1014-35-348 **Peng Feng***, Dept of Physical Sciences and Mathematics, College of Arts and Sciences, Florida Gulf Coast University, Fort Myers, FL. *On the blow-up rate of large solutions for a porous media logistic equation.* Preliminary report.

In this paper we establish the exact blow-up rate of the large solutions of a porous media logistic equation

$$-\Delta w^m = \lambda w - a(x)w^p \quad \text{in } \Omega, \tag{1}$$

$$w = \infty \quad \text{on } \partial\Omega. \tag{2}$$

We consider the carrying capacity function $a(x)$ with a general decay rate at the boundary instead of one can be approximated by a distant function. Obtaining the accurate blow-up rate allows us to establish the uniqueness result. Our result covers all previous results on the ball domain and can be furthered adapted in a more general domain. (Received September 12, 2005)