

Stević, Stevo**Behavior of the positive solutions of the generalized Beddington-Holt equation.** (English)

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Panam. Math. J. 10, No. 4, 77-85 (2000).

Summary: We consider the asymptotic behaviour of the positive solutions of the generalized Beddington-Holt equation

$$x_{n+k} = ax_{n+k-1} + \sum_{i=0}^{k-1} \frac{b_i x_{n+i-1}}{1 + c_i x_{n+i-1} + d_i x_{n+i}}, \quad n = 1, 2, 3, \dots$$

near the zero equilibrium. When $k = 1$, we also consider the asymptotic behaviour of the positive solutions of the generalized Beddington-Holt equation near the positive equilibrium.

MSC:

39A11 Stability of difference equations (MSC2000)

39A20 Multiplicative and other generalized difference equations

92D25 Population dynamics (general)

Cited in **34** Documents**Keywords:**

population dynamics; asymptotic behaviour; positive solutions; generalized Beddington-Holt equation; positive equilibrium