

Reasons for udders to be added into BW:

- 2nd highest cull factor after reproduction, in many herds
- Becoming a larger issue/focus as more herds move to OAD or higher output
- High correlation with teat health, cup slip, even milking out etc which in turn cause SCC and clinical mastitis issues as well as grumpy/temperamental cows.
- The correlation with longevity, quoted by Peter Amer, takes too long to gain reliability on animals, whereas TOP can be measured in the 1st lactation and gain very good reliability.
- Cow values move from genuine dairy cow (\$1500-2000+), to cull cow (\$500-1000), or worse to petfood (\$30) if she is unfit for transport.
- Bad collapsed udders result in cows needing to be culled asap = lost milk potential as they cannot be milked for the remainder of the year.
- Poor uddered cows are ineligible for breeding replacements = more bobbies plus greater pressure on the remainder of the herd to generate good quality and quantity of replacements

High Output:

Whilst a high output index is very appealing, it's probably low on the priority list compared to getting BW correct in the first instance. If a High Output index were to be developed, some of the assumptions listed in the consultation document seem incorrect and I wouldn't support an index based on such assumptions:

- Cows doing ~400kgMS aren't really "high output", this must surely just about be the national average in years to come? I'd say cows need to be doing at least 100% of liveweight.
- Higher feed costs is an extremely debatable factor. Grass alone isn't cheap, and DNZ quotes values of grazed pasture around \$300/tDM which is very similar to maize and pke used to support higher output herds.
- Liveweight should not be further penalised due to the above point on feed costs, and also due to the opportunity for good higher liveweight cows to consume and much more above maintenance and hence produce more than increasing the stocking rate.
- Fertility weighting should probably be similar to BW. Just because higher output herds may utilise tools such as extended lactation or split calving, doesn't mean that's their goal in an ideal world. Some resort to it purely because they are exposed to the inverse relationship of milk production with fertility. Most farmers would love to have low empty rates (wastage) and be able to have a compact seasonal calving.
- Udders would be vital in a high output index.
- OS high output indexes may give some indication but still wouldn't capture the performance on NZ farms and conditions.

Increase DIM from 270 to 305:

Increasing to 305 days will allow genetics with good lactation persistency to get some brownie points which is an important factor for farms trying to increase production through days in milk and putting weight onto milking cows instead of dry cows (much more efficient). Especially with the push to lower stocking rates going forward. The current 270 days assessment lends itself to potentially favour very peaky cows and doesn't punish cows who turn into a dry off mode before the lactation is complete. 305 DIM is the international standard lactation length.

It'll also add value to BW for higher output and OAD herds especially if no high output or OAD index is developed, as these herds in particular are targeting longer days in milk.

Develop a Lactation Persistency EBV:

This will also help farmers who target longer days in milk to avoid genetics that switch to dry off mode too early and start packing on the body condition. Fat lazy cows need to be dried off early and managed in a separate mob. They also are at risk of metabolics at calving when they calve down too

fat, especially if they are the minority in the herd and don't get managed in a separate mob, and hence continue to eat more than they need either as stale milkers, or dry cows. A simple way might be to take the combined fat and protein production between say 230-305 DIM and compare this to their cohort. Do not do it how LIC calculate it, this is incorrect and is not passing the common sense test. I can elaborate on this one day.

Premature calvings:

Cows that calve prematurely should not have their production that lactation count to their index's. They are at a big disadvantage as they usually struggle to come into milk properly and have to deal with metritis issues etc. A prime example is MYYW-18-8. She calved a month early and is only producing at about 75% of her cohort and her indexes have suffered. So perhaps anything coded as prem or earlier than x days from due date should have their production ignored?

Fertility:

Following on from the above point, should the system also be ignoring cows who have twins, assisted calvings, prem or abortions, malpresentations etc in terms of their fertility EBV? These cows are at high risk of poor fertility and it's due primarily to their bad luck at the previous calving, rather than their genetic ability to get back in calf under normal circumstances. Or by leaving fertility as is, are we indirectly also selecting cows who are less likely to suffer from the above issues?