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Jerome Goddard II* (jg440@msstate.edu), Department of Mathematics and Statistics, P.O. Drawer MA, Mississippi State, MS 39762, and **Eun Kyoung Lee** (eunyoung165@gmail.com) and **Ratnasingham Shivaji** (shivaji@ra.msstate.edu). *Diffusive logistic equation with non-linear boundary conditions.*

We analyze the steady state solutions of a population model with diffusion and logistic growth, namely,

$$\begin{aligned} -\Delta u &= au - bu^2 - ch(x); & \Omega \\ \alpha(u) \frac{\partial u}{\partial \eta} + [1 - \alpha(u)] u &= 0; & \partial\Omega \end{aligned}$$

where Ω is a subset of \mathbb{R}^n with $n \geq 1$, $a, b > 0$, $c \geq 0$, $\alpha(u) : \mathbb{R} \rightarrow [0, 1]$ is a non-decreasing smooth function, and $\frac{\partial u}{\partial \eta}$ is the outward normal derivative. In particular, our study is focused on a population living in a patch, Ω subset of \mathbb{R}^n with $n \geq 1$, that satisfies a certain nonlinear boundary condition and on its survival when constant yield harvesting is introduced. Our existence results are established by the method of sub-super solutions. (Received August 18, 2010)