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abstract We discuss the generation of entangled states of two two-level atoms coupled simultaneously with a dissipated atom. The dissipation of the atom is supposed to come from its coupling to a noise with adjustable intensity. We describe how the entanglement between the atoms arise in such a situation, and whether a noise except the white one could help preparation of entanglement. Besides, we confirm that the entanglement is maximized for intermediate values of the noise intensity, while it is a monotonic function of the spontaneous rates. This resembles the phenomenon of stochastic resonance and sheds more light on the idea to exploit noise in quantum information processing.