backgrounds.

"That is more and more the case," he said.

Farm kids understood technical terms and were familiar with agriculture, Hurburgh said. Now, it takes a lot of training to get students prepared to work in the field — literally.

Ray Klein, a Sheldon native who is the director of ISU's Office of College Partnerships in the College of Agriculture and Life Sciences, said students can find work at elevators, grain dealers, ethanol plants and other facilities in multiple areas.

"There's a whole span of employment opportunities," he said.

Klein said in addition to training young people, the mill and grain science complex will be used to provide short-course classes and continuing education for people currently in the feed and grain processing industry.

"The industry has a need for someone to provide continuing education," Klein said.

It helps keep facilities up-to-date, successful and safe as the workers deal with regulatory compliance issues, address biosecurity concerns and gain experience in advanced processing methods.

"Continuing education is an important piece for us in serving the people of Iowa," he said.

Klein, 51, is a 1989 Sheldon High School graduate. He grew up on a farm six miles southeast of Ashton.

The feed mill will be capable of producing 20,000 tons of feed a year, which will be used in classes, courses and internships carried out by ISU. The feed also can be used as ration for livestock and poultry. It will have a storage capacity of 200,000 bushels.

The complex will include a feed mill tower, feed milling and mixing structures, grain storage bins, a warehouse and an educational building with a large classroom.

A pilot facility, essentially a micro version of the feed mill, will allow the creation of batches of diets as small as 100 pounds, which will benefit research efforts.

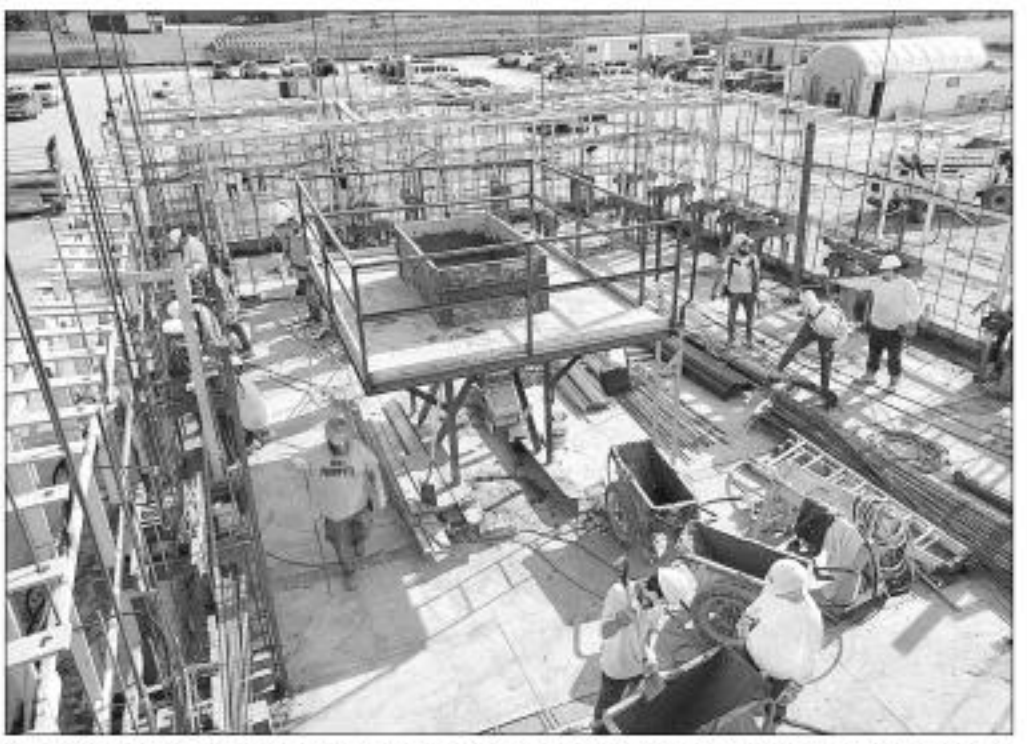
Students with majors such as animal science, agricultural biosystems engineering, agricultural business and more will work at the facility.

In 2021, a new minor in feed technology debuted, developed by faculty in the Department of Agricultural and Biosystems Engineering along with faculty in the Department of Animal Science. The minor will help prepare students to meet a growing demand for highly skilled professionals in the feed and grain industries.

Ground was broken on the feed mill Sept. 13, 2019, and the goal was to open the facility during the summer of 2021. But the COVID-19 pandemic and supply chain issues pushed the opening date back two years.

Hurburgh, Klein and others involved are eager for the first day of production and education.

The Kent Feed Mill and Grain Science Complex will be a world-class, state-of-the-art facility used by faculty and staff to prepare students and train ag industry professionals. Photo submitted



Work continues on the Iowa State University Kent Corporation Feed Mill and Grain Science Complex, a multimillion dollar, full-size feed mill and research facility slated to open in 2023. Photo submitted

The Iowa State University Kent Corporation Feed Mill and Grain Science Complex is being constructed on 10 acres of land in southwest Ames. The Iowa Board of Regents approved a $24 million budget, but the final figure may be closer to $30 million. Photo submitted

Ag analysts say crops hurt by spotty rainfall in Iowa in 2022

HARVEST

Continued from page D1

might have expected as the year unfolded," he said. "I kind of thought that we'd have a lot of corn that just plain gave up and would not reach maturity. That didn't happen. For the most part, corn reached maturity, which meant that test weights were reasonably good, feeding value was reasonably good and the dry weather didn't really top quality like we might have expected. We didn't turn out so badly."

