

A synergistic herbicidal mixture comprising A) at least one 3-heterocyclyl-substituted benzoyl derivative of the formula (I) in which the variables have the following meanings:  $R^1$ ,  $R^3$  are halogen, alkyl, haloalkyl, alkoxy, haloalkoxy, alkylthio, alkylsulfanyl or alkylsulfonyl;  $R^2$  is a optionally substituted heterocyclic radical selected from the group: isoxazol-3-yl, isoxazol-4-yl, isoxazol-5-yl, 4,5-dihydroisoxazol-3-yl, 4,5-dihydroisoxazol-4-yl and 4,5-dihydroisoxazol-5-yl;  $R^4$  is hydrogen, halogen or alkyl;  $R^5$  is alkyl;  $R^6$  is hydrogen or alkyl; or one of its environmentally compatible salts; and B) the compound of formula (II) or one of its environmentally compatible salts; and C) at least one further herbicidal compound from the group of the acetolactate synthase inhibitors (ALS), lipid biosynthesis inhibitors and photosynthesis inhibitors; in a synergistically effective amount. Compositions comprising these mixtures, processes for the preparation of these compositions, and their use for controlling undesired plants

