The Western Dairyman

Keeping Western Milk Producers Fully Informed

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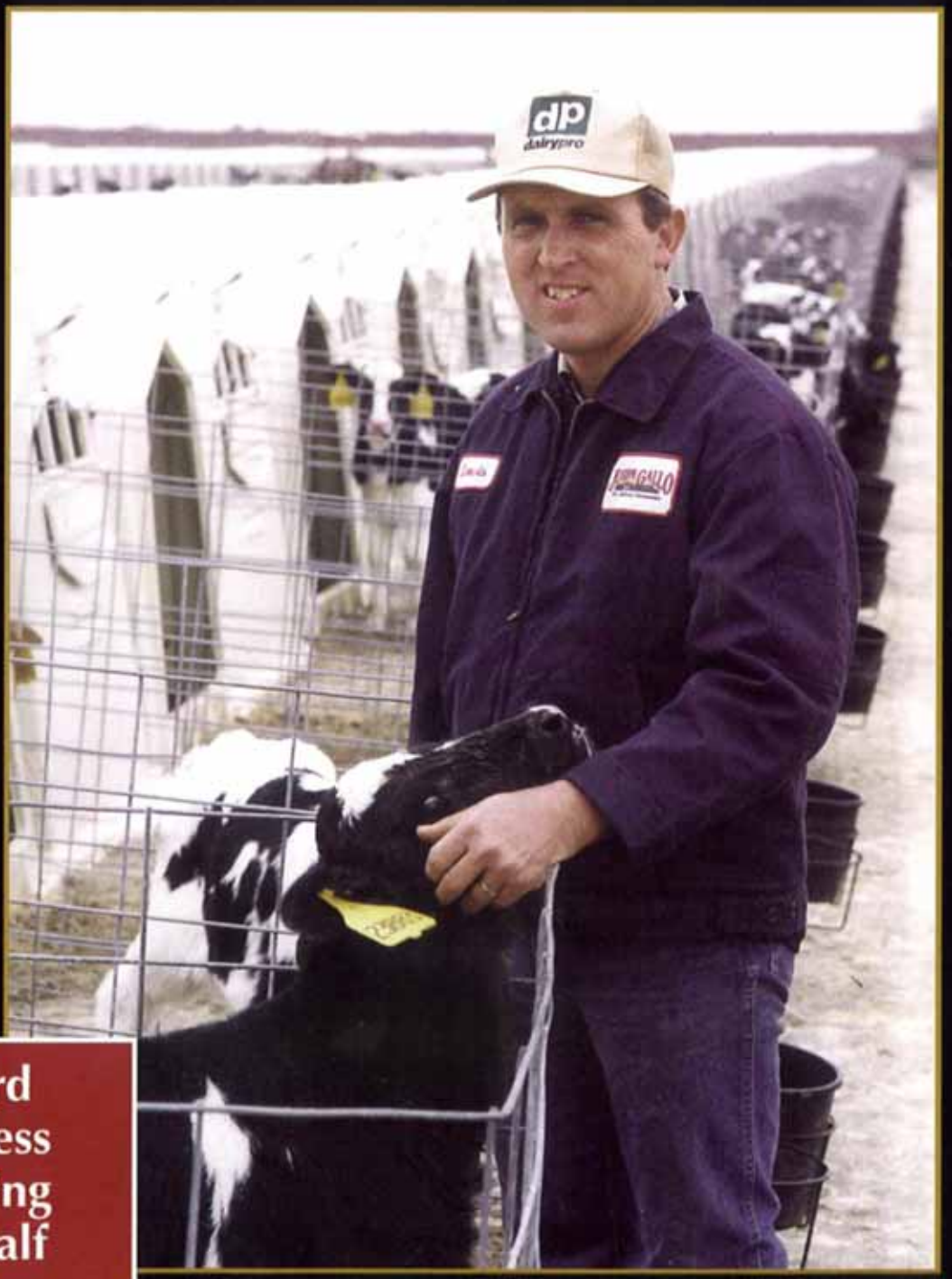
20 Acres of Calves at Joseph Gallo Farms.



twenty ACRES of calves

The harvest of dairy genetics is a nonstop process at Joseph Gallo Farms, where a calf is born every 32 minutes.

