They've done no-arm pregnancy checks for over eight years

Blood tests replace the vet and identify pregnant cows after just 30 days at this Washington dairy.

by Hoard's Dairyman staff

RECTAL PREG CHECKS are a thing of the distant past at Tony Veiga and J&K Dairy in Sunnyside, Wash. More than eight years ago the 1,700-cow dairy replaced tedious arm-in-cow palpations with a simple blood test that improved weekly workflow and freed up the veterinarian to give more input on production management topics.

The blood tests also allow pregnancy confirmations to be made 30 days after breeding instead of the 42 where they once were. This has tightened up their timed A.I. program and helped cut average calving interval to just 13.05 months. Age at first calving has been 22 months for over five years, since they began raising their own calves.

Better labor efficiency . . .

Dairy manager and partner Jason Sheehan says making the switch to blood test preg checks was initially more about improving labor efficiency than anything else.

"Arming cows was working just fine and our pregnancy rate was good, but we wanted to reduce the amount of time the cows were locked up at vet check," he recalls.

"At that time we'd lock up 800 cows, the A.I. technician would go through them, and then the vet would come in. Thursdays used to be an all-day vet check. That was tough on everyone, so we were looking for a way that would fit our system where we could go in a day ahead of the vet check and preg check cows somehow. Tuesdays were a pretty light work day then, so when this blood test came out it matched up perfectly because we could do it then."

Reproduction takes up a huge amount of time for the 1,700 milking cow operation because it is also the calving and breeding site for a 1,300-cow dairy that the partners own close nearby. All animals calve at the main dairy and go into a fresh pen. From there they move into a high string where they eventually enter a timed A.I. protocol until 120-130 days in milk. If they aren't confirmed pregnant by then they are shipped to the smaller dairy. Anything over 250 days in milk goes into a bull pen, but they only get 50 days to settle.

Pregnancy test blood samples are taken every Tuesday morning during the same hour the A.I. technician is there, so the cows are never locked up any additional time. "That's something I really like because regular vet checks seem to last for hours," says Sheehan.

Taking the small (5cc to 10cc) samples takes only a couple of seconds: lift up the tail and insert the needle on the vial into the vein on the underside about five inches up from the rectum.

"Writing the eartag number on the vial actually takes longer," notes Sheehan. "Cows hardly even know you're back there; it's much less invasive than arming them and cows sometimes do get nicked up during that process, too."

Herdsman Victor Arroyo, a 10-year employee at the dairy, always collects the samples, which generally averages 80 to 85 each Tuesday. Sheehan says he usually gets through the pens as quick or quicker than the A.I. technician does. Vials go into refrigerator while Arroyo makes a list of eartag numbers on them for the lab. Around noon someone from the dairy then personally takes them to the lab in town about four miles away.

"Having the lab right here in town is a huge advantage that helps makes this process work for us," says Sheehan.

Results e-mailed next day . . .

Test results cost $2.40 each and are e-mailed to him the next afternoon for uploading into his management program, which he can do remotely from anywhere he has access to a computer. The next day, Thursday, is vet check day and all open cows come up to start on an Ovsynch cycle. All cows that are called pregnant by the blood test are palpated at 50 to 56 days to reconfirm they're pregnant and that early embryonic death has not taken place.

Sheehan says the biggest thing the blood tests have done is spread out the dairy's weekly workload.

"Mornings are always the time we like to work with the cows, and Monday through Friday is when we do the majority of it," he explains. "What we were having before with vet checks on Thursday was cows were locked up a lot longer. The blood test has allowed us to move around the workload so it's more even on each day, and we're not having those big long vet checks. The other thing is that over at our other dairy we A.I. now and I don't even need a vet there."

Not arming so many cows is something Sheehan likes because it means his vet is able to consult with him more on production management strategies. The biggest advantage he sees to the blood test, though, is how perfectly it fits into his Ovsynch program.

