

Beef Heifer Fertility

An examination of the effect of breed type, genetic merit and plane of nutrition on the onset of puberty and pregnancy rate of beef heifers

Reproductive efficiency is a major determinant of production and profitability of beef suckler cow enterprises. Central to this is age at puberty, particularly when heifers are bred to calve as 2-year olds and in systems that impose restricted breeding periods, such as in seasonal calving herds. Heifers need to reach a minimum body weight (threshold) and age before they will express puberty, and that age and body weight differs with breed. Presently, there is no information on age of puberty in heifers of the different genotypes typically used as replacements in beef herds in Ireland. Furthermore, there is no information on targets weights at 12 to 13 months of age that ensure puberty has occurred at this time. It is widely accepted that nutrition during development mediates physiological changes necessary for puberty. It is unclear what the optimum growth rate and appropriate nutritional regime post-weaning needs to be for replacement heifers particularly from modern beef late-maturing crossbred dams with lower milking ability, to reach threshold weights.

A large study is ongoing at Teagasc, Grange in order to establish age at puberty, specific target weights at circa 12 to 13 months of age to ensure puberty and early conception and, specific optimum growth rates and appropriate nutritional regimes to reach threshold weights in heifers of different breed types and genetic merit.

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