

Effect of altering energy and amino acid nutrition on health and reproductive performance of dairy cows

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SUMMARY

- Nutritional strategies and feeding management during pre-calving and post-calving periods impact health, productivity and fertility of high-producing dairy cows.
- Formulating diets to meet requirements of the cows but avoid over-consumption of energy may improve outcomes of the transition period and lead to improved fertility.
- Management to improve cow comfort and ensure good intake of the ration is pivotal for success.
- Rumen-protected methionine (RPM) added to the diet of Holstein cows during the transition period and early lactation improves the survival rate of preimplantation embryos. Embryonic death has been shown to drop from 19 percent to 6 percent in multiparous cows fed RPM.
- Cows fed RPM have more lipid droplets inside the preimplantation embryo, which could be used as energy by the embryos.
- Impacts of the transition program should be evaluated in a holistic way that considers disease occurrence, productivity, and fertility.

Key words: rumen-protected methionine; energy balance; fertility; transition period