Hurburgh also used the term "variable" when talking about the 2022 harvest. The north half of Iowa was particularly volatile, he said, with some farmers getting much-needed rains at the right time, while others just a few miles away missed out.

"The crops were hurt for sure, some more than others. Those with subsoil moisture, less so," he said. "Rainfall was spotty. It made for very spotty results."

Hurburgh said some producers are reporting average to above-average yields — "Not 2021 yields, but not bad" — while others saw a sizable drop in their harvest.

"So, it's hard to characterize, with one statement, what happened," he said. "It is highly variable, and the quality patterns are the same. They were quite variable. Quality developed probably better than we might have had reason to expect."

Hurburgh said many soybeans were small, with low protein, which happens in dry years. That sun-baked crop meant a 5 percent drop in weight for a lot of soybeans, he said.

With soybeans bringing up to $14 per bushel, that's a lot of money.

Corn did not fill out, Hurburgh said, and did not have the depth, resulting in smaller-than-normal kernels. There was some late-season rain that allowed corn in some fields to restart, he said.

While that moisture was welcomed, it posed a unique problem.

"Who would have thought we would have wet corn, wetter corn, 20 percent moisture, in late October?" Hurburgh said.

Corn coming out of fields at 14 percent to 16 percent moisture eliminates most of the need for drying, he said, but corn that matures slowly will always dry in the same manner and surrender moisture slowly.

Farmers refer to it as "hard-to-dry corn," Hurburgh said.

Extension field agronomist Gentry Sorenson of Algona said most farmers were able to complete their harvest quickly because of the dry conditions.

"The harvest season progressed with limited rainfall. Due to the limited amount of rain delays, harvest was able to proceed without many delays with corn and soybeans," he said

Corn yields were good if farmers received rain, Sorenson said.

"If rain did not fall at the appropriate time, yields did suffer and were reduced," he said. "In areas of severely drought-stressed corn, I heard of low yields in several areas where moisture limited production. Others who received just enough rain reported good yields. Yields were varying, oftentimes based upon moisture and rainfall, soil type and the ability of the hybrid to tolerate drought stress."

Soybeans yields were mixed as well based upon the drought or area, Sorenson said.

"Those that received just enough rainfall reported very good yields. Those that were short on rainfall reported yields that were reduced because of moisture stress," he said. "I did hear of pockets of soybean aphid that growers had to treat this summer; they were not widespread but were present in some areas and some fields."

The second and third cuttings of hay were reduced due to lack of rainfall, Sorenson said.

He offered some advice for producers.

"Farmers should evaluate their alfalfa and pasture stands this winter going into spring in pasture and hay fields to understand if interseeding or frost seeding will be needed and understand if stands were reduced because of a lack of moisture," Sorenson said.

Mark Licht, an ISU associate professor and Extension cropping systems specialist based in Ames, said the harvest went well for most producers.

"In general terms, it was very smooth. Few to no rain delays," Licht said. "The lack of precipitation that plagued a good portion of Iowa was a blessing for a smooth and timely harvest. Even with dry conditions, the corn yields were good, especially for northeast and east-central Iowa. Probably not what farmers in northwest Iowa wanted but maybe better than expected considering how dry it was. This is definitely attributed to good genetics that perform well in dry conditions as well as genetics that have good root structure and rooting depth.

"In northwest Iowa, yields took a big hit, especially in the extreme drought area. Yield may have been cut by 40 to 50 percent or more. However, in other areas with less drought, corn yields remained strong," Licht said. "Because of the drought, corn yields were highly variable within fields and from one field to the next."

He said soybeans did yield really well for a good portion of Iowa, especially areas in the state where some mid- to late-August rains came through.

"Soybeans are able to handle the heat and dry conditions better than corn, and this is really evident when those late-season rains come through," Licht said.

He said there was a silver lining in the lack of rain clouds.

"The warm and dry fall definitely helped farmers allow for the corn to dry down in the field to reduce drying costs. In some places where frosts killed the corn a bit early, the corn did not dry down quite as well," Licht said. "But, overall, the corn stood well in the field, even though drought stress likely resulted in weaker stalks. We were hearing reports of stalk and crown rots, especially as harvest got deeper into the fall."

Pleasant autumn weather helped ease some of the pain, Sorenson said.

"Warm weather did assist with the dry down of some farmers' corn this year. I have heard reports of some drier corn coming out of the fields," he said. "The drier fall in terms of lack of rainfall did give farmers an opportunity to harvest when they felt it was fit to harvest as well. Lack of rainfall during the fall allowed for a continuous harvest and drying costs were reduced."

Ten Napel agreed that the warm fall was a positive development.

"Harvest progressed very quickly because of the dry conditions," she said. "Some growers may have benefited from the moisture of the grain when harvested because they were able to avoid drying in storage."