A 2015 survey of university plant-breeding programs in the U.S. reported that there were approximately one-third more entry-level positions available for Ph.D.-level plant breeders in private industry compared with academia in the U.S. and nearly three times as many available globally. With more career opportunities outside of academics, plant-breeding education programs need to ensure students are being prepared for these career paths.

Graduate Training vs. Industry Needs

Graduate education and training opportunities will vary from one program to the next. However, most academic programs will emphasize theory, experimental design, and statistics along with writing peer-reviewed publications and grants. The skills that plant breeders in industry or non-profits need include, “knowing how to design a product, strong quantitative skills, data management skills, and developing a production pipeline,” said Gary Atlin, a plant breeder who is a Senior Program Officer at the Bill and Melinda Gates Foundation. Atlin points out that in North America and Europe, newly graduated plant breeders who enter industry are likely to learn from senior staff.

Educating the next generation of plant breeders

by Tracy Hmielowski

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