

agriculture & rural development

Department:

Agriculture and Rural Development
North West Provincial Government
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Cow-calf efficiency in extensive Beef cattle production

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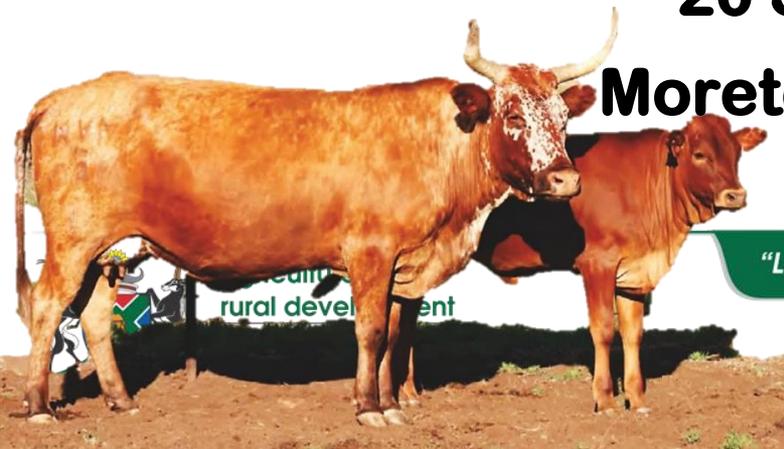
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Moretele Livestock Study Group

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Moretele Community Hall



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What is cow efficiency?



Cow-calf
production
efficiency –

Kg of
calf
weaned

Per

Exposed
Cow



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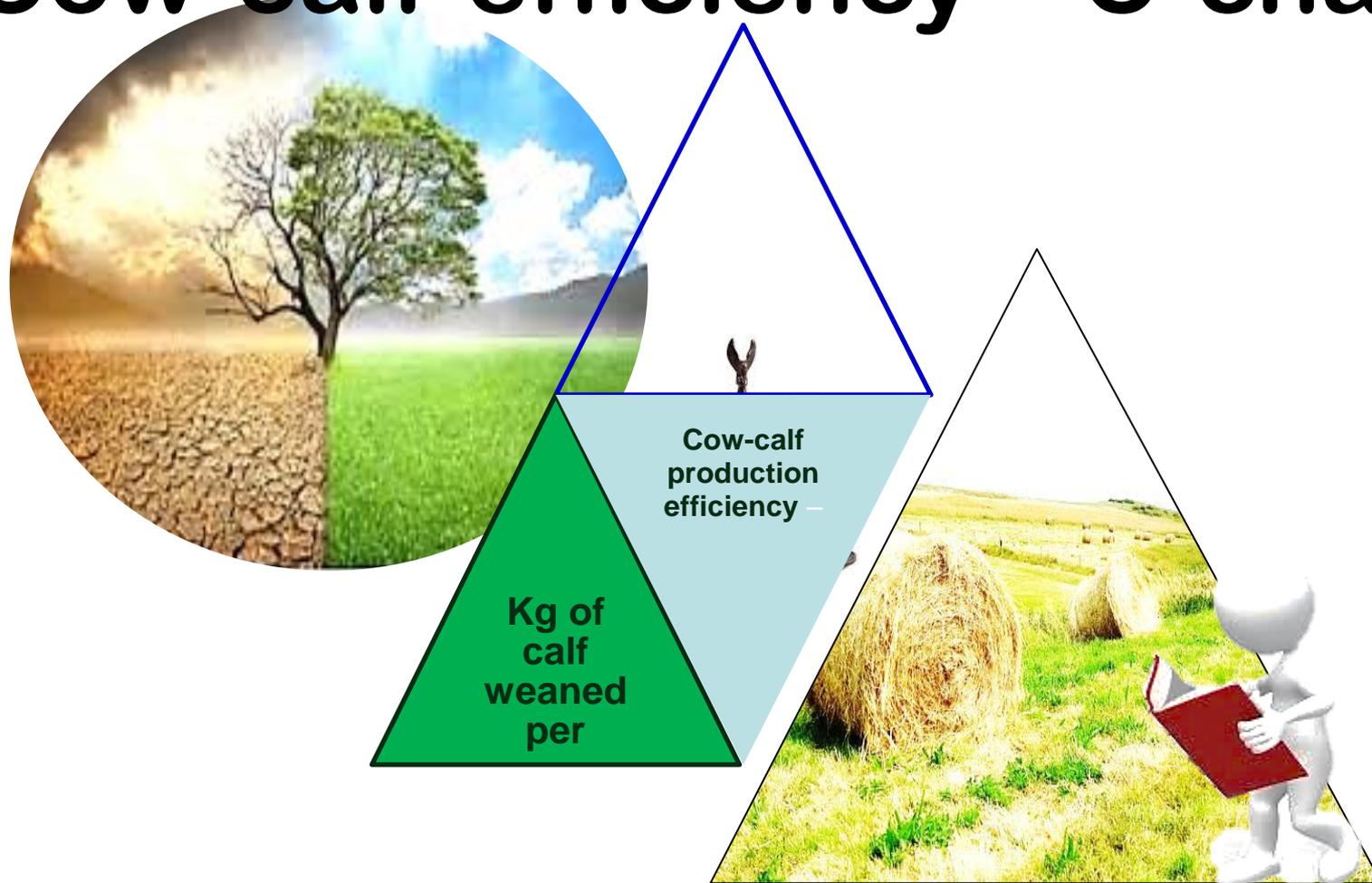
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Cow-calf efficiency – C-change



