

# We went the electronic ID, sort gate route

—by Hoard's Dairyman magazine and farm staff—



**HOARD FARM MANAGER** Jason Yurs puts on neck-mounted transponders before the cows are moved over to the new free stall barn.

AMONG the many decisions you have to make when planning a barn is how you're going to handle your cows for herd checks and other events. Basically, that means lock-ups or headlocks at the mangers or electronic ID and sort gates.

Both systems have advantages and disadvantages, but we went the electronic ID, sort gate route. Our primary reason for doing that was to avoid the unintentional, but all-too-common, failure to release cows from lock-ups as soon as they should be after being worked. Many people we've visited have devised various ways to remind themselves that the cows need to be released . . . day-glow painted release levers, signs placed prominently in the farm office or a timer, and so forth.

Not all lock-ups enable you to restrain one or a few cows for some reason and release the others. Sometimes, you have to restrain quite a number of cows before the one or ones you want actually lock themselves up.

Cow safety can be a factor. Depending on design, it is possible for a cow to get hung up in headlocks. And they can be tough on ear tags.

Some, not all, lock-ups are noisy. Without them, you're assured of a quieter barn . . . nice for both people and cows.

## We wanted info . . .

Our sort gate system requires the use of electronic ID. In our case, they are neck-mounted transponders. Beyond sort-gate handling, electronic ID seemed to fit in more closely with the type of information we wanted to generate about our cows individually and as a herd.

For example, our system IDs cows with a portal antenna when they enter the double-10 herringbone. We get a milk weight, peak milk flow, average milk flow rate, and machine-on time for each cow at each milking. These can be summarized and analyzed by group or for the entire herd. This is a valuable way to track milking consistency and get feedback on any changes in milking protocol.

We are pleased with the accuracy of both our parlor and sort chute ID system. The sort chute rarely misses cows. And the parlor portals rarely miss cows, providing they

enter single file. Our only parlor ID problem occurs when an 11th cow gets read as a group of 10 enters the double-10 herringbone. When that happens, that cow's ID won't be read again. However, when her ID is entered manually for the first position in the next batch, the other nine IDs reset automatically.

To help reduce this problem, we modified our entrance gates soon after starting to use the parlor. It was possible for cows to step forward past the angled entrance gate and get read by the antenna.

The two biggest uses we're making of our electronic ID now is sorting and heat detection. Farm em-

around the head – ear tagging new cows comes to mind – can be a challenge. Also, unless some device is placed behind the last cows in line, it is hard to keep them from moving around.

Cows are diverted to their right from the sort chute if they need some special attention, are going to be trimmed, or are being loaded out.

## Breed on activity . . .

All breeding done at the farm now is based on either seeing standing heat or a change in the amount of activity which is detected by the electronic ID system.

We have not used Ovsynch or any similar programmed A.I. protocols for six months. We are using prostaglandin only on cows that don't show heats by 75 days after calving.

There were two activity monitoring systems that we considered.

be done during each milking.

Activity on the ankle-mounted transponders is read only as cows enter the parlor. So you only then know how many cows are going to have to be sorted out for breeding.

Knowing that we were going to be relying on heat detection and activity monitoring, we made some changes in the barn design. We have generous alley widths (14 feet for the feed alley; 11-1/2 feet for the back alley) for easy movement of cows. Also, we made our cross alleys (with rubber matting) wider. They are 12 feet between the waterers and the free stall end wall. We were told by Ray Nebel, formerly of Virginia Tech and now with Select Sires, that is where a lot of the mounting activity would take place, and that has turned out to be the case.

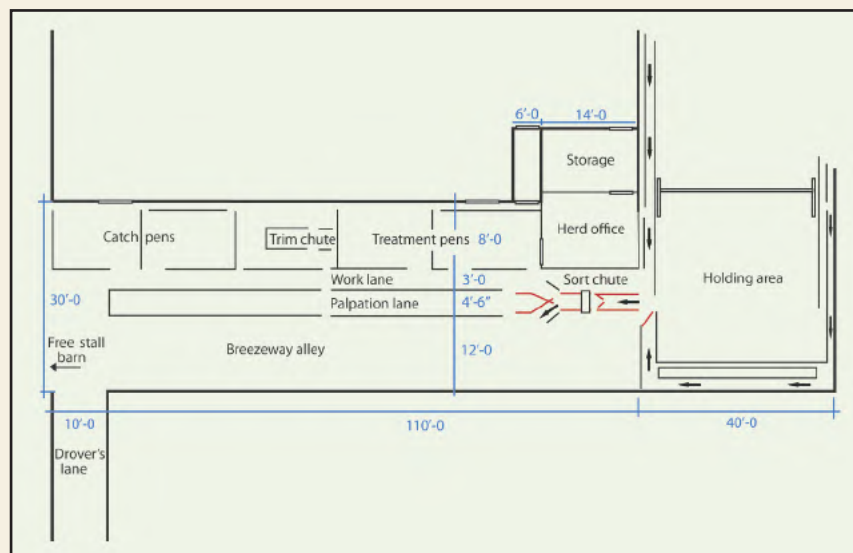
In recent months, our conception rates have been around 32 to 34 percent. We have been trying to inseminate cows about 4 to 6 hours after their peak activity. It has been interesting to note that some cows tend to show greater activity for a day or more when in heat, while most just for a few hours.

## Technology costs . . .

Electronic ID is not cheap. When spread over our projected 550 cows, our system costs about \$195 per cow. That does not include wiring. By contrast, headlocks might run \$90 a cow. Our transponders and neckbands alone cost just over \$100 per cow. Some day, the major dairy equipment companies are going to design their ID equipment to be compatible with much less expensive ID tags . . . at least we sure hope so.

We actually have a double ID system. In addition to the neck transponders, we also have RFID (radio frequency) button tags in the ears. These are used by the American Guernsey Association but obtained from Holstein U.S.A. Since we use those tags for registration, instead of tattoos, we also need an ear tag with the corresponding registration number. Those tags also have name, barn or management number, sire, and month and year of birth.

We also are part of a pilot project being conducted by the Wisconsin Livestock Identification Consortium. Through that program we have been given wands that read our RFID tags and Palm Pilots in which we can enter data, such as during herd checks. This information then can be downloaded into our herd records system.



ployees program the system to sort cows as they leave the parlor. Our parlor has double return lanes, but all cows go through the sort chute after each milking as shown.

We have a three-way sort. Under normal circumstances, cows go through the sort chute and are diverted to their left back to the breezeway alley so they can return to their group in the free stall barn.

When cows need to be held for herd check or some other group work such as vaccination, they are directed straight ahead as they leave the sort chute moving into the palpation lane or management rail, as some people call them. Work such as breeding and herd checks is done during milking to keep the amount of time cows spend in the palpation lane to a minimum.

Like headlocks, palpation lanes are not perfect. Doing anything

One uses ankle bracelets with transponders. We chose the transponders on neck straps.

In some herds we've visited, the ankle transponders seem to be encased in dried manure. That manure could be washed off in the parlor before it accumulates, although that doesn't appear to get done.

We felt that the main advantage of the system we chose is what might be called "real time" monitoring. With this system, there are antennas mounted at several places in the barn and between the breezeway and holding pen. Cow activity is monitored continually. The benefit of this is that someone can check on how many high-activity cows there are at any time around the clock.

This helps plan ahead for the number of breedings that need to