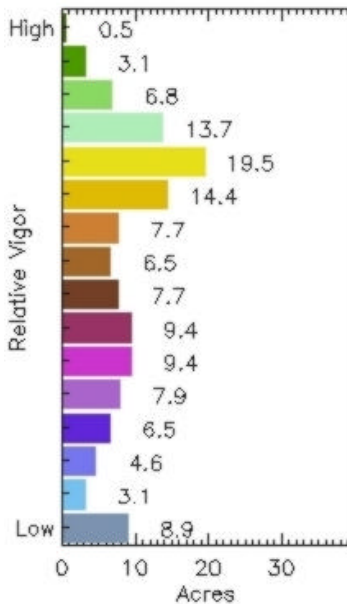
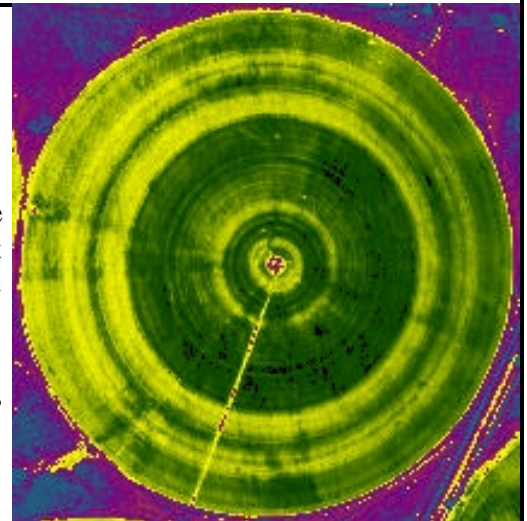




What's New in Aerial Photography

Over the past two years, Agro's aerial photography program has made large strides. A digital multi-spectral camera system and computer programs have been developed to produce an innovative product and valuable tool for agricultural growers. Now, aerial photos are in the grower's hands within days of a flight. Products include a color infrared image (enhanced and cut to the limits of the grower's field) as well as a highly sensitive crop health image that shows variations in crop biomass, vigor, and nutrient levels. These images clearly highlight areas of healthiest growth as well as problem areas. Some of these problems include irrigation system performance and uniformity, plugged nozzles, poorly set corner timers, bad spray patterns or runoff, fertility levels, chemical treatments, variable soils, weed, pest or disease infestations, hail or wind damage, planters, fertilizer spreaders, or chemical applications.

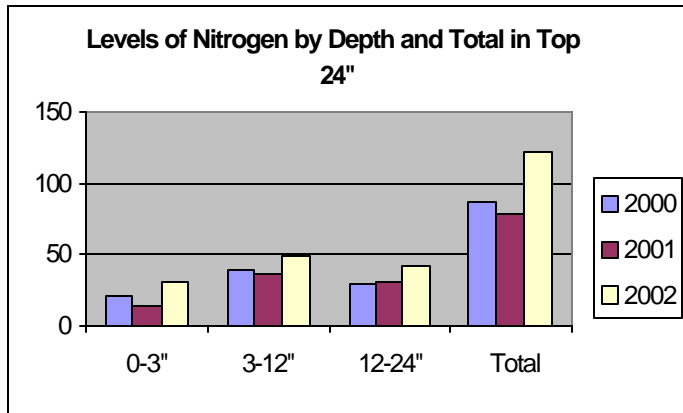
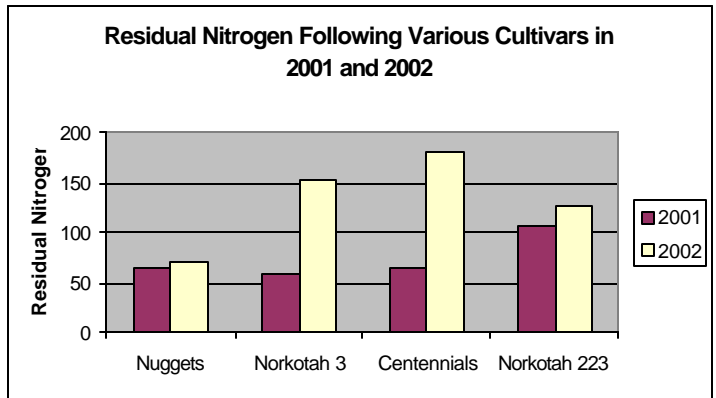


Our experience with you over the last 2 years has shown this crop health imagery to be superb at identifying problems. However, additional questions may remain, such as - How much did this problem cost me? - or - How much of my field is producing less than it could? If this were known, the grower could evaluate if a problem was worth spending the money to fix. But, one more thing must be known; acreage. So, as an added service for 2002, an acreage color key will be included with the crop health image. The GPS unit used in the airplane will be used to record a photo altitude. Comparing this with the ground elevation at that point will allow us to estimate the total acreage for each color in the image. So, for example, if a plugged nozzle causes a ring in the image, the key will show how much acreage was damaged. Or, the key would show how much acreage in a field is producing less than a healthier part of the image. The cost to improve the yield of this area with irrigation or fertility improvements could be evaluated.

Of course, many of you with hand-held GPS units may already know that elevation readings from GPS are not very accurate. So the acreages on our acreage key will only be good estimates - not exact numbers. An additional service Agro provides is to "geo-reference" your aerial photos to satellite images. Photos are put into real map coordinates using computer software, and very accurate acreages can then be determined. For an additional \$90, we can give you a print with a picture of your field and documentation of the crop grown and the exact irrigated acreage. This makes an excellent permanent record of your cropping history and of the use of your water rights on your field. We (or you) can also use this "geo-referenced" image with a GPS and a laptop to see, while in the field, exactly where we are on the image and to find problem spots, and determine the right solutions.

Grain Will Require Less Nitrogen Fertilizer in the 2002 Season

As soil tests come back from the lab, it is evident that soil nitrogen levels are higher than normal. This can be attributed to a very dry winter with little leaching losses and reduced nitrogen use efficiency at the end of the 2001 potato crop.



This situation will result in lower nitrogen requirements for the 2002 grain planted in the San Luis Valley. This translates into reduced nitrogen inputs, but could also lead to an increase in grain lodging.

Agro is still looking for lodging for our summer interns. If you know of anything that is available, please call our office.



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