

BioLumic partners with Beck's Hybrids and other major seed companies to boost corn productivity via UV light

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A breakthrough has been achieved by BioLumic in enhancing these inbred corn lines, and its UV light signaling technology will be incorporated into partnerships with major seed companies including Beck's Hybrids, Peterson Farms, Breeder Direct, and many others.

BioLumic's technology exposes seedlings or seeds to a short-duration "light recipe" that can trigger genetic expression of certain crop traits. In the case of the inbred corn, the company specifically targeted target improved germination, seedling vigor, and yield. The 2023 trials demonstrated a more than 7.3% yield gain compared to the growers' standard practice, says the company, which is targeting double-digit yield gains for 2024.

Inbred seeds are critical to the production of hybrid seeds, which most farmers favor when it comes to their crops. For example, 95% of the corn in the US is planted using hybrid seeds that can produce greater yields on less acreage, according to the United States Department of Agriculture.

"Seed companies look for varieties that have traits that they desire, and they try to keep those varieties pure," explains Steve Sibulkin, CEO of ag biotech company BioLumic.

The challenge is that these "pure" lines—that is, the parent lines of hybrid seeds—eventually start to suffer from a depression in the form of reduced germination, poor seedling emergence, susceptibility to environmental stressors and other negative factors. This in turn impacts the quality of the hybrid seeds.

BioLumic is also examining what Sibulkin calls “the cross-generational passthrough” of inbred seeds’ beneficial traits to the hybrid seeds.

Currently the company is working with Beck’s Hybrids, one of the largest seed brands in the US, as well as Breeder Direct, which is owned by Gro Alliance and which last year gained full breeding access to Farmers Business Network’s pool of corn germplasm. The company is commercializing its technology for both inbred and hybrid corn cultivars in partnership with Gro Alliance for the first quarter of 2025, so that seeds will be available to farmers for that year’s planting season. BioLumic will also advance trait development of soybean parent lines, with plans to initiate trials this year.