**We should be considering kg calf weaned per ha of grazing!!
Or at least per LSU**

Looking at them, can we tell which cow is efficient?

Not really!!

Can we measure cow efficiency? Not as a single trait

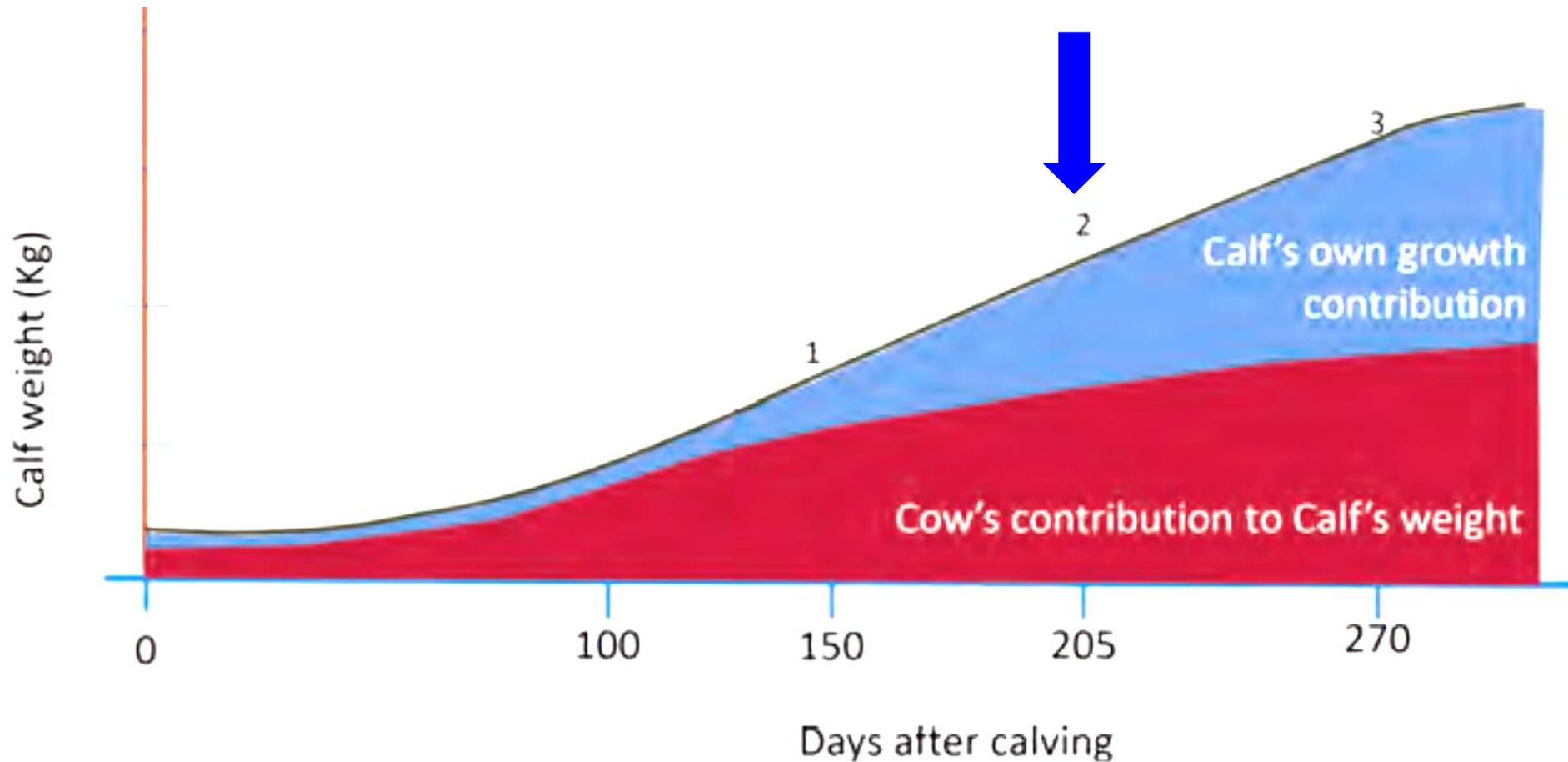


What if we knew the production per constant unit?
i.e. kg/ha or kgC/LSU



Yes we remember the complications of using Cow - calf efficiency ratio!!

It's largely an index of components



Cow efficiency demonstration

Cow ID	Calf ID	Birth Date	Sex	BW	Sire ID	AAW	Wean Date	WWT	CWTWR	R C:CW	W_Ind	DLSU	kgc/LSU	Rnk	7/LSU
ON15007	ON21001	2021/09/29	F	30	13022	239	2022/05/26	239	455	53%	109	1,4	174	1	9,9
ON11048	ON21002	2021/09/29	F	38	10096	239	2022/05/26	237	556	43%	108	1,6	151	4	11,3
ON13038	ON21003	2021/09/30	M	39	9008	238	2022/05/26	246	559	44%	112	1,6	157	3	11,3
ON11003	ON21004	2021/10/10	F	37	10096	228	2022/05/26	193	510	38%	88	1,5	132	5	10,7
ON11068	ON21005	2021/10/16	M	30	12079	222	2022/05/26	185	395	47%	84	1,3	152	2	8,9
Average				35		233		220	495	44%	100	1	153		10,4

- On cow-calf ratio, cows **ON11048**, **ON13038** and **ON11003** performed the least,
- Based on kgCalf/LSU, the picture is different. See the ha needed for such output



Cow efficiency demonstration

Cow ID	Calf ID	Wean Date	WWT	CWTW	R C: CW	W_Ind	DLSU	kgc/LSU	Rnk CCW	Rnk Kgc/LSU	(7/LSU) Ha used
ON15007	ON21001	2022/05/26	239	455	53%	109	1,4	174	1	1	9,9
ON11048	ON21002	2022/05/26	237	556	43%	108	1,6	151	4	4	11,3
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Average			220	495	44%	100	1	153			10,4



Conclusion

Weaning Weights - ranking based on kgC/LSU?

- kgC/LSU - combination of calf and dam weight - trait of dam.
- It is independent of cow weight between breeds
- It allows the use of the relationship between kgC produced and the estimated feed inputs (by using LSU)
- It brings us closer to expressing production per constant unit
i.e. (kg weaned/ha)



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