

Imagery for Hunting

Background:

Ranchers in Montana have been using imagery to estimate forage and to plan grazing. While cattle raising is the main occupation of the ranchers, wildlife hunting within the ranch boundary is also permitted during the hunting season. This can upset the delicate balance between forage conditions, cattle grazing and human interference if done in an unplanned manner. It is important for the hunters to know where they can hunt and where they cannot. This information has to be current and updated daily as the cattle are moved to new grazing grounds regularly. In the past, the rancher provided the hunter with a topographic map with demarcation of the permitted hunting areas. But traditionally, the hunters found it difficult to read the map and ended up straying. In a very unique application, IKONOS imagery was used to demarcate hunting zones to the advantage of both the rancher and the hunters.

Use of Data:

The adjoining figure shows a typical map provided to a hunter. IKONOS imagery was overlaid with fence lines (in thin red) using ArcView and the county roads were highlighted in purple color. Different colors of shading were used to show the location of cattle and the permitted hunting zones for the particular day. Putting the map in a set of double vinyl and using dry erasable markers, the rancher was able to update the permissible hunting areas for each hunter every day. The hunters found the hunting map created this way far easier to read and follow than the conventional topographic maps.

Economic and Environmental Benefits:

Over 50 hunters took advantage of these maps. Unlike in the previous years, no hunting took place in the undesigned areas. This greatly reduced the interaction time between the rancher and the hunter and the monitoring time spent by the rancher. The conservative estimate of the time saved by the rancher in dealing with hunters over the season, is 40 hours. Besides, the use of imagery resulted in a more effective way to harvest the game animals.



Hunting zones map, Big Timber Montana
based on IKONOS image

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