Periparturient Responses of Multiparous Holstein Cows Fed Different Dietary Phosphorus Concentrations Prepartum. By Peterson et al., page 3582. To evaluate the effects of prepartum dietary phosphorus concentrations on periparturient metabolism and performance, multiparous cows were fed 0.21, 0.31, or 0.44% P beginning 4 wk before calving. Feeding 0.21% P was adequate to meet the total dietary P requirement with no adverse effects on P and Ca metabolism or subsequent lactational performance. It is concluded that the NRC (2001) estimate of the dietary P requirement for late pregnant, multiparous Holstein cows is sufficient for normal metabolic transition from gestation to lactation.