

Summary descriptions of grass planting trials

Annual grasses – These grasses require little to no preparation (weed control) prior to planting. They are reasonably cheap to obtain seed and can be very productive. Their downside is that they must reproduce from seed which means that they have to establish from scratch every fall leaving them vulnerable to invasion from weeds.

'Blando' brome and annual ryegrass – Blando brome is a commercial version of soft chess. The grass is very palatable when it is green and is fairly tolerant to drought. It must reproduce from seed and germinates again in the fall with the first rains. Annual ryegrass is extremely palatable, cheap to plant, highly productive, and easy to establish. For various reasons it is difficult to maintain a solid stand of annual ryegrass, however, some of the plant population can be maintained if allowed to go to seed.

Perennial grasses – The grasses in this category are mostly summer dormant (not dead), so they do not have to reproduce from seed every fall. This gives them a competitive advantage over annual grasses once they are established. The downside to these grasses is that they are far less competitive as seedlings than other annual grasses such as medusahead, requiring very good weed control prior to establishment.

'Flecha' fescue – Flecha fescue is a summer dormant type of tall fescue. It is often referred to as a Mediterranean fescue because it has strong winter growth but is dormant during summer, even with irrigation. It would not be planted in an irrigated pasture. The grass greens up readily in the fall and will remain green into summer much longer than our common annual grasses. It is a much newer variety in California compared to the other grasses on this planting list and has not yet seen wide spread use on rangeland.

'Advanced AT, Perla, Holdfast' hardinggrass – Holdfast and Advanced AT are newer varieties of hardinggrass in California, but they closely resemble the variety called 'perla' which has been out for over 30 years. Hardinggrass is one of the most productive grasses available if soils are deep enough and have enough fertility to sustain the plants. If soils are not adequate, or the areas rainfall is not high enough, the stand will diminish over time. Hardinggrass is often disliked by many because it can accumulate a lot of growth and become rank and unpalatable to cattle. It is best planted in an area where it can be managed to keep growth in a palatable stage.

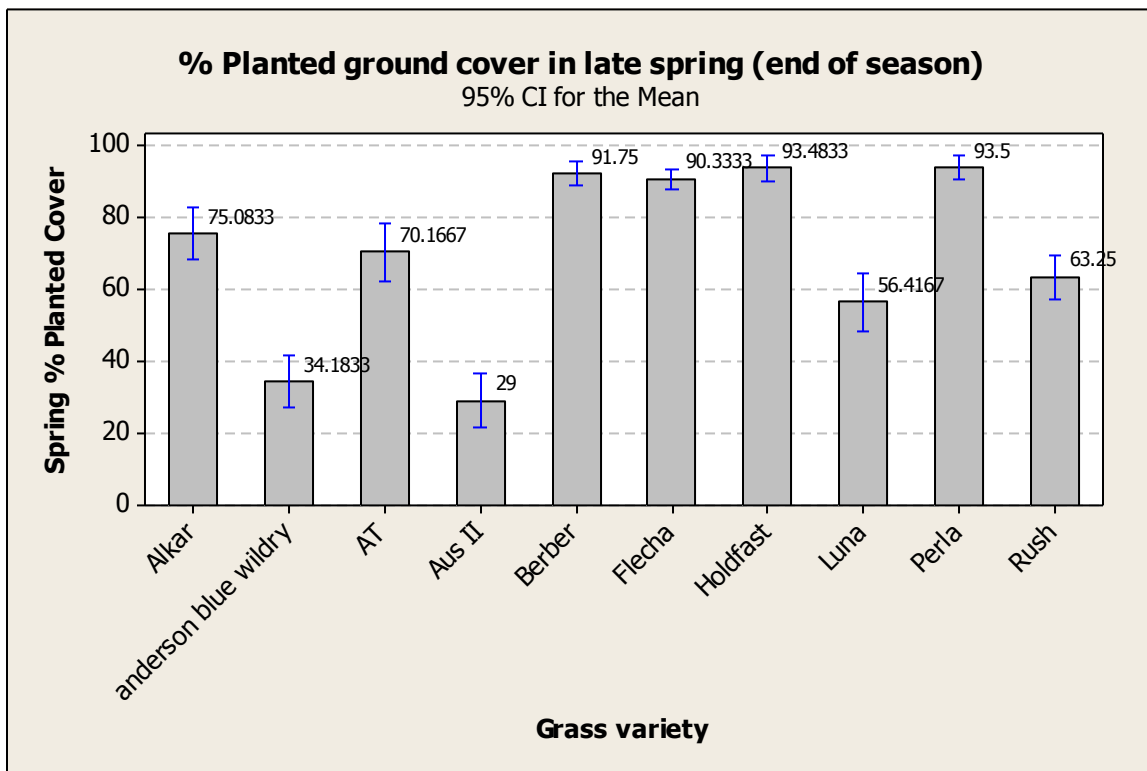
'Luna' pubescent wheatgrass, 'Rush' Intermediate, 'Alkar' – The wheatgrass are common for plantings in the intermountain areas. They will go dormant in summer when soil moisture is depleted, but stay green far longer than most other plants, including the other perennials on this list. They are developed to persist in the cold winters of the intermountain area so they are somewhat dormant during the winter, which means that they would not likely be planted as a sole species in Mediterranean climates. In fact, if a planting is solely for increased winter season feed, they should not be included at all. However, it is possible that they have a fit as a part of a mix of other perennials with an advantage of greatly extending the grazing season into summer. They can be very productive, producing a large quantity of late spring and early summer feed. Tall wheatgrass grows larger than pubescent or intermediate, but can also become more rank.

