



PRESS RELEASE (2021/02/01)

Feeding regimen could help reverse decline in Japanese black cattle

High volumes of milk replacer improve growth of calves and reduce age of first birth

Joint research led by Kyushu University could help increase Japanese black cattle production through a change in feeding regimen.

Yutaka Taguchi, Dr. Yudai Inabu, and Dr. Hideyuki Takahashi have found that feeding high volumes of milk replacer to female Japanese black calves may improve their growth and reduce the age they first give birth, potentially speeding up the rate cattle can be produced.

In a study of fifty-one female calves, the researchers fed the heifers one of three randomly assigned milk replacer regimens starting three days after birth: a maximum of 9 liters per day for either 60 days or 41 days or a maximum of 7 liters per day for 40 days.

Heifers weighing over 270 kg and measuring taller than 116 cm at 300 days of age then underwent up to seven rounds of artificial insemination.

Using these protocols, the average age at first birth for the heifers that got pregnant was 22.1 months, which is two months faster than the industry average and one month earlier than the value targeted by the Ministry of Agriculture, Forestry, and Fisheries.

However, the calves fed the most milk replacer averaged two months longer from the first artificial insemination to pregnancy compared to the other groups.

On the other hand, the group fed the least amount had the best success rate for getting pregnant, making this the most promising of the three feeding plans.

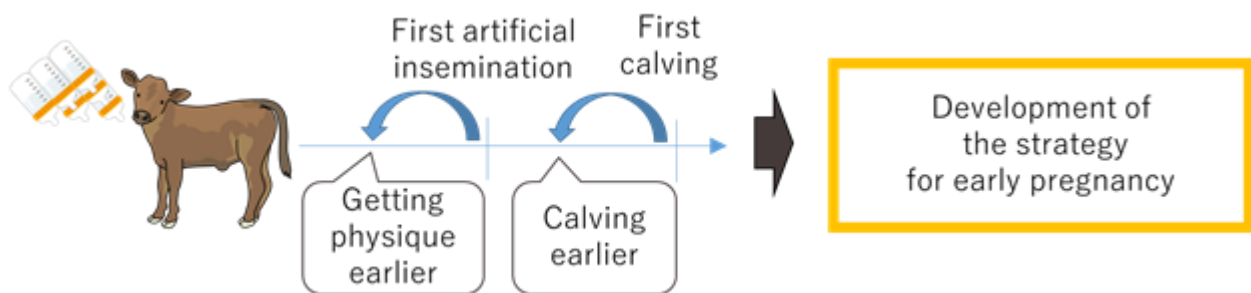
This research was a joint effort with Mirai Global Farm Inc., Itoham Foods Inc., Nosan Corp., RIKEN, Japan Eco-science Co. Ltd., and Chiba University.

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For more information about this research, see “Effects of feeding high volumes of milk replacer on reproductive performance and on concentrations of metabolites and hormones in blood of Japanese black heifer calves,” Yutaka Taguchi, Yudai Inabu, Koki Hayasaki, Noriyuki Maeda, Yoshiro Kanmera, Seiji Yamasaki, Noboru Ota, Kenji Mukawa, Arisa Tsuboi, Hirokuni Miyamoto, Tetsuji Etoh, Yuji Shiotsuka, Ryoichi Fujino, Christopher D. McMahon, and Hideyuki Takahashi, *Animal Science Journal* (2021). <https://doi.org/10.1111/asj.13505>



Yutaka Taguchi with a Japanese black cattle.



Female Japanese black calves gain the physique for artificial insemination and give birth earlier when fed high volumes of milk replacer.

[Contact]
Hideyuki Takahashi, Associate Professor
Faculty of Agriculture
Tel: +81-974-76-1377 Fax: +81-974-76-1218
E-mail: takahashi.hideyuki.990@m.kyushu-u.ac.jp