

Breeder's Corner



At <u>Tozer</u>, we are world leaders in responding to market demands for innovation. We have been developing successful new wild arugula varieties with improved shelf life and mildew tolerance for years.

Best Practices - Arugula

Breeding arugula for improved shelf life & downy mildew tolerance

Shelf Life



Good shelf life



Poor shelf life

Long shelf life is a vital breeding aim for arugula. Each new variety is carefully checked to ensure it will not deteriorate quickly post-harvest.

An independent third party undertook recent comparative shelf life trials of all our current commercial varieties, comparing them our competitors' and they found no difference in shelf life; in fact, our varieties were often better!

We are now actively working to extend shelf life even further, <u>developing</u> <u>exciting new varieties</u> with unique leaf shapes and structures. This will allow arugula leaves to circulate more freely in bags post-harvest without sticking together with a higher dry matter content to slow post-harvest senescence.



Poor shelf life - Good shelf life

Mildew Tolerance

Downy mildew is a relatively new problem in wild arugula. It has become a real issue now that the crop is becoming so extensively cultivated worldwide.

Since this disease is quite new, it is not currently well studied or understood. We do not yet know how much it varies in virulence in different areas.

At Tozer, every new arugula variety we develop is carefully tested under controlled laboratory conditions to ensure it meets a minimum standard for tolerance to this disease. We keep a stock of many different isolates of downy mildew that we collect worldwide for testing, including several stocks from the USA. This ensures if there are different 'strains' of the disease in different geographical areas, our varieties will still produce marketable crops.

We have not yet reached the stage in the evolution of arugula downy mildew that we have known virulence races of the disease to breed varieties with specific major resistance genes - as is the case with spinach and lettuce. However, we continually monitor and develop research on arugula downy mildew in order to stay one step ahead of this pathogen.







*red circles indict mildew



*red circles indicate mildew



*red circle indicate mildew

Fun Facts on Arugula

- In ancient times, love potions were made using arugula and other herbs like lavender.
- Arugula did not become a culinary ingredient in the US until the 1990s.
- The scientific name of wild rocket is Diplotaxis tenuifolia.



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