



## Cibus Confirms Important Milestone for Nutrient Use Efficiency Trait Development

June 17, 2024

*Nutrient Use Efficiency Traits are an Important Large Category of Traits that can Make Fertilizer Use More Efficient on a Global Basis*

*The First Case of Cibus Using its Trait Machine Process for a Third Party Developed Trait*

SAN DIEGO, June 17, 2024 (GLOBE NEWSWIRE) -- **Cibus, Inc. ("Cibus" or the "Company") (Nasdaq: CBUS)**, a leading agricultural technology company that develops and licenses plant traits to seed companies for royalties, today announced it has confirmed it has successfully made edits in Canola for its initial Nutrient Use Efficiency (NUE) trait. These newly edited plants will now be tested in controlled environments. If successful, Cibus expects this will mark a milestone of what is believed to be the first NUE gene edits in a major crop in North America.

Cibus is a leader in developing complex gene-edited traits in plants. The Company focuses on key strategic areas like disease and other productivity traits like NUE. The aim of its NUE trait development efforts is to significantly improve crop production with lower inputs through more efficient use of soil-borne nutrients without compromising the yield growers expect. Today, only about a third of applied nitrogen fertilizer is absorbed by the plant, limiting the plant's biomass generation and grain yield. Beyond yield and cost reduction, NUE trait also has the potential to improve resource sustainability and positively impact air, water, and soil quality. Globally, 3% of CO<sub>2</sub> emissions arise from the production of nitrogen fertilizer, with a 20% reduction equivalent to taking 130 million cars off the road. Cibus believes using gene editing technologies in its **Rapid Trait Development System™ (RTDS®)**, the cornerstone of Cibus' Trait Machine™ process, can improve NUE, reducing environmental impact and combatting climate change.

Steve Sanders, PhD and Executive Director of Molecular Discovery and Computational Biology at Cibus, commented, "We are excited with the speed with which we have completed the first edited NUE plants. This was a product of collaboration with a third party to develop this mode of action for NUE. We believe