Wheat gluten plant up and running

April 25, 2002

By JOY LEIKER

Hays Daily News

RUSSELL — Two weeks after U.S. Energy Partners reopened the doors to a wheat gluten plant, the first truck full of the bagged, powdery product rolled onto the scales and on the road toward the warehouse of a national gluten distributor Wednesday.

The reopening and production at the plant this month follows nine months of inactivity after it was closed down by its previous owner, Farmland Industries of Kansas City, Mo.

When Farmland closed the gluten plant last July, it blamed a pair of factors, including the excessive waste the plant produced and the costs associated with discarding that waste.

But as U.S. Energy Partners continued construction at its ethanol plant next door to the gluten facility, the company began talks with Farmland about the purchase of the shutdown plant.

Now, the combination of the two facilities has created an integrated arrangement that eliminated nearly every ounce of waste and likely most chances of financial failure at the gluten factory.

Jeff Nash, general manager of both U.S. Energy Partners factories in Russell, said the waste is eliminated because it is shipped on a conveyor belt across the Russell Industrial Park to the ethanol plant next door. More than 100 gallons of starch are transferred to the ethanol plant each minute during production. The starchy, leftover product is recycled as an ingredient in the production of the alternative fuel.

Wheat is ground in a typical flour mill, then the flour is sifted into a fine powder and mixed with water and enzymes that form a bubblegum-type substance. The large wet globs are separated by the likes of mechanical spaghetti-strainers, and eventually the pieces are beaten into smaller bits, then dried into what looks like a tanned-color fine flour. The gluten eventually is bagged in large, commercial-sized paper bags and prepared for shipment.

Regis Weiss, gluten plant manager, said the Russell facility, one of two wheat gluten plants in the state, processes 770,000 pounds of wheat each day, the equivalent of 13,000 bushels.

The plant produces 600,000 pounds of flour a day, and only about 15 percent of that results in gluten. Most of the mass is starch.

That ratio typically would spell disaster for most businesses, but because the starch can be used to make ethanol, Nash said the production of the high-protein bread ingredient is feasible. While the goal of the gluten plant remains the same as it was when it was owned by Farmland — production of the sticky substance that is used as a strengthening agent in bakery products — the relationship between the two plants is the ultimate example of synergy.

“It’s focus is on producing gluten. Everything else is incidental,” Nash said of the plant. “When this plant was operating on its own, the load it put on was not only a cost, but it was a lost product. Everything here is a value next door.

“We’ve taken about 99-percent of the load off the effluent treatment plant. We turned a lot of the negatives into a lot of positives,” he said.

Even with the addition of the 25-million-gallon ethanol plant, Nash said the company’s water use hasn’t skyrocketed because even the water used in the gluten process can be reused at the ethanol plant.

“Our total water consumption is no more than running the gluten plant, or running both the gluten and ethanol plants,” Nash said.
The Russell gluten is being sold to a Dallas bakery distributor. When customers go to the store and pull a loaf of bread off the shelf, the loaves on the bottom of the stack aren't crunched because of the gluten used to make the bread. Weiss said it provides an edge of stability.

While most of the Russell gluten likely will be shipped to one of the Texas company's four warehouses, some shipments for large, corporate customers might be shipped directly from the Russell site.

Even though wheat gluten is used in every bread recipe, Nash pointed out that wheat gluten production is not an expansive industry in the United States. Wheat gluten is produced in all parts of the world and is imported to the United States on a regular basis. Nash said those imports are an exchange for the country's billing as the top corn gluten producer in the world.

The pressure for more U.S.-produced wheat gluten continues. Weiss said that's a prime reason why every bag from Russell features the image of a U.S. flag and the "Made in the USA" slogan.

"That's a selling tool for us," he said.