By Dennis Halladay

At one the largest dairy enterprises in the United States, where herd size and milk production typically attract most people's attention, the calf raising 'numbers' at Joseph Gallo Farms in Atwater, California, are on a scale that is equally impressive:

- *25,000 total dairy animals in 10 herds at five facilities produce about 16,000 calves per year. That's an average of 45 calves per day, or one every 32 minutes.*
- *Preweaned calves are housed in a virtual city of 2,300 individual plastic huts situated on approximately 20 acres.*
- *The maternity pen is staffed 24 hours a day.*
- *There are 10 full-time calf area employees.*
- *There are 8 full-time maternity area employees.*
- *Calf mortality rate (preweaning) is 5%... and declining.*
- *It takes just 3 seconds per feeding to deliver a half-gallon of milk to each calf.*
- *Every calf receives 1 gallon of colostrum within 1 hour of birth.*
- *Each 1% drop in mortality rate means 80 more heifers per year for the JGF milking strings.*

Notice the eartag number?

So large is the scale of calf raising at Joseph Gallo Farms that Calf Manager Lewis Anderson Jr. says none of his previous dairy experience could possibly have prepared him for the scope of the job when he took it nearly five years ago. But approximately 60,000 calves later, Anderson and his team have developed a system that is highly streamlined, amazingly efficient and,


Maintenance-free plastic huts (above) are a stark contrast to dilapidated wood hutches used previously, which were impossible to disinfect and now sit discarded in weeds, waiting to be used for a bonfire.


Closeup cows from all five Joseph Gallo single maternity pen site (above) where and they can be observed 24 hours a da

most importantly, very effective.

Being big does have its advantages, too. Three of the biggest calf raising keys at Joseph Gallo Farms result from the operation's enormous size: constant maternity pen care; a no-shortcuts colostrum program; and a calf area and feeding system that are tailor-made for consistency and efficiency. A fourth and perhaps even more crucial key – calf housing that promotes disease control and cleanliness – is actually an idea that Anderson borrowed from Midwest producers who start fewer calves in a year than he does in a day.

The calf raising process starts in a huge maternity facility located at one of the five JGF dairy sites. Closeup cows from all JGF locations are brought there approximately four weeks out and are grouped in 100-head pens to be watched literally around the clock. The maternity facility is staffed 24 hours a day by eight full-time employees, four per shift, with a staff veterinarian on site during the day and a private practice vet on call at night. Cows are moved from pen to pen – and progressively closer to the calving area – as freshening draws near. When a cow begins to push she is moved into a smaller delivery pen where every calving is observed and assisted if necessary.

Calves – heifers and bulls alike – are removed immediately after birth and taken a few steps away to a maternity house, where their navels are clipped and dipped and they receive an identification tag. Before they are one hour old calves receive a gallon of tested warm (103°) colostrum collected from the first milking of second lactation and up cows only. Before they are six hours old they receive a second gallon. For the rest of their first day of life, calves are kept in individual raised metal pens inside the maternity house.

"The first 12 hours are easily the most important period in a calf's life," says Anderson. "Feeding plenty of good quality colostrum right away covers a LOT of the mistakes you may make later on in life." He adds that a colostrum booster is also used to raise protein levels in the fresh colostrum.

