



Another difficult growth period? October saw good growth, but with November and early-December being very dry, the result for many pastures was slow growth!



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SUMMARY POINTS

- Some of the annual clovers showing what they are capable of, again. Growth rates from pure Persian annual clover plots at Te Kopuru have been impressive:
 - 86 kg DM/ha/day for October
 - 104 kg DM/ha/day for November
- Growth rates of the perennial grass mixes at the same Te Kopuru site have been moderate @ 79 kg DM/ha/day for October and November.
The Italian grass mixes averaged 59 kg DM/ha/day for the same period.
- The perennial grasses continue their "come-back" at NARF, Dargaville. These grasses averaged just 3% presence in January, February and March of this year. Now their presence is:
 - 42 % for the perennial ryegrass
 - 70 % for both the tall fescue and cocksfoot.

Time will tell how this influences persistence, but it does not look overly promising for the perennial ryegrass.

- Daily growth for these perennial grasses at NARF for October and November were very similar @ 77, 80 and 81 kg DM/ha/day for the tall fescue, perennial ryegrass and cocksfoot, respectively. These are "plot" growth rates – not just the grass component.
- Cocksfoot was showing very strong nitrogen growth response at Awanui from nitrogen applied in late-September. While cocksfoot grew at 84 kg DM/ha/day for October, perennial ryegrass grew at 53 and tall fescue at 61 kg DM/ha/day: All treatments received the same nitrogen.



The stand-out pasture at Awanui (*shown on the left*) from April 2019 sowing, has been the cocksfoot, phalaris, annual clover plantain, red and white clover mix. Up to 11 December it has produced 13,670 kg Dry Matter per hectare. A surge of growth during October, early-November, saw growth rates of 90 kg DM/ha/day.

To date, 75% of this production has come from a very strong berseem annual clover presence, coupled with a moderate Persian clover presence.

Continued monitoring will tell us how productive the red clover and plantain plants will be this summer for this Awanui pasture. Monitoring will also show whether sufficient cocksfoot plants survived the strong competition from the annual clover, to fuel good pasture growth rates during the next few years. High soil fertility is one factor driving such strong clover growth currently: pH @ 6.3, Olsen phosphorus @ 48, potassium @ 16 and sulfate sulfur @ 13 back in August of this year. There has been no fertiliser, nitrogen or weed spray applied to this new pasture yet.

UPDATING CURRENT PRODUCTION

- Cocksfoot's grow continues to be impressive.

Growth 2019 – Control Plots at Awanui			
	Growth kg DM/ha/day		
	Aug/Sept	Oct	Nov
Perennial ryegrass	20	53	30
Tall fescue	25	61	31
Cocksfoot	31	84	36
Mixed grass + red clover	31	66	38

Nitrogen was applied @ 30 kg/ha in late-September to all plots. Cocksfoot showing its ability to respond to improved nitrogen status.

ANNUAL CLOVER GROWTH

While the growth from any of the annual clover species was slow to very slow in June and July, some of them have really “kicked into life” in October and November.

Site: Te Kopuru Peak Growth 2019 Kg DM/ha/day		
	October	November
Persian clover	86	104
Perennial grasses + clovers	83	75
Italian ryegrass + clovers	52	65



7 Nov 2019
Mixed grass and clover plots at Te Kopuru showing moderate – high growth during October and November, ranging from 52 to 83 kg DM/ha/day.



7 Nov 2019

Annual clover plots showing impressive growth through Oct/Nov, peaking at 104 kg DM/ha/day for the Nov period.

Note the line of strongly flowering crimson clover that had been flowering for up to 5-6 weeks just outside the plot area.



12 Nov 2019

Persian clover plots showing very strong growth during the Sept – Dec period. Being harvested by Duncan Bayne.

These results are showing that Persian clover can “outgrow” various grass mixes, even an Italian ryegrass with clovers and plantain. The 104 kg DM/ha/day in November is impressive but this sort of growth, or higher, has been recorded in previous years in our Northland’s Diversified Forage project.

Presence of Weeds – Awanui

The plots that were sown into balansa annual clover, sub clover failed badly, while the berseem was a “moderate” failure. These plots have grown weeds for the last two months. The 11 December result showed a huge 78% of the plant material grown in Nov/Dec was weed – largely parsley dropwort. In comparison, the other 11 treatments averaged under 1% for weed content, for the same date: A huge difference!



11 Dec 2019

The weed – parsley dropwort, making up close to 80% of the plant material that has grown in Nov/Dec. These “weed plots” were the balansa or sub clover plots that failed. In contrast, the pure Persian plots strongly in flower have performed very well, growing @ over 80 kg DM/ha/day at Awanui.

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