

Thinking about annual rangeland and lack of rain...

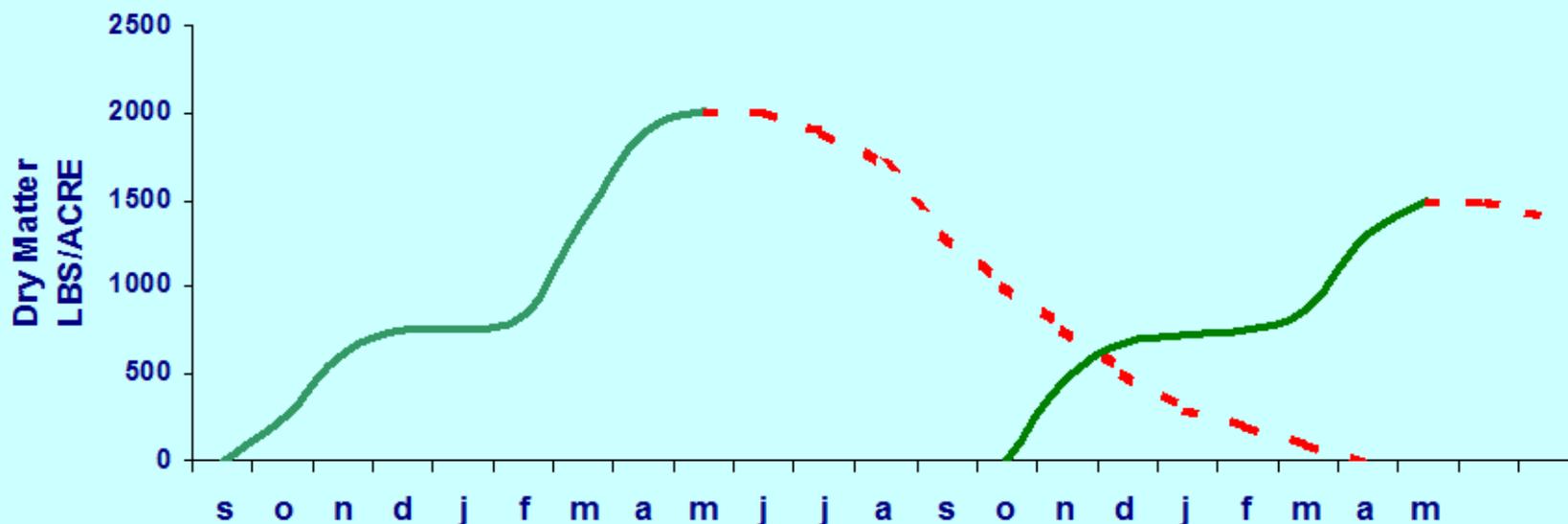
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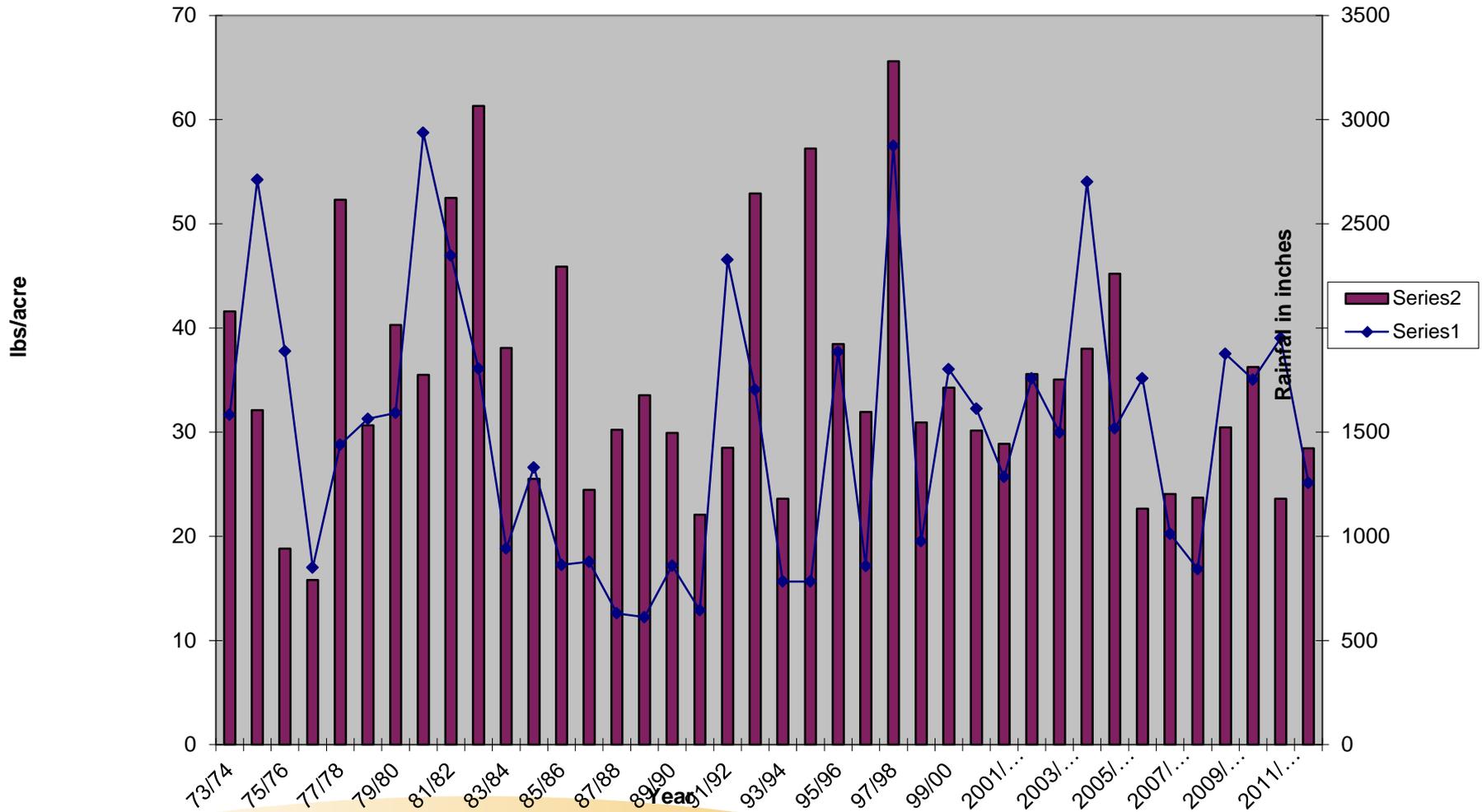


