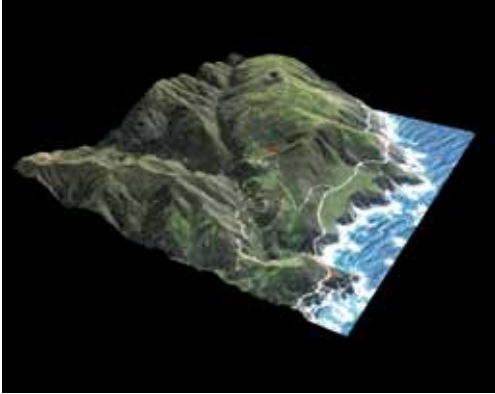
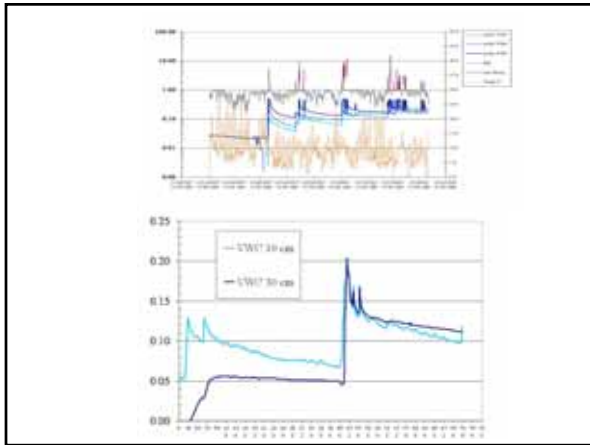


### Brazil Ranch Ecological Sustainability Studies

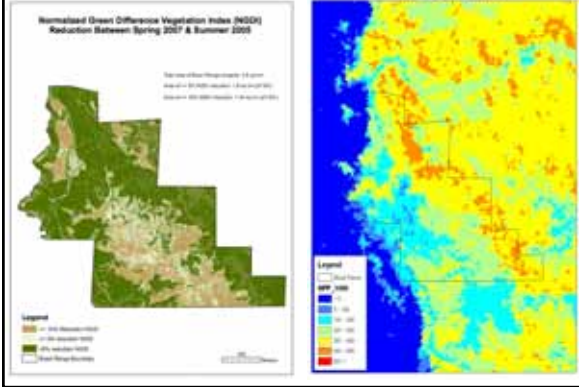


### Brazil Ranch Climate Station Network



### Brazil Ranch Satellite Remote Sensing Studies

Annual Range v. Evergreen Vegetation      Annual Net Primary Production



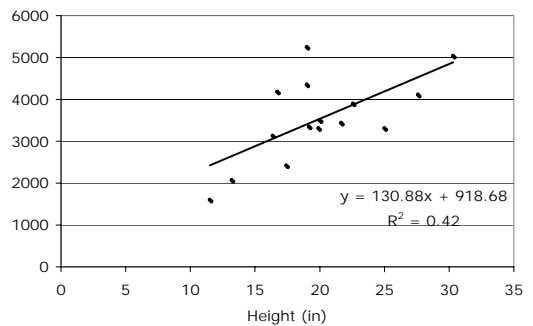
### Brazil Ranch Pasture Soil Sampling Results



	MEAN	Stdev
	n = 15	
Biomass (dw: lbs/acre)	3531	1007
<b>Soil Analysis</b>		
Organic Matter %	6.21	2.08
Organic Matter ENR (lbs/acre)	42.39	4.17
P1	16.53	8.01
HCO3_P	21.64	7.98
pH	5.34	0.69
K (ppm)	157.10	102.16
Mg (ppm)	509.61	223.59
Ca (ppm)	2579.61	2050.91
Na (ppm)	176.69	202.47
BUFFER_pH	6.22	0.19
H (meq/100g)	7.88	3.79
CEC (meq/100g)	26.10	9.00
K_PCT	2.03	2.09
Mg_PCT SAT	16.33	5.40
Ca_PCT SAT	45.10	18.87
H_PCT SAT	33.33	14.68
Na_PCT SAT	3.19	3.73
NO3_N (ppm)	4.00	2.23
S (ppm)	51.13	13.77
Zn (ppm)	1.71	1.00
Mn (ppm)	30.41	9.51
Fe (ppm)	73.77	26.72
Cu (ppm)	0.26	0.17
B (ppm)	0.86	0.38
EX_LIME	0.00	0.00
S_SALTS	0.89	0.19
SAND	68.16	5.12
SILT	15.61	3.75
CLAY	16.24	3.06

### Brazil Ranch Pasture Vegetation Sampling

Biomass V. Height





### Brazil Ranch Pasture Soil CO<sub>2</sub> Sampling Results

Site	Grazing Pattern	Mean Soil CO <sub>2</sub> flux (umol/m <sup>2</sup> /s)
<b>Trough</b>	Grazing	2.23
	Grazing absent for 1 month	6.32
	Grazing absent for 2 months	n/a
<b>Cera Ridge</b>	Grazing	3.62
	Grazing absent for 1 month	2.12
	Grazing absent for 2 months	n/a
<b>Redwood Pasture</b>	Grazing	2.81
	Grazing absent for 1 month	10.35
	Grazing absent for 2 months	n/a

