Hydrogen Peroxide in Germination

As I published earlier, the use of hydrogen peroxide is extensively known in hydroponic cultivation as a disinfectant. However, this little molecule has far more uses and some of them also pertain to plant grow. For example, as it was discussed in the fourth International Symposium on Seed, Transplant and Stand Establishment of Horticultural Crops; Translating Seed and Seedling Physiology into Technology in February 2008, the use of hydrogen peroxide has been studied as an agent to aid the germination of seed.

Indeed, the chemical qualities of hydrogen peroxide make it ideal for the replacement of the stratification of certain seeds. In a peer reviewed article published about the use of hydrogen peroxide for the germination of eastern gamagrass seeds, the authors discovered that the use of hydrogen peroxide 15% for 18 hours indeed helps the seeds germinate by "dissolving" the outer coat of the seeds and therefore facilitating water's access to the seeds embryo.

In fact, hydrogen peroxide is so effective at this, that the above mentioned treatment substitutes a four week period of stratification at 4°C. The seed containing cupules treated with Hydrogen peroxide effectively germinated after only 2 weeks, when such a time was impossible before the treatment. The article mentions that hydrogen peroxide was the "most effective" mean of breaking up seed dormancy and effectively carry out germination. (Below a picture of eastern gamagrass)

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