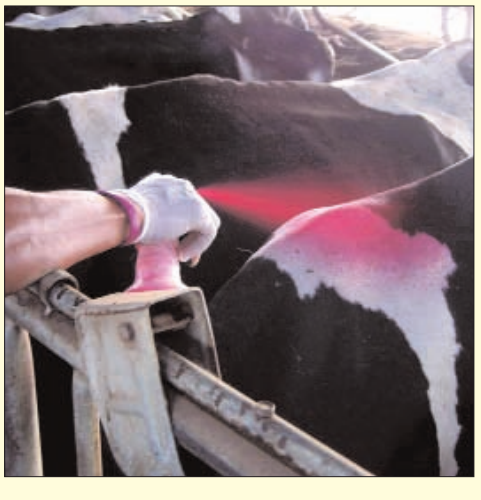
"We time A.I. on Sundays, so 30 days later is always a Tuesday. That's why Tuesdays became blood day for the pregnancy test," he explains. "Tuesdays used to be a real slow day in our treating, handling and moving system. Our overall work week has become much more steady and efficient by adding the

TAKING BLOOD SAMPLES is a process that starts with herdsman Victor Arroyo walking in front of cows with his electronic I.D. reader (first photo).

When he finds one that has reached 30 days since breeding he marks her with spray paint (second photo).

After going through the pen he then goes behind the cows. When he finds one that he just marked he takes a sample vial and writes her eartag number on it (third photo).

Taking the sample is a quick and easy matter of lifting the tail and withdrawing 5 to 10 cc's from the vein on the underside (last photo.)



blood test and shifting a lot of the Thursday overload to it. Thursdays used to be an all-day vet check; now we're done before noon. On a [palpation] program I wouldn't be able to preg check at 30 days, it would be another whole week before I'd be able to arm them. In fact, we would have to do it on Thursday so it would actually be 39 days before we could preg check."

Sheehan says in his situation the biggest drawback to the blood tests is "number confusion" – the potential to "goof up" cow numbers somewhere along the way.

"When you're arming cows it's simply a matter of "she's pregnant" or "she's not" and then you move on to the next one," he explains. "But the blood test brings a whole different scenario because only one employee, Victor Arroyo, does it.

Many chances for errors . . .

"When he finds them he checks their ear tag and makes sure he writes the right number on the blood collection vial, then he bleeds them. When we take the tubes into the lab they have to transcribe the cow numbers correctly, so we learned it helps prevent errors if we give them a list of the cow numbers in each batch. The lab also has to enter those numbers correctly onto the results sheet, and I used to have to enter the results into our computer. There are a lot more chances for errors compared to when the vet just arms them.

"If it weren't for Victor I don't know if I would continue doing this, because it takes a person who is good with numbers to make it work, and he is extremely good with numbers," adds Sheehan.

Although the palpation recheck at 50 days is an extra step, he says he would probably continue doing it regardless of what initial preg check method he used.

Admittedly a fan of science, technology, and new ways of doing things, Sheehan says he's thought about what might be even better ways to confirm pregnancy in cows.

"A cowside test, or a milk test that happens automatically during milking and takes no labor at all would be the coolest," he smiles. "It would be great to not have to bleed and pay for sample tests, or worry about making number errors. If I could do something cowside or right here on the dairy, that would be what I want. Our vets around here don't need more work. They're looking to get into more of the management side of things, which is where I'd like them to be for me."

Blood testing has worked well for Sheehan because of the way they fit perfectly into his reproduction program workflow, but they might not work for everybody.

"It takes more management, there's more potential for errors, and it takes a real good person doing it," he emphasizes. "You'd better have the right person pulling blood who is darn good with numbers. It definitely takes dedication and a certain skill set to make this work. And you'd better have some controls along the line; the last thing you want to do is write down the wrong numbers and enroll cows in Ovsynch that are actually pregnant. You've got to have a safety net everywhere along the line. It took all of us at the dairy and at the lab to be diligent and make sure we knew what was going on.

"The blood test maybe isn't cheaper than arming cows, but it doesn't cost us more," he adds. "I like some things about it and I dislike some things. It isn't for everybody, which is the case for all new technology out there. But you have to continue to adapt new things because the dairy industry continues to move forward at such a fast pace. You don't want to adopt every new thing that comes along, and you can't afford to, but you have to pick and choose what will work for you.

As we move forward in the dairy industry I think you have to keep looking for better ways of doing things. You don't always have to be an early adopter and jump on every new thing, but you do have to constantly look at new things and see which ones benefit your bottom line or move you forward."