'Berber' orchardgrass – Berber is a summer dormant orchardgrass that has been found to be successful on shallow and droughty soils, but it also does well on high fertility soils. It does not like to be inundated with moisture, preferring soils

with decent drainage. It is productive and often grows well on sites that do not meet the soil requirements necessary to plant hardinggrass. The original cultivar was developed in Australia, however it gained commercial existence in California through the efforts of UCCE Specialist Burgess Kay. It goes dormant in the summer once soil moisture is exhausted. With summer moisture it will remain green, but produces very little forage.

'Anderson' blue wildrye – Blue wildrye is a native grass to the Mediterranean climates of California. It is summer dormant when soils dry, but will stay green if irrigated. It prefers better soils, usually seen along creek or stream banks in its natural state.

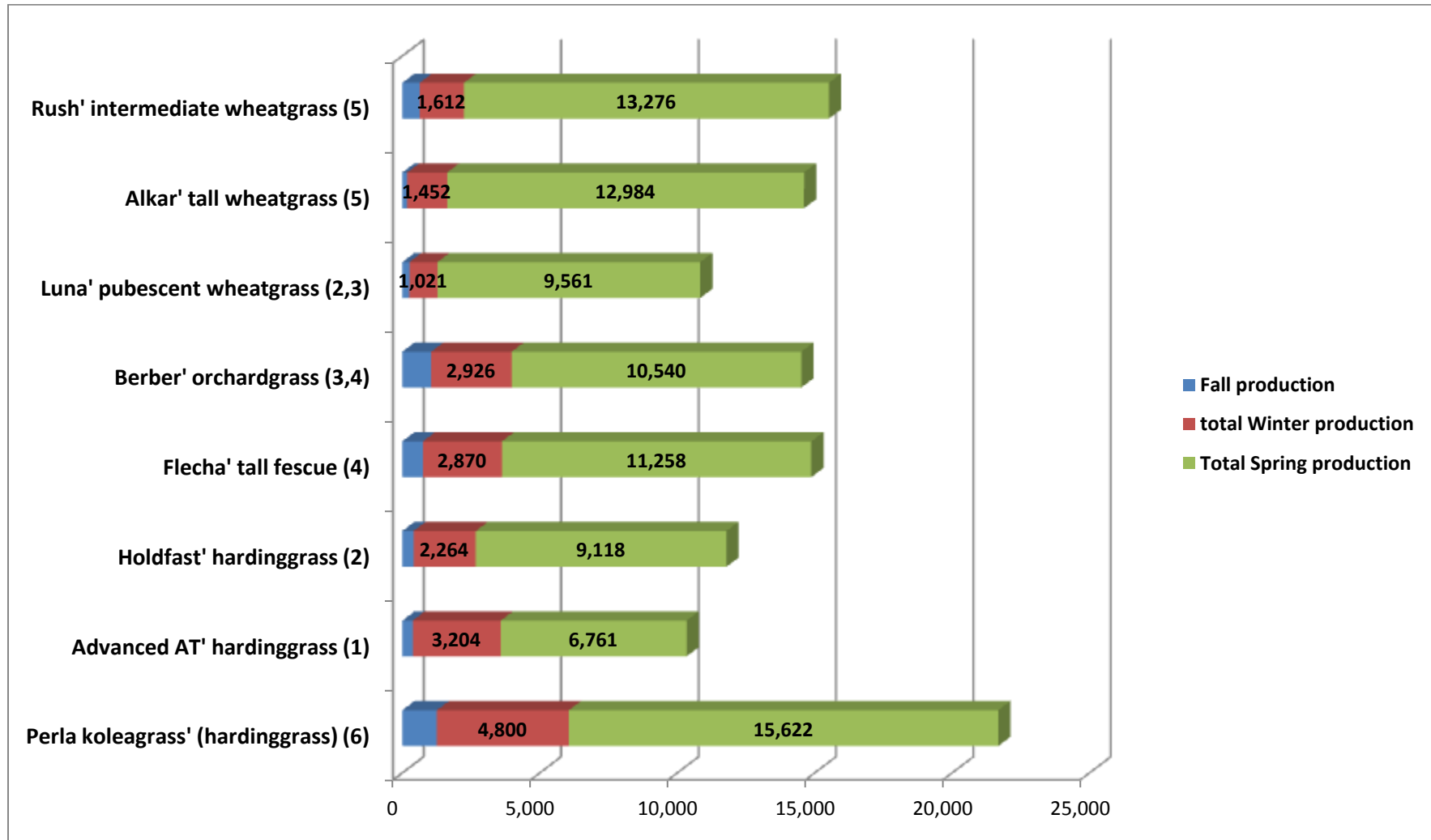
This chart depicts the percent of total ground cover of the planted grasses in the plot at the end of the season.



