AEROCam
2007 Season Highlights

The demand and use of aerial imagery is becoming more and more popular in today's farming and research practices. As in past years, our goal was to increase the number of end-users receiving AEROCam imagery and promote precision farming.

SEASON OVERVIEW

AEROCam completed another productive season collecting aerial imagery. It was successful on many points including an increase in end-users and in the number of sites. Fortunately, the past season was void of any mishaps and extended periods of down-time. After receiving the plane and installing the camera on April 28th, we were able to keep busy until the 30th of September. Only 4% of the possession days were spent on the ground due to scheduled maintenance checks, while 41% of the total possession days were spent in the air. Many sites were flown multiple times throughout the summer, which increased our site visits and total square miles of acquired site area. The number of images collected was up sharply as well, due to both the increased numbers of end-users and sites. Plus, we were able to georeference over 38% of end user site visits for 2007, despite the labor-intensive processing required.

	2006	2007
USERS		
Number of users	48	67
SITES		
Number of sites	76	171
Site visits	92	351
Site area (Sq miles)	457	995
Sites georeferenced	47	135
AIRCRAFT		
Possession days	136	156
Down days	53	7
Flying days	41	61
Idle days	42	88
Flight hours	168	244
IMAGES		
Images delivered	8,300	23,800

TECHNICAL IMPROVEMENTS

Image quality was greatly improved for the 2007 season by calibrating our camera and using specific camera settings based on daily sun angles. The resulting images were sharper in appearance with the false color composite images (NIR) being corrected to at sensor radiance DN values. We will continue to make the necessary improvements to the AEROCam system to provide high-quality images to our growing user base.

FUTURE CHANGES

Many improvements are being looked into for the upcoming 2008 season. A large number of our end-users prefer receiving both true color composite and false color composite images of the same site and same time period. The camera is capable of collecting both images simultaneously, but requires additional hardware to do so. For next year, we would like to purchase the necessary hardware allowing us to collect both image sets for our end-users that request this option.

Another end-user preference is the ability to receive georeferenced images. Through the purchase and incorporation of an attitude reference sensor, we would have the capability to rectify large quantities of images. This would allow us to provide rectified images to all our end-users instead of a select few. Currently, we do not have any kind of attitude reference system, but are constantly looking to purchase this type of hardware.