
Acreage Living

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Aerial Photos Online

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Ever wonder what your property looks like from high above? Ever try to picture the curves in the creek or the outline of the grove of trees? If so, you'll like some of the geographic images available online.

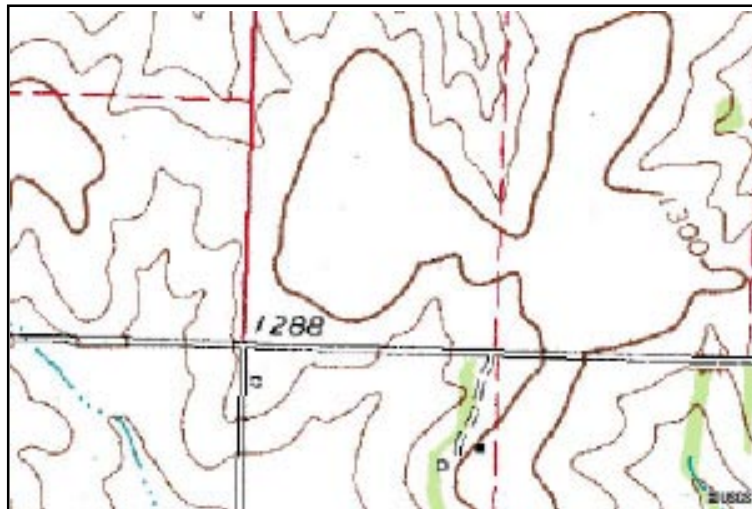
Being a typical engineer, I really like diagrams and pictures. When I go out to visit a farm or acreage, I like to have an idea of how it is laid out. Two internet web sites I use provide a wealth of information on visual representations of land appearance and topography. There are undoubtedly other web sites and services available, but I have found these two to be easy to access and useful.

The Iowa Geographic Image Map Server at <http://ortho.gis.iastate.edu/> was developed by the USDA Natural Resources Conservation Service in cooperation with Iowa State University and the Massachusetts Institute of Technology (MIT). The Microsoft Terraserver web site at <http://terraserver.homeadvisor.msn.com/> is a joint project of Microsoft Corporation and the US Geological Survey (USGS). The purpose of these sites is to evaluate methods of distributing geographically referenced digital data via the world wide web for use in Geographic Information Systems and other applications.

The two products of the web sites I find most useful are the Digital Orthophoto Quads (aerial photos) and the 1:24,000-scale USGS Topographic maps. A digital orthophoto quadrangle is produced from aerial photographs taken from an aircraft at 20,000 feet. The photos are "rectified" to correct the distortion caused by camera angle and elevation differences. A topographic map shows physical features like roads, buildings, and water bodies, along with contour lines showing land elevation.

Both web sites offer two methods of searching for a specific place. You can point and click at a map (starting with an Iowa map for the Iowa Geographic Image site, and a map of the earth for the Terraserver site) or you can search for a specific landmark such as a town, state park, or quadrangle name. I usually find that searching for a town is the easiest starting point. From the town location, you can maneuver the maps in any direction to find a specific site. You can zoom in to show increasing detail. The Terraserver site will tell you the location relative to a nearby town (for example, 17 km east of Oakland, Iowa, United States). The Iowa Geographic Image site will give you the coordinates of the center of the image using the Universal Transverse Mercator (UTM) grid system (a whole other topic I won't try to explain right now).

The only major difference between the two web sites is the maximum level of zoom (resolution) offered. Both sites offer topographic maps to a resolution of about 2.4 meters per pixel on your screen (one inch is about 600 feet on the map). The Iowa Geographic Image site offers photos to a resolution of two meters per pixel, while the TerraServer site offers twice the zoom, to one meter per pixel (one inch is about 300 feet). At this resolution, individual cars can be seen on roads and driveways, but you cannot quite count people or cows in the pasture. Here are example images of the farmstead at our research farm.



It is important to note that the maps and photos upon which these sites are based are five years or more old. If you've added buildings in the past few years, they aren't going to show up on these sites. However, I still find them useful, educational, and downright fun browsing. Enjoy!

Everything About Bees

A new internet service is providing answers to wide-ranging questions about honey bees—free of charge. Called the Expert Forum on Honey Bees, it lists a wide range of frequently asked questions, along with answers from scientists. It



also provides information about beekeeping as a hobby or profession, crop pollination, honey bee biology, and related re

search. The site maintains a Student Forum on Honey Bees, with questions and answers for students in grades K through 12.