How long did they stay green? – Percentage of plant still green during sampling periods through spring

Forage type	% green by date (P<0.0)					
	6/3/2010	6/11/2010	6/18/2010	6/25/2010	7/9/2010	7/20/2010
Blando Brome	0a	0a	0a	0a	0a	0a
Annual Clover M	76b	0a	0a	0a	0a	0a
Annual ryegrass	100g	65b	4a	0a	0a	0a
Perla Koleagras	95c	68b	57b	25b	4a	0a
Flecha Fescue	99fg	89e	56b	39de	17bc	0a
Berber Orchardg	97cde	77c	77ef	43ef	18c	0a
Wheatgrass 'Rush'	98defg	83de	60b	49g	38e	24b

Summary of 2012 selected grass variety production at the end of each season (cumulative). Production is in DM lbs/acre. The numbers (1-6) beside the name of each grass delineate statistical difference. Grasses with the same number are not different in total season production.



What have we planted over the last five years?

Forage	Variety	Year planted		
Harding grasses	Perla koleagrass	2009		
	Australian II hardinggrass		2010	
	Holdfast hardinggrass		2010	
	Advanced AT hardinggrass		2010	
Orchadgrass	Berber orchardgrass	2009		
	Paiute orchardgrass	2009		
	Kara orchardgrass	2009		
Wheatgrasses	Intermediate wheatgrass (rush)		2010	
	Jose tall wheatgrass	2009		
	Alkar Tall Wheatgrass			
	Luna Pubescent Wheatgrass		2010	
	Nordan Crested Wheatgrass		2010	2013
	Hycrest Crested Wheatgrass			2013
	Douglas Crested Wheatgrass			2013
	Saltlander Green Wheatgrass			2013
Blue wildryes	Mariposa blue wildrye	2009		
	Anderson blue wildrye		2010	
Annual rygrasses	Common oregon tetraploid ryegrass	2009	2011	
	Green Spirit ryegrass		2013	
Soft chess				
Fescues	Blando Brome	2009	2011	
	Flecha Max P fescue	2009		
Alfalfa	Prosper		2011	2013
	Ladak alfalfa	2009		
Forage brassica	Winfred brassica coated	2009		
	Winfred brassica non-coated	2009		
Chicory				
Plantain	Grouse chicory	2009		
	Tonic plantain coated	2009		
	Tonic plantain non-coated	2009		

bold indicates the planted species is no longer in the plot for various reasons

Plot map for viewing the current plots. The plots start at #1 closest to the driveway. Not they go plantings 1-20 and then repeat at 20-40 and again at 40-60 to obtain three replicates.

Berber orchardgrass	1	'Anderson' Bluewildrye	41
Prosper tall fescue	2	Perla koleagrass	42
Hycrest crested wheatgrass	3	Australian II hardinggrass	43
Perla koleagrass	4	Intermediate wheatgrass (rush)	44
'Anderson' Bluewildrye	5	Alkar Tall Wheatgrass	45
Douglas crested wheatgrass	6	Annual ryegrass	46
Australian II hardinggrass	7	Nordan Crested Wheatgrass	47
Flecha Mediterranean Fescue	8	Flecha Mediterranean Fescue	48
Annual ryegrass	9	Berber orchardgrass	49
Blando brome	10	Hycrest crested wheatgrass	50
Intermediate wheatgrass (rush)	11	Control	51
Alkar Tall Wheatgrass	12	Prosper tall fescue	52
Control	13	Blando brome	53
Luna Pubescent Wheatgrass	14	Douglas crested wheatgrass	54
Nordan Crested Wheatgrass	15	Blank	55
Saltlander green wheatgrass	16	Saltlander green wheatgrass	56
Holdfast hardinggrass	17	Advanced AT hardinggrass	57
Blank	18	Blank	58
Blank	19	Luna Pubescent Wheatgrass	59
Advanced AT hardinggrass	20	Holdfast hardinggrass	60
Luna Pubescent Wheatgrass	21		
Holdfast hardinggrass	22		
Blank	23		
Nordan Crested Wheatgrass	24		
Saltlander green wheatgrass	25		
Blank	26		
Advanced AT hardinggrass	27		
Control	28		
Perla koleagrass	29		
Alkar Tall Wheatgrass	30		
Berber orchardgrass	31		
Flecha Mediterranean Fescue	32		
'Anderson' Bluewildrye	33		
Blando brome	34		
Hycrest crested wheatgrass	35		
Intermediate wheatgrass (rush)	36		
Annual ryegrass	37		
Australian II hardinggrass	38		
Prosper tall fescue	39		
Douglas crested wheatgrass	40		