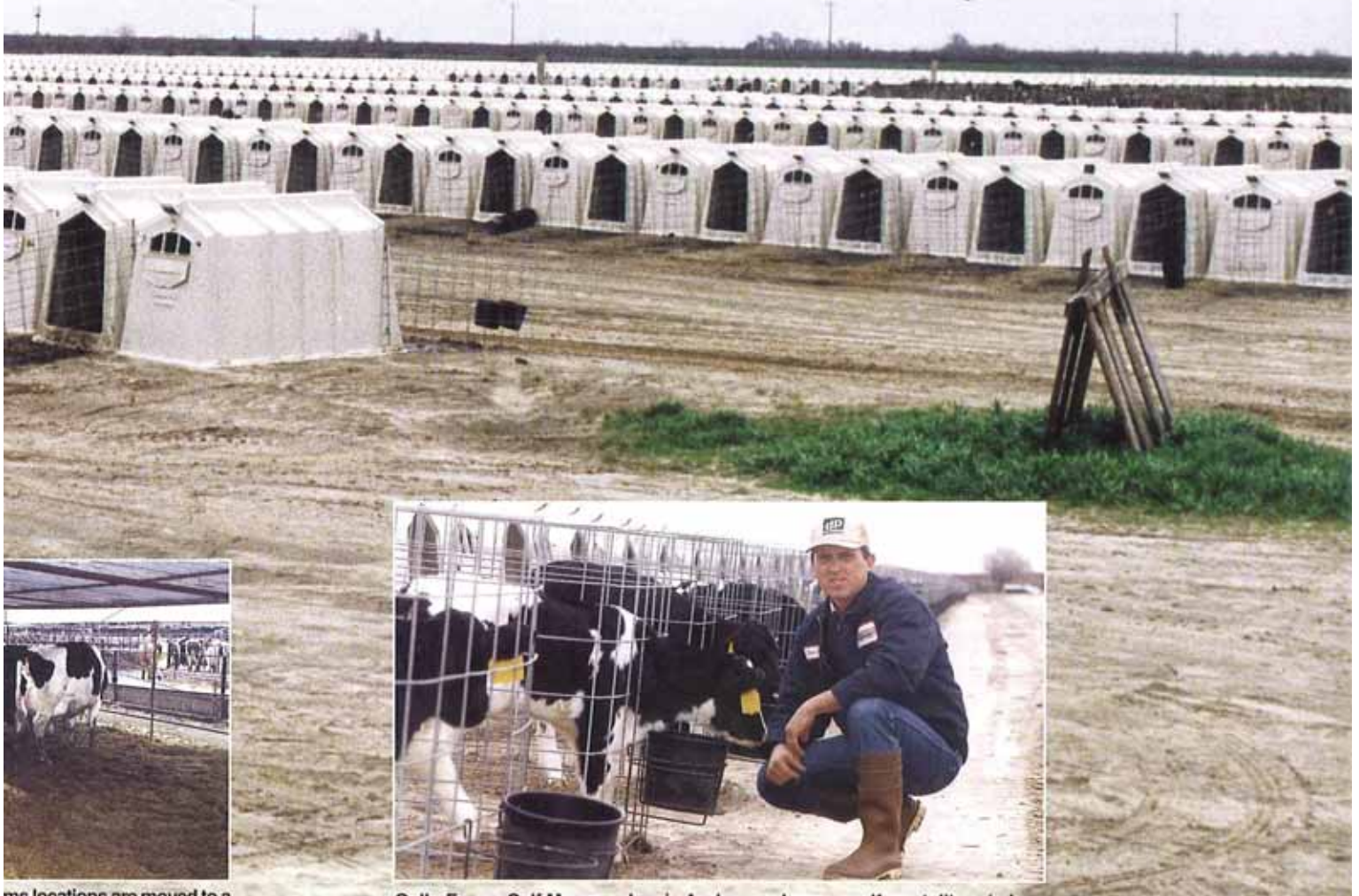
Anderson arrives at the maternity house at 7 a.m. each morning to take the newborns to the calf area. Some may be as little as two hours old. On average he picks up 45 head, but the one-day record is 73. When they arrive at the calf area they are placed in individual polyethylene plastic huts (CALF-tel®) where they remain until weaning.

The 20-acre site is literally a sea of 2,300 white huts that has to be seen to be believed. Huts are situated on long, low mounds of sand in arrow-straight rows of as many as 200 each. As one group of calves moves out of the huts, generous spacing between rows allows the huts to be disinfected and moved onto thoroughly sun-disinfected sand. At least one row of huts is moved every week.

Although the huts are arranged in side-by-side fashion, every other one is turned in the opposite direction for two reasons. First and most important, the staggered spacing makes it impossible for calves to touch one another, even though each has its own wire-fenced 'front

Yes, That Gallo

Joseph is the younger brother of the famous winemaking duo. Joseph Gallo Farms was founded in 1975 and is now operated by Joseph's son, Michael. JGF produces 30 million lbs. of cheddar, Monterey Jack and mozzarella cheese per year under the Joseph Farms brand label.



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l-time veterinarian is on staff

Gallo Farms Calf Manager Lewis Anderson Jr. says calf mortality rate has already dropped from 15% to 5% since switching to the pastic huts, and he is confident it can be reduced further to just 3%.

yard'. Second, it allows Anderson to easily keep track of the sexes: all bull calf rows face south and all heifer rows face north.

