The $\alpha$-dicarbonylmonoximes 1 and 11 do not react as simple “CH-acidic-compounds” in the Mannich condensation. In a concerted reaction with aminals in absolute dioxane they give rise to the products 4a-e and 12a-e with better practicability and much higher yields compared with the conventional method. The Mannich bases with a cyclic amine part show in the dehydrogenation, using mercury-EDTA, a neighbouring group participation of the oxime in type 4 and of the oxime or amide function in 12 yielding cyclized products. For the reaction a plausible mechanism is proposed.