

Best practice pregnancy scanning

A powerful tool

There are cost-saving and production benefits from identifying hinds that didn't conceive during mating. These unproductive 'dry' hinds can be culled in early winter or a little later for the lucrative chilled season, and their feed allocated to other stock.

There are two ultrasound scanning methods; internal probe (rectal scanning) and flank scanning. A rectal probe scan can identify the age of the foetus to within five days but it must be done between days 30 and 80 of pregnancy.

Flank scanning is less precise for foetal aging but can be used for pregnancy diagnosis throughout pregnancy.

Well-trained operators typically identify if a hind is pregnant 99% of the time.

Well-managed herds typically have six dries/100 adult hinds and 8-12 dries/100 well-grown yearling hinds.

Financial benefits

Scanning costs around \$3/head for pregnant/not pregnant scans and around \$4/head for rectal scans for foetal aging.

The benefits greatly outweigh these costs. A pregnant mixed-age red hind needs to consume about 2.4 kg of dry matter/day during mid-pregnancy just for maintenance. Over 90 days this is 216 kg of feed.

Identifying hinds not carrying fawns ('dry hinds') means they can be sold for venison or managed separately. This frees up feed for hinds that are pregnant or other priority stock.

Since its commercial introduction in the 1990s, pregnancy scanning has become widely adopted in the deer industry.

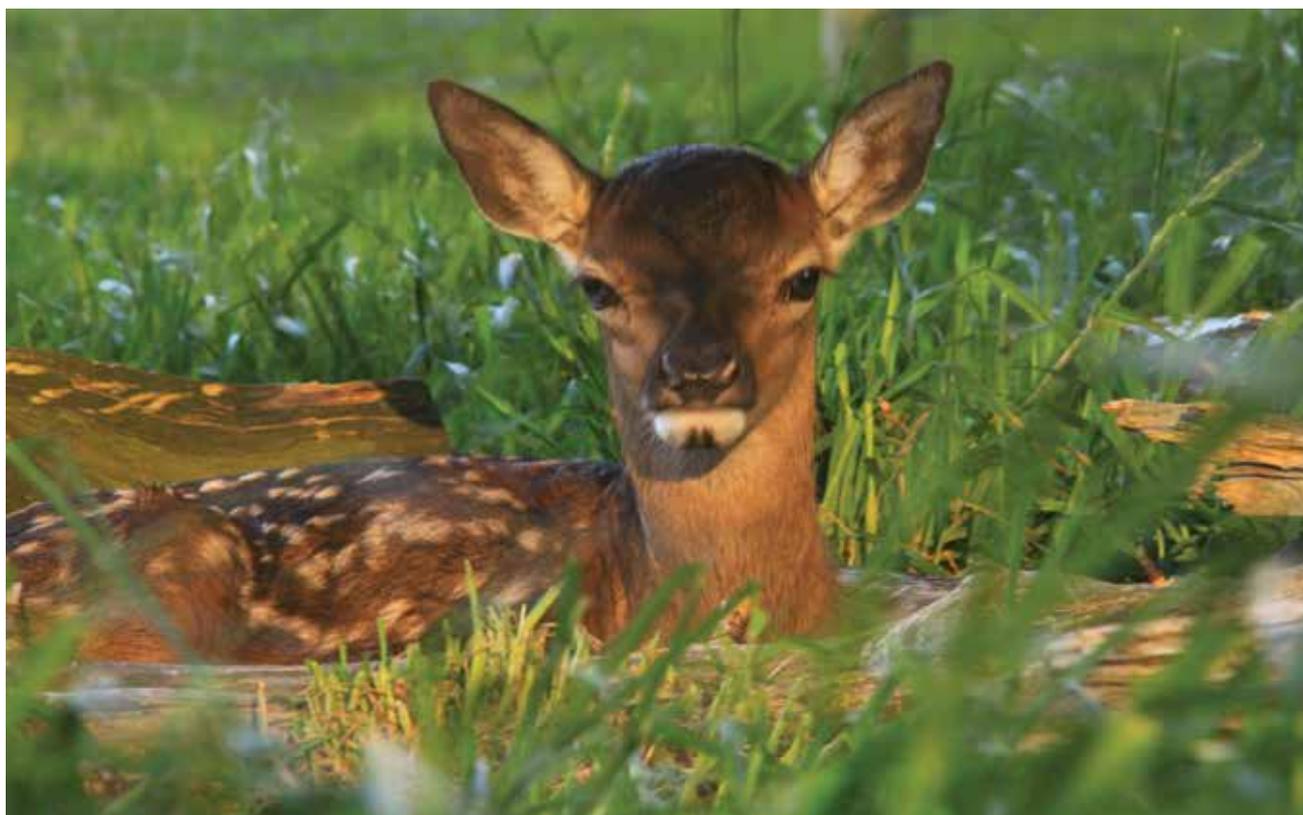
KEY POINTS

- Internal scanning with a rectal probe can identify dry hinds and the age of the foetus to within five days. This is best done between days 30 and 80 of pregnancy.
- Flank scanning is faster and can be done throughout pregnancy. It identifies a pregnancy but not foetal age.
- Hinds not carrying fawns can be sold for venison or managed separately. This frees up feed for hinds that are pregnant.
- Knowing the day of conception means hinds can be sorted according to expected fawning dates, and the early-fawners allocated more feed earlier.
- Scanning can show whether artificial insemination (AI) was successful and help identify the sire.