Typical Current Growth & Residue Decline California Annual Grassland

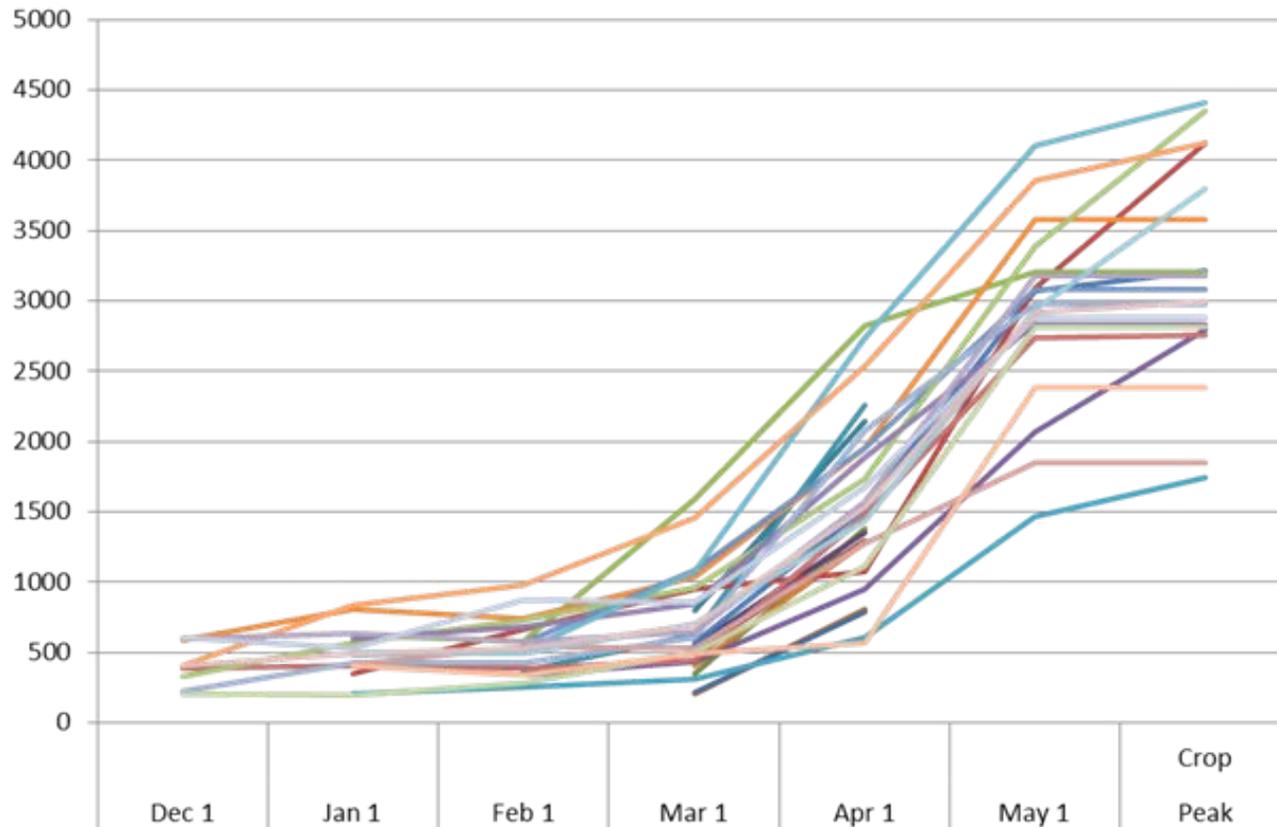
— Current Growth
