

TRACKING ENVIRONMENTAL CONDITIONS OF LIVESTOCK BARN

Data Loggers Let Producers Check Animal Health from Mobile Devices

Keeping livestock healthy is of the utmost importance for meat and dairy producers. Their barns hold hundreds of cows, pigs and other animals producing meat, milk and eggs. Excessive heat and humidity are one of the largest risks to livestock health, causing heat stress and loss of appetite. However, many suppliers are turning to technological advances (already in use in cold chain businesses) to get an early warning of unsafe conditions.



For example, researchers at the **University of Missouri** have developed a new app for livestock owners and animal husbandry workers. Available free on Google Play and the Apple Store, **Thermal Aid** shows producers how healthy their cattle are at any given time. At [CAS DataLoggers](https://www.casdataloggers.com) we provide environmental data loggers which can record temperature and humidity data while also sending alarms in case of dangerous conditions.

Live Data Helps Prevent Heat Stress:

Farmers often use fans, sprinkler systems and window blinds to help keep their animals cool. Once an animal experiences heat stress, it soon loses appetite, which quickly affects its health. Therefore owners want to detect this malady as soon as possible so they can take remedial action (adding fans, increasing water volume etc.)

One way to keep tabs on environmental conditions is to use a **data logger**. Inside of a barn or pen environment, these devices can be housed within a metal enclosure since

many models have high operating temperatures. Temperature and humidity sensors can then run out from ports on the side of the enclosure to the outside of stalls and pens. These sensors then take regular temperature and humidity readings and send them to the data logger which goes into alarm mode in case of unsafe conditions.

Cellular Modem Data Recorder:

The [dataTaker DT80M intelligent data logger](#) is a low-powered data recorder with an integrated cellular modem, making it perfect for remote applications. The rugged design and wide operating temperature range of the low-power DT80M provides reliable operation even in hot and humid environments.

The DT80M is configured directly in your web browser using dataTaker's **dEX** graphical interface. dEX takes you through the configuration of your logger, showing you wiring diagrams and allowing you to decide – in as much or as little detail – how you want to the system to work. Using the internal modem you can even re-configure your system remotely over the internet if required.

View Data via USB or From Your Mobile Device:

Data can be quickly retrieved via Flash drive or accessed via smartphone using an app such as Thermal Aid or the new dataTaker **dEX Tablet App**. The latter works on Android and iPad platforms and provides convenient access to DT8X range loggers via your Tablet.

The dEX App offers users a version of the dEX web-based software for use on a tablet platform. Users can manage logger configurations and monitor data directly via the modem logger. The dEX App allows numerous loggers to be setup with their data accessible with just a touch of the screen. A third-party '**DT Remote App**' is also available for remote data display.

Viewing Environmental Conditions at a Glance:

Dozens of fans run nonstop to keep barns and animals cool in the summer heat, but on especially hot or humid days, some livestock will rapidly become stressed. To help prevent this, U-Miss. has developed **Thermal Aid**, a mobile app that pulls in live weather data to help determine if livestock is affected by heat stress. The app also offers advice to minimize the effects of heat.

In addition to tracking the weather and ambient temp/humidity, Thermal Aid also monitors livestock heat stress, individual respiration rates, and other health indicators. Using a built-in timer, the app calculates an animal's breaths per minute along with data about the cow's breed, its food, and other details. Then Thermal Aid collates the data to determine how the cow's feeling in this environment. It's easy for farmhands or their children to keep tabs on their animals by just pulling out their smartphone.



Benefits:

Using data collection methods and technological options such as **ThermalAid** and **dEX Tablet**, producers can more quickly see which animals need attention and also identify where the 'holes' are in sprinkler and fan zones.

Several producers have already expressed interest in ThermalAid and related environmental monitoring systems. Thanks to the Internet of Things, all the environmental data is available whenever users need it.

For more information on the [dataTaker DT80M Modem Datalogger](#), or to find the ideal solution for your application-specific needs, contact a CAS Data Logger Applications Specialist at (800) 956-4437 or visit our website at www.DataLoggerInc.com.