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Malley M Nason* (mnason@linfield.edu), 190 SW Brumback Street, Unit #2815,
McMinnville, OR 97128. *Asymptotic Behavior of Travelling Wave Solutions to Reaction-Diffusion
Equations.*

We will discuss travelling wave solutions to reaction-diffusion equations of the form $u_t = u_{xx} + u^p(1 - u^q)$, which can be used as a mathematical model for various biological phenomena, as well as to model problems in combustion theory. We identify conditions on the wave speed so that travelling wave solutions exist for the case $p \geq 1$ and $q \geq 1$. Moreover, we estimate the rate of decay of the travelling wave solutions. When $p > 1$ and $q \geq 1$ this estimate requires center manifold theory because the typical linear methods fail to work. (Received September 04, 2014)