- - Residual Dry Matter Growth



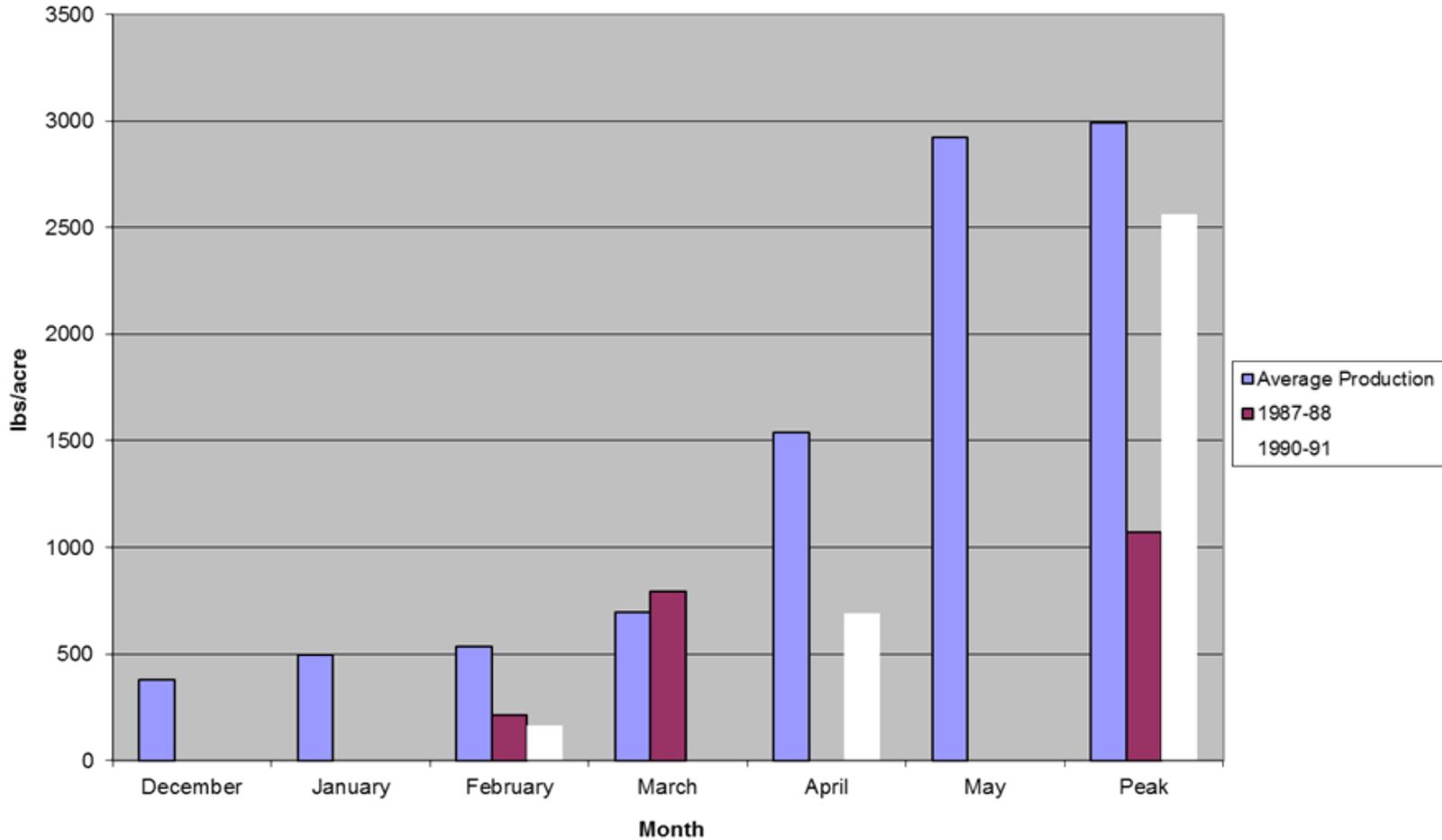
Annual Forage Forage Production and Precipitation in the Redding Area