Benefits of foetal aging

Using scanning to identify the age of a foetus means farmers can:

- Identify the early-conceiving hinds and use them (and their progeny) in future breeding. Hinds that conceive earlier in the season tend to have better sized fawns at weaning. This desirable trait is moderately heritable.
- Draft hinds into early, mid and late-fawning mobs and feed accordingly.



Only pregnant hinds can produce a fawn. Unidentified dry hinds consume valuable feed that could be put to productive use

- Confirm if AI done on a certain day actually resulted in pregnancies or if the follow-up stag sired the fawn.
- Reassure buyers that hinds sold in-fawn were actually pregnant at the time of scanning.
- Provide this information to the DEERSelect genetic evaluation programme. It is important to know the conception date (and the resulting fawning date) so that later-born fawns are not penalised when assigning breeding values for growth rate.



Photo: Jamie Ward

Pregnant or dry? Pregnancy scanning will show a mob's conception rate, identify unproductive hinds that can be sold and can predict the date when a fawn will be born

Double-scanning to identify losses during pregnancy

If the loss of fawns between conception and birth is thought to be an issue, double-scanning can help narrow down where the problem lies. This is a good strategy if mobs scanning 100% in-fawn produce poor fawn survival rates at weaning.

Scan at 40-60 days and then again after day 180. This enables you to identify any losses during this period. If losses are high, this may be disease-related. Consult your veterinarian.

If double-scanning shows losses during pregnancy are not an issue, but survival percentages are poor, the losses will be occurring between birth and weaning. More investigation is needed to find the cause.

The mechanics of rectal probe scanning

A lubricated probe is inserted in the rectum while the hind is held secure in a crush. This is most accurate between days 30 to 80 of pregnancy (late May to early June), a period when the foetus grows in a very uniform way.

After 80 days, foetal growth and development is more variable, making accurate age assessment impossible.

Because the operator needs more time to identify the foetal age, rectal scanning in early pregnancy is more expensive than flank scanning. An operator can usually rectal scan 500 to 1500 hinds/day. Operators use the size

of the foetus and the surrounding tissue mass to estimate a date. Genotype has little effect on foetal size early on, so adjustments are not needed for wapiti-type hinds.

The mechanics of flank scanning

An ultra-sound scanner head is held against the flank. The operator typically walks among the hinds while they are standing in a small yard. The hand-size scanner is placed against the udder or nipple, scanning the uterus. A crush may be need for large elk. Typically an operator can scan 1500 to 2500 hinds/day (around 200/hour).

Best practice management

Before

There is a short window from 30-80 days of gestation (late-May to mid-June) for rectal scanning so book early. Where AI is being used, scanning is usually performed 40-50 days after insemination.

Before 30 days, early stage pregnancies can be difficult to detect. After 80 days, large foetuses drop lower into the abdomen and become difficult to see.

During

Yard hinds on the day of pregnancy scanning. Time off feed and stress should be minimised.

Mark dry hinds with coloured raddle and draft them off. With pregnant hinds, record the estimated foetal age against the hind's plastic tag number and/or load it onto its EID tag (NAIT tag or other EID).

After

Dry hinds: Hinds that were early-scanned dry should be re-scanned 20-30 days later.

Those that are confirmed dry can then be culled or retained for slaughter in the spring chilled season.

Pregnant hinds: To work out the expected fawning date, add 234 days (33 weeks) to the estimated conception date for red deer. Add 240 days for red x wapiti crossbreds.

Poor nutrition during the last half of pregnancy can increase gestation length and vice versa.

Draft hinds into foetal age mobs at any stage, but normally by week 18 of pregnancy, when foetal growth accelerates along with hind feed requirements.

If feed supply is tight in late-winter, this enables the early-fawners to be preferentially fed. Increase pasture allowances for each mob in turn as it approaches fawning (see *Deer Fact*, 'Feeding hinds for maximum fawn growth').

About 10-14 days before their estimated fawning date set-stock hinds in their fawning paddock.

More >>

DINZ *Deer Hub*: Foetal aging, bit.ly/DEER-FOETAL-AGING

DINZ *Deer Fact*: Feeding hinds for maximum fawn growth