

# Pregnant or not?

**OENKERK [NL]** ■ After the cow has been inseminated, a farmer is anxious to know if the insemination has led to a pregnancy. Various available methods to determine whether a cow is pregnant or not are discussed in this article.

The presence or absence of a pregnancy obviously has a lot of influence on a number of management decisions regarding that cow. Every day that a cow on the farm is unnecessary not pregnant is a direct loss. Therefore, it is of the farmers benefit to find out whether a cow is pregnant or not as soon as possible. It remains important that a farmer always realises that when a pregnancy has been defined, this is not a 100% guarantee that nothing goes wrong afterwards. It's important to keep observing the pregnant cow and, when in doubt, it is best to let a vet check her again. The different methods to establish a pregnancy are:

1. Optimal heat control
2. Milk research
3. Ultra-sound scanning
4. Rectal examination
5. Percussion

## 1. Optimal heat control

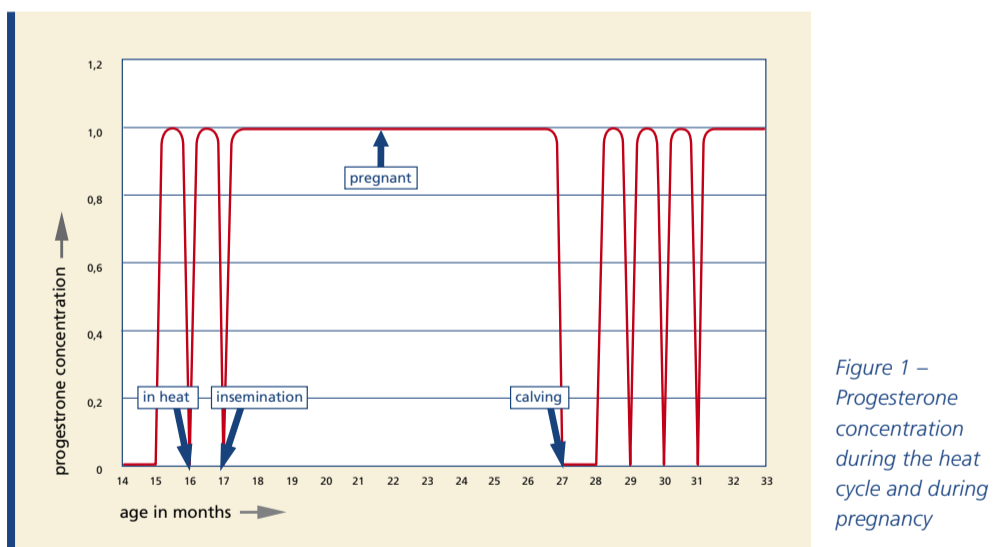
For farmers who know their animals well, it is possible to quite accurately determine whether or not the animal concerned is pregnant based on cow behaviour. It is very important to carry out stringent checks during the cyclic period of three and six weeks after insemination.

If the insemination has not resulted in a pregnancy, a healthy cow will show heat signs again after three weeks. If the cow remains quiet around this time, the farmer can assume that a real chance that the cow is pregnant.

## 2. Milk research

It is possible to measure the progesterone concentration of a milk sample, three weeks after the insemination, to detect pregnancy. If the cow is pregnant, the concentration of progesterone in the milk is very high. This is because the corpus luteum on the ovary has reached the maximum size, and is therefore capable of producing a maximum amount of progesterone. This helps maintaining the pregnancy. A disadvantage of this method is that the progesterone concentration also remains high when there is infection and pus in the uterus.

In figure 1, the progesterone concentration during the heat cycle is shown. Note the level of progesterone during pregnancy and the times when the yellow body reaches its maximum size during the heat cycle.



## 3. Ultra-sound scanning

From 30 days in heifers and 35 days in cows, it is possible to determine pregnancy by using the ultra-sound scan technique (shown in the picture). Particularly for large dairy farms, this method is a welcome addition to other existing techniques.

Animals that are definitely empty, have to be inseminated again as soon as possible to prevent the calving interval from increasing. So, with this method, it is clear that the animal is not pregnant at an early stage and the farmer knows he has to watch the animal closely in the period after this check.

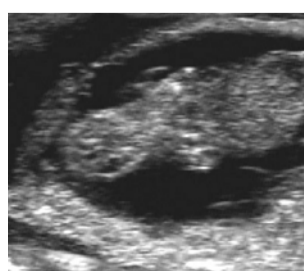
Images by ultra-sound:  
non pregnant uterus



fetus 35 days



fetus 50 days



Ultra-sound  
scanning by the vet



All animals that are declared pregnant before forty days after insemination have to be rechecked. This is because there is a small percentage, of less than 5%, that the animal could come into heat again, even after six weeks.

An extra advantage of the ultra sound technology is that the status of the ovaries can be checked and it is also possible to see if the uterus is clean or not.

## 4. Rectal examination

Rectal examination is the most common method for determining whether or not an animal is pregnant in dairy farms. It is a method that requires a lot of experience and an extensive knowledge of the female reproductive tract. Then it is possible to form a proper diagnosis from six weeks onward. If carried out with caution, there is no risk to the embryo/foetus. When this procedure is carried out by an incapable person or without caution there is a serious risk. So some farmers don't use this method to determine whether or not their animal is pregnant. For a proper diagnosis using rectal examination it is important (particularly at short gestation) to first remove as much manure from the rectum as possible. This is unlike AI, where manure in the rectum is not obstructive.

## 5. Percussion

From five months onward, it is possible to determine whether the cow is pregnant or not without many tools. By standing at the right side of the cow near the stomach and making short percussive movements on the underbelly, it is possible to locate the calf. In order to get familiar with this method, it is recommended to also do this in empty cows. Once you know how an empty cow feels, it is much easier to recognise a pregnant cow.

The area on the underbelly where the cow should be tapped



## TIPS

- Check the cow both at three and six weeks after insemination if she shows heat signs.
- If the progesterone level in the milk is high three weeks after insemination the cow is most likely pregnant.
- With ultra-sound the farmer can check for pregnancies after between 30 and 35 days. It also checks the status of the ovaries and the quality of the uterus.