We study the system of equations of the type

$$u_t + A(x, \frac{\partial}{\partial x})u + R(u) = f(x), \quad x \in \Omega \subset \mathbb{R}^n,$$

where A is a linear operator of the form

$$A = \begin{pmatrix} \mathcal{L}(x, \frac{\partial}{\partial x}) & \ell_1(x) \\ \ell_2(x) & \ell(x) \end{pmatrix},$$

$\mathcal{L}(x, \frac{\partial}{\partial x})$ is a strongly elliptic matrix second order differential operator and $\ell_1(x)$, $\ell_2(x)$, $\ell(x)$ are matrices; by $R(u)$ we mean some nonlinear terms. The systems of this type are very useful in many biological, ecological and physical problems. We consider initial-boundary value problems for such systems and study the stability of stationary solutions on the basis of linearization principle.