

managers are growing up and learning things differently than most people who currently own or operate ranches. Many of them are used to having data, records, and spreadsheets to inform decisions. They are used to having data instantly at their fingertips. When the time comes to pass the reins of your operation to someone else, I think having a record of drought management scenarios and the decisions made in this or a similar format will be invaluable to them. That person may understand what 10 inches of rain a year means. This may help them also understand what *"the grass is beer can high"* means. I think we owe it to them and to the ranch.

Summary

The scenario based planning process described here is tailor made for adaptive management. It fits perfectly within the basic plan-implement-monitor-evaluate-adapt-reimplement structure. It also facilitates collaboration between ranchers and agencies on public land. On a given operation, depending on the need and the professional relationships involved, each group can be involved in each step to varying degrees. This system can also be applied to multiple interrelated management alternatives (Table 4). It can also be applied to other management situations such as range

improvements or restoration projects. My final thoughts on the scenario-based planning process are:

1. Plan for drought and for rain.
2. Develop strategies and scenarios beforehand.
3. Use science and local knowledge.
4. Document for the next generation.

So it is fourth and goal from the five and you are behind by 3 points. There are 5 seconds left and you just used your last time out, your kicker has a pulled hamstring...or should I say it has been 2 years since you had a decent monsoon. Monitoring data says conditions are stable but cow BCS is about a half a score less than your target, your daughter just got married and they are coming back to the ranch...what are you going to do?

Doug is the range specialist at the V Bar V Ranch. He came to the University of Arizona from Texas A&M in January 2008 and has implemented several extension and research activities during his time here. He can be reached at doug@calz.arizona.edu or 928-646-9113.

Table 4. Example Multiple Management Category Scenario Planning Worksheet

Management Category	Scenario						
	"Best" Exceptionally Wet	Abnormally Wet	"Average" Long Term Average	Abnormally Dry	Moderate Drought	Severe Drought	"Worst" Extreme Drought
Stocking Rate	Target culling, retain or add seasonal grazers	Target culling, retain or add seasonal grazers	Normal culling	Normal culling	Cull priority group 1	Cull priority group 2	Cull to baseline herd level
Grazing System	Defer forage or utilize with seasonal grazers	Defer forage or utilize with seasonal grazers	Defer forage for burn or to re-build forage base in key pastures	"normal" or "planned" utilization at "normal" stocking rate	"normal" or "planned" utilization at reduced stocking rate	"normal" or "planned" utilization at reduced stocking rate	"normal" or "planned" utilization at reduced stocking rate
Herd Structure	Cow/calf, stockers/seasonal	Cow/calf, stockers/seasonal	Cow/calf	Cow/calf	Reduced Cow/calf	Reduced Cow/calf	Reduced Cow/calf
Nutritional Mgmt	Purchase short term emer feed if needed	Purchase short term emer feed if needed	Purchase suppl feed as needed	Purchase suppl feed as needed	Purchase suppl feed as needed	Purchase suppl/replacement feed	Purchase suppl/replacement feed
Repro Mgmt	synch, AI	synch, AI	"normal" breeding practices	"normal" breeding practices	1x/day suckling	early weaning	early wean, extended breeding
Brush Mgmt	Sculpt, Chem, Mechanical	Prescribed Fire	Prescribed Fire	Prescription IPT	Prescription IPT	Prescription IPT	Prescription IPT
Wildlife Mgmt	Selective harvest	Selective harvest	Selective harvest	Increase cull harvest	Increase cull harvest	Increase cull harvest	Increase cull harvest
Water Mgmt	Repair/improve troughs, wells	Repair/improve troughs, wells	Improve water distribution	Improve water distribution	Improve water distribution	Repair/improve dirt tanks	Repair/improve dirt tanks
Equip/Facilities	Improve/purchase	Improve/purchase	Maint/repair	Maint/repair	Maint/repair	Maint/repair	Maint/repair
Financial Mgmt	Capture additional animal perf, stockers, trophies, make improvements	Capture additional animal perf with stockers, make ranch improvements	Capture additional animal perf with nutrition (burn or suppl)	Evaluate input costs	Evaluate input costs	Reduce input costs, early mkt calves, mkt cull deer	Reduce input costs, early mkt calves, mkt cull deer