Forage Production by Month-SFREC-All Years



Average and 2008/2009 Season Monthly Annual Forage Production at the UC Sierra Field Station



Dryland Pasture

- Annual grassland

- Manage Residual Dry Matter

- to protect soil
- to manage composition
- to promote production



Dryland Annual Pasture



■ Low Residue Encourages

- Silverhair grass
- Turkey Mullein
- filaree
- bur clover
- clover

■ High Residue Encourages

- Oats
- Soft Chess
- Medusa head
- Ripgut

Intensity

- Graze to the desired RDM at fall germination.



What about reseeding?

| Species | Seeds/Square Inch | Plants/square inch after 7 weeks |
|-------------|-------------------|----------------------------------|
| Fescue | 17.99 | 11.97 |
| Brome | 3.16 | 2.74 |
| Silver Hair | 6.37 | .42 |
| Filaree | .67 | .64 |
| Clover | .66 | .64 |
| Total | 39.37 | 16.67 |

Bartolome, 1976

- *Of the many species of annuals present in the study area, only broad-leaved filaree germinated synchronously with the first rains, reaching near peak density in the first week of the season (figs. 1 and 2). Other species germinated over a longer period; additional seedlings were added to the stand over several weeks, probably in response to additional precipitation. Annual fescues and soft chess, in particular, exhibit this pattern (fig. 3), as do clovers*

Bartolome, 1976

- *Although many clover, soft chess, and annual fescue seedlings may now be evident and later die, enough seed will remain ungerminated in the soil to fully establish these species with later rain*

Couple of good references...

- Annual Range Forage Production, Mel George, et al(2001)
http://californiarangeland.ucdavis.edu/Publications%20pdf/8018_AnnForageProd
- Managing Livestock During Drought, McDougal, Neil et al (2001). <http://anrcatalog.ucdavis.edu/pdf/8034.pdf>
- Early Rains Alter Range Forage, James Bartolome (1976)
<http://ucce.ucdavis.edu/files/repositoryfiles/ca3012p14-72081.pdf>
- Livestock Poisoning Plants of CA. Lary Forero et al (2011) <http://anrcatalog.ucdavis.edu/pdf/8398.pdf>

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