Users will play a key role in expanding this state-of-the-art, electronic question-and-answer service. As new questions are received and answered, the staff will update the forum, which can be accessed 24 hours a day, 7 days a week, by

going to <http://gear.s.tucson.ar.sag.gov>.

For more details about this service, contact Gloria DeGrandi-Hofman, USDA-ARS Carl Hayden Bee Research Center, Tucson, Arizona; phone (520) 670-6481.

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Moles

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It's spring, and time to brush up on mole facts. Not the faulty assumptions, misstatements, erroneous conclusions, and blatant lies that pass for information about this common landscape nuisance.



The worst offense committed in the name of mole control is the great landscape lie that insecticides will cure the problem. This mistake has been going on for a very, very long time and seems to be constantly perpetuated by several things. One, many people want to believe there is a simple cure for complex problems. Two, there is a hint of logic to the gross oversimplification. Three, chemical control for moles is part of our folklore (as in, that's how we did it in the past). And finally, there is a great profit motive on the part of "pesticide peddlers" to sell insecticides and insecticide application services, even unnecessary insecticides that waste homeowner time and money and needlessly contribute to pesticide overuse.

The full story on moles is in ISU Extension

pamphlet Pm-1302b, "Managing Iowa Wildlife Moles," available from your county ISU Extension office. Below are discussion points about moles. The handy checklist makes a convenient guide for answering questions about moles. Mole Musings...

- Moles are mostly solitary. (1 acre land = approximately 3 moles; it only looks like there are hundreds!).
- The "main mole meal" is earthworms supplemented with some insect larvae, centipedes, millipedes, and spiders.
- Moles eat more than their own weight in earthworms daily (HIGH metabolism!).
- Having moles doesn't necessarily mean you have grubs.
- Applying insecticides for grubs will not solve the mole problem.
- Eliminating earthworms is neither practical nor prudent. White grub insecticides do not control earthworms (fortunately!).
- Moles DO NOT eat bulbs, roots, pets, or small children.
- Moles are active year-round.
- Activity near the surface occurs in early morning and late afternoon in the spring and fall and on cloudy, damp days of summer. The rest of the year is spent in deep tunnels 6 - 24 inches under the surface.

- Surface runways may be used only once; main runways may be used for years
- Moles are woodland/woodland edge critters.
- Well-drained, loamy soils are their favorite haunts.
- Moles are built for digging: They can dig surface runs at one foot per minute!
- Moles hear well, though they have no external ears.
- Moles see poorly (light/dark) as the eyes are covered with fused eyelids.
- Benefits of moles:
 - soil mixing
 - soil aeration
 - water penetration to deeper plant roots
 - some biological control of destructive insects such as cutworms
- Problems moles cause:
 - disfigurement of lawns, golf courses, cemeteries
 - dislodge bulbs, roots, expose them to air readily, consume small plant roots
- Mole control options:
 1. Correctly identify the offending critter
 2. Locate active, main runs
 3. Decide if damage is worth the effort
 4. Purchase and set mole traps, being careful to follow label directions
 5. If pitfall trapping, relocate to a legal area at least several blocks away
 6. Inspect lawn for grubs. Don't assume they are present. Treat with insecticide ONLY if white grubs are present
 7. Maintain vigilance!
- NON-Options (These "controls" do not work!)
 1. Sonic, ultrasonic and electromagnetic devices.
 2. Repellents (early, encouraging results using

castor oil repellent have not been consistent through further testing)

3. Chewing gum
4. Grain-based mole poisons
5. Gassing is only occasionally effective

This article originally appeared in the April 3, 1998 issue, of Horticulture & Home Pest News. <http://www.ipm.iastate.edu/ipm/hortnews/1998/4-3-1998/moles98.html>

Further reading:

<http://www.extension.iastate.edu/Publications/PM1302B.pdf>

<http://www.iarr.unl.edu/pubs/wildlife/g1288.htm>

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Lingo Lexicon:

(brief definitions of current environmental jargon)

EQIP: The Environmental Quality Incentives Program (EQIP) provides technical and financial assistance to eligible farmers and ranchers to address soil, water, and related natural resource concerns on their lands in an environmentally beneficial manner. Contracts of up to 10 years are made with eligible producers. Cost-share payments may be made to implement one or more eligible conservation practices, such as animal waste management facilities, terraces, filter strips, tree planting, and permanent wildlife habitat. Incentive payments can be made to implement one or more land management practices, such as nutrient management, pest management, and grazing land management.

Acreage Living is published monthly. For more information, contact your local county ISU Extension office.

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