Press release

KYOCERA Starts R&D on World's First High-Accuracy Bovine Estrus Sensor

Sensor will improve livestock management by monitoring cow estrus using wireless networks

April 24, 2015 – Kyoto/Neuss – Kyocera Corporation will commence research and development next month of the world's first[*1] sensing system that can detect the onset of estrus in cows by combining a high-accuracy sensor and wireless networks.

Bovine Estrus Detection System

Livestock producers are increasingly adopting information technology (IT) solutions, including a variety of sensors and communications networks, to improve efficiency and reduce costs.

The bovine estrous cycle occurs over 21-day intervals, with estrus itself lasting only around 12 hours. Accurate detection of estrus is therefore necessary to facilitate optimum mating opportunities. For this reason, the estrus cycle is currently monitored using 24-hour surveillance cameras and acceleration sensors. However, 24-hour monitoring requires significant labor resources, and acceleration sensors are not always accurate. Consequently, avoiding "missed estrus" is a priority among livestock producers, and an area offering great potential for improvement.

To address these issues, Kyocera is developing a revolutionary sensing system to detect indications of estrus in cows by combining a unique high-accuracy sensor and communications networks. Compared with existing systems, Kyocera's system is more

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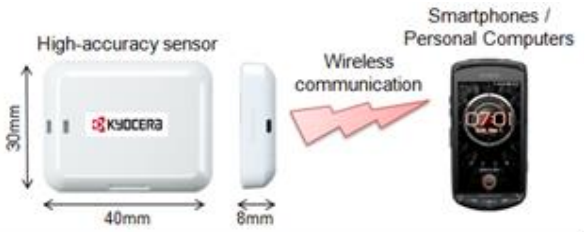
accurate in its high-precision sensing of physical changes in the cow that indicate estrus. The system sends information on indicators of estrus, as well as the anticipated end time of the estrus phase, to designated smartphones and personal computers. This contributes to increased conception rates while easing the labor burden of 24-hour monitoring. In addition to enhanced accuracy, the sensor will provide a greater cost advantage and feature a smaller and lighter design compared with existing systems. Kyocera will continue its research and development of this system, aiming for commercialization in 2017[*2].



Kyocera's bovine estrus sensor

	Current Sensor	New Sensor (In development)
Cost	Fair	Good
Sensing Accuracy	Fair	Good
Size/Weight	Good	Excellent

Comparison to conventional systems

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[*1] Combining Kyocera's original sensing technology and communication networks creates the world's first sensing system to detect indications of bovine estrus without an acceleration sensor. Based on research by Kyocera (as of April 23, 2015).

[*2] System specifications and device designs are current at the time of announcement and may change without notice.

For more information about Kyocera:

www.kyocera.eu

About Kyocera

Headquartered in Kyoto, Japan, Kyocera Corporation is one of the world's leading manufacturers of fine ceramic components for the technology industry. The strategically important divisions in the Kyocera Group, which is comprised of 230 subsidiaries (as of April 1, 2014), are information and communications technologies, products which increase quality of life, and environmentally friendly products. The technology group is also one of the largest producers of solar energy systems worldwide, with more than 5 gigawatts of solar power having been installed around the world to date.

The company is ranked #531 on *Forbes* magazine's 2014 "Global 2000" listing of the world's largest publicly traded companies.
With a global workforce of about 70,000 employees, Kyocera posted net sales of approximately €10.19 billion in fiscal year 2013/2014. The products marketed by the company in Europe include laser printers, digital copying systems, microelectronic components, fineceramic products and complete solar power systems. The Kyocera Group has two independent companies in the Federal Republic of Germany: Kyocera Fineceramics GmbH in Neuss and Esslingen and Kyocera Document Solutions in Meerbusch.

The company also takes an active interest in cultural affairs. The Kyoto Prize, a prominent international award, is presented each year by the Inamori Foundation — established by Kyocera founder Dr. Kazuo Inamori — to individuals and groups worldwide who have contributed significantly to the scientific, cultural, and spiritual betterment of humankind (converted at present €362,000 per prize category).

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