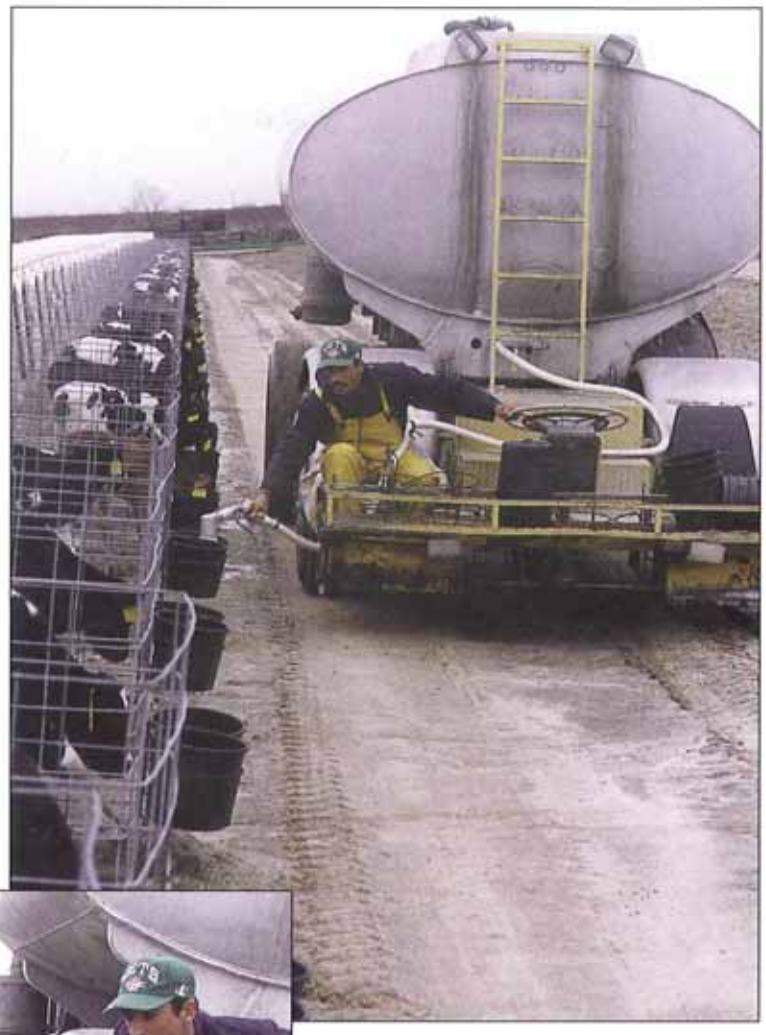
For the first five days they are in the huts, calves receive warm (90°-95°) pasteurized milk that contains scours medicine and vitamins. They also are vaccinated for IBR-BVD-Lepto and Clostridium. After five days the calves begin receiving an 18% protein grain mix that Anderson likes to feed in small quantities, but have in front of them all the time. In addition to keeping the grain fresh and minimizing waste, it is a mild form of challenge feeding to stimulate appetite. Fresh water is given twice a day in mild weather, three times when it is warm.

It is also at five days of age that calves are switched to non-medicated – but still pasteurized and still warm – milk twice a day, two quarts per feeding. This is an event that by itself is worth the trip to see in person. Joseph Gallo Farms has raised the bar of calf feeding efficiency to new heights with a self-designed tanker feeding truck (right, and below) that allowed two men to feed 2,100 calves in just 1 hour and 40 minutes the day we visited. That's less than three seconds per calf.

"We've been able to use equipment that has allowed us to reduce labor," says Anderson, "And we've physically set up our operation to be able to use as few people as possible." Total workforce at the JGF calf area is just 10 full-time employees.

Calves remain on milk until 50 days of age, when they receive only water and grain. Employees watch these animals closely for 10 days to make sure they are eating enough; Anderson wants to see 10-12 quarts daily consumption before weaning. Calves are weaned at 60 days and moved to 10-head outside pens where they are introduced to hay and switched to 16% grain. At successive two-week intervals they are moved to 25-, 50- and 100-head pens.

Brucellosis vaccination, branding and dehorning occurs at four months, and when heifers reach 350 lbs. in weight they are shipped to JGF's heifer raising facility. (Steers are typically sold at 300 lbs. as feeders.) If all goes well, early one morning in another 18 months (when the heifers are 22 months of age), Anderson will pick up their first calves and the cycle will begin anew.



This ingenious calf feeding truck was conceived of at Joseph Gallo Farms and custom-built by a local fabricator. The chassis and rolling gear were salvaged from a TMR feed truck, and a 2,000-gallon milk tank is mounted to the frame. The hydraulic steering gear and driving position have been radically repositioned to allow driver Armando Arroyo to fill each calves' buckets in gas pump fashion, in just three seconds each, as he slowly idles by and without ever leaving his seat.

