

A career on the grow...

Life as a plant breeder



Having a passion for plants is one thing but putting those green thumbs to professional use is a whole new world. The good news is horticultural careers are vast, varied and very rewarding and none more so than working as a Plant Breeder.

Plant breeders ensure the continued survival of plants and essentially food production overall. They work to turn one seed into a field of crops, battling ever-changing disease varieties and conducting the latest research to keep the world growing.

Mark Nightingale, Technical Manager at [Elsoms](#) seed specialists, shares some insight from his 30 year career in plant breeding...

“Embrace a hugely varied career”

When you work as a plant breeder you're taking on a hugely satisfying career. If you're passionate about crops, then seeing a whole crop being cultivated, from just one seed, is very humbling and rewarding. A typical week doesn't exist. You combine field and office work, research and development while managing your time across multiple short and long term projects. Working as a plant breeder is very diverse to say the least.

Plant breeding is all about working as a team too. You and the team could be working on a different task every week of the year. There are certain tasks you will only do one or two days a year, which can be challenging, however it's the diversity of work you learn to embrace and thrive on.

“Literally an expert in the field”

As a plant breeder, you get a real kick out of breeding a potential crop that is quickly and widely sown. We are selling hundreds of tonnes of seed, potentially producing a huge food supply and it's

all from one seed that we nurtured – that’s rewarding! Plant breeders are also the go-to experts on plant varieties. Whole seed merchants will seek your advice on the commercial placement of a finished product. You are quite literally the expert in the field.

“Facing major challenges”

There are of course some major challenges facing plant breeders. A lot of the potential genetic materials generated by breeders won’t contain sufficient beneficial traits or aren’t yielding enough to be commercially viable. This is, of course, disheartening for plant breeders who must discard large amounts of potential new seed varieties every year.

We are also facing an ongoing battle against ever-adapting diseases and horticultural requirements to adhere to. Diseases are constantly evolving and plant breeders must evolve with them in order to protect new varieties. The Agriculture and Horticulture Development Board (AHDB) also set out requirements and certain standards, that plant breeders must follow too.

“We are constantly learning”

Today the role is more technical and requires more in-depth knowledge than ever before. While a basic understanding of genetics and a keen eye for detail is a key requirement for the job, many companies will also require a masters degree as a minimum today. As far as other skills go? A willingness to constantly learn on the job is essential.

“Get your foot in the door”

As with any career, there’s many ways to break into the industry. I started as an assistant at the plant breeding institute in cytology, where I completed a degree part time. A move into plant physiology led to a role with Elsoms Seeds.

Originally, I worked with winter wheat, spring and winter barley before moving into winter oilseed rape. During my 30 years at Elsoms, I have completed my masters degree in plant breeding, specialising in doubled-haploid production.

A career in plant breeding

Working as a plant breeder requires flexibility, patience and a passion for plants and crops. Beyond knowledge of plant breeding, it’s also vital to have a good understanding of what farmers want in the real world, the politics associated with the plant breeding sector and how the export markets work. If you have a passion for crops, it’s hugely satisfying to see something you helped create start growing in fields across the UK.