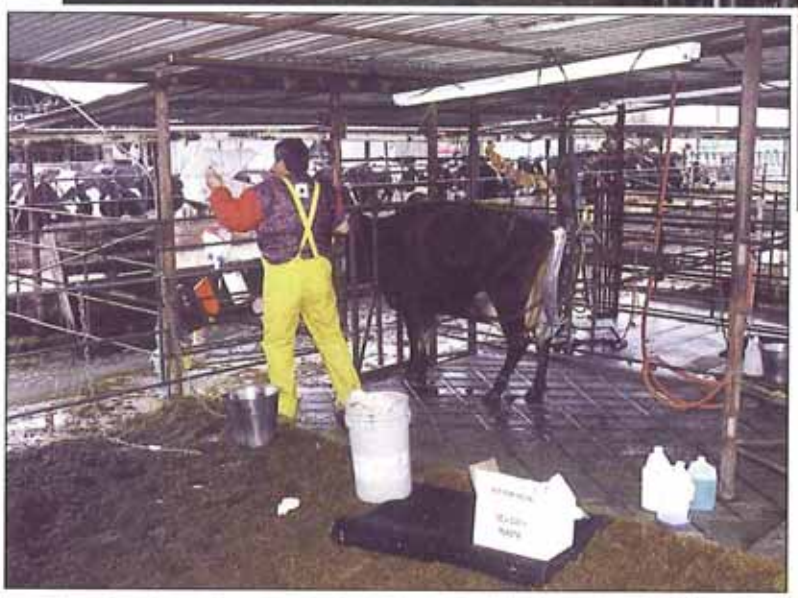
Anderson cites excellent employees, thorough organization, and the right facilities for much of the calf unit's success, but he says the radical switch in housing that was made in mid-1997 was the critical factor that allowed everything else to fall into place.

"When I came here five years ago I knew we had a problem," he recalls. "The first thing I saw was an exceptionally high death loss... over 15%. So we started tracking things to see if there was a common denominator. The biggest thing we kept coming back to over and over again was the wooden three-in-a-hutch housing we were using. We improved our colostrum, we improved our maternity area, we improved everything – and the problem was still there.

"So I started doing research on every kind of calf housing system I could find. I did research for over a year, and when I came across these plastic huts I talked to people everywhere who used them – from Canada to Kansas to Wisconsin to New Mexico. The thing I kept hearing over and over was, "We have less sick calves because they aren't infecting each other."

Anderson ultimately did a side-by-side trial with 250 of the plastic huts that lasted from January to August 1997. Within days of starting the trial, he knew what the results would be.

"Right off the bat we saw scours drop tremendously," he says. "We still had cases here and there, but the next one would be 10 or 20 calves away instead of 10 or 20 calves all in a row. I never felt, no matter how hard we tried, that we could ever get the wood hutches clean – and we tried everything we possibly could. I always



Newborn calves are kept clean, warm and dry in the maternity house (above) before being moved to the calf raising area. All calves receive two gallons of colostrum before they are six hours old. Included on the full-time staff at the JGF maternity area is veterinarian Geraldo Retana (left).

felt that wood was our problem."

The decision to switch entirely to plastic huts was an easy – although admittedly not inexpensive – one, and starting in August one semi-truckload of huts arrived at the calf area every week for 10 weeks in a row. As they did, Anderson and his employees took great delight as row after row of maintenance nightmare wood hutches was replaced. Today, they sit on the sides of the site, abandoned in the weeds to await their final end.

"It was a happy day – a VERY happy day – when the last wooden hutches were dragged away," smiles Anderson. "I hope to have a really big weenie roast with them one of these days."

Anderson points to four major benefits of switching from wood to plastic housing:

• Hut maintenance has dropped to zero, and he was able to cut the workforce from 13 to 10 employees.

• The number of scours, pneumonia and other calfhood disease cases has dropped 43%... simply because calves can't infect one another and the huts can be thoroughly disinfected between groups.

• Mortality rate has been slashed from as high as 15% down to 5%, and Anderson is confident he can get it down to 3%.

• Weaning age has dropped from 70-77 days to just 60. Anderson attributes this to the exercise area that each calf has with the plastic huts. Exercise, he reasons, makes calves hardier and stimulates them to eat more, thus making them more solid and mature than "Box-raised calves that really only grow like vealers."

But there's also a fifth major benefit to the plastic hutches that doesn't quite show up on the profit & loss statement: worker morale.

"The employees are having fun working here again," says Anderson. "And it's really exciting to have them come up and say 'Hey boss, we didn't lose any today!'."

So with all these benefits of plastic huts, is there any chance that wood hutches will ever be used at Joseph Gallo Farms again?

"Yes," Anderson laughs, "But only for the barbecue!"

"With just the death loss decrease we've seen so far, we anticipate on paper that in five years Mr. Gallo is going to have to build two more dairy sites. We're talking about 870 more live animals per year... and that means 435 more heifers."

– Lewis Anderson

Update from Lance Hampel:

The Rest Of The Story

After the initial hutch-vs.-hut test at Joseph Gallo Farms, calf manager Lewis Anderson knew he'd have to crunch some numbers and see if an investment in plastic huts penciled out.

The Costs

The biggest factor to consider was calf death loss – which dropped from an average of about 9% down to just 3%. With some 16,000 calves born per year at Joseph Gallo Farms, this translates into 960 more live animals (including bulls) per year. Lewis estimates the value of this at $350 per heifer saved, or $168,000 per year!

Reduced medicine and veterinary cost was another substantial savings area. Based upon a 43% reduction in the incidence of sick calves requiring treatment, Anderson projected medicine and labor savings at $60,000 per year.

Labor required to repair and clean the old wooden hutches was a constant and expensive chore that was a full-time job for more than one man. Plastic huts, however, last for years, require essentially no maintenance, and can be disinfected in minutes. "We figure the labor and materials we spent to repair the wood hutches cost us $30,000 annually," says Anderson.

The Payback

Total estimated annual savings for just these three factors was $258,000 per year – meaning the plastic huts would pay for themselves in just over 18 months. (Even using a more conservative value of $125 per heifer saved, resulted in an annual death loss savings of $134,000, or a payback period of about 32 months.)

Either way, it was a sound investment, so the decision was made: switch to plastic huts. Joseph Gallo Farms placed an order for 2,300 **calf-tel®** huts (replacing 6,000 wood hutches!), which soon began arriving in semi-loads of 250 huts each

Why calf-tel®?

Aware of the significant investment that was required, Mike Gallo, President of Joseph Gallo Farms, kept a close eye on the hut project as it progressed. It turned out the prices of different brands of huts were too similar to be a deciding factor. But both Mike and Lewis liked the **calf-tel®** unit. Their reasons were simple: the material **calf-tels®** are made from looks (and is!) strong and durable.

Lewis' initial impression was verified by talking to owners of **calf-tel®** huts, some of which had been in use for 15 years. In addition to telling him about "less sick calves", owners told Lewis their **calf-tels®** "Are still in good shape"; "We're still using them"; and "We still love 'em."

It became clear why Hampel Corp. backs **calf-tel®** huts with a 10-year written warranty – the longest by any plastic calf hut manufacturer.

Anderson wanted to try several different configurations of plastic huts and several feeding options during the on-farm trial. "Hampel Corp. was very accomodating," says Anderson. "They provided us with exactly what we wanted."

Hampel Corporation owner and president Lance Hampel (left), Randy Haass (center) and Brian Wesemann proudly display three of the company's high-quality shelters products (l-r): the calf-tel® Multimax heifer hutch, the calf-tel® Calf Hutch, and the Country Classic portable toilet.

Better Than Expected

In addition to the estimated pre-weaning medicine savings of $60,000 per year, Anderson also found healthier baby calves require less medicine as they grow up. He now projects a $20,000 cost savings per year in that area. In addition, healthier calves mean faster weight gain and earlier weaning (10 days sooner) – which means less total feed and labor and more calves weaned per hut.

In the case of Joseph Gallo Farms, the switch to **calf-tel®** huts also meant a savings in real estate – a BIG savings, as it turned out. The total amount of land required for all 2,300 plastic huts was just 20 acres, compared to 35 acres previously used for the wooden hutches. That means there's now room for future expansion at the calf raising unit.

Safety issues and worker morale are other significant benefits that are harder to put a value on. But lifting heavy wooden hutches to move calves in and out is a strenuous and potentially dangerous job that Anderson says Joseph Gallo Farms is glad to be rid of.

With all of these benefits, we're not surprised that Lewis Anderson is smiling so much these days. By the time he added up all those savings, we think he figures he got the **calf-tel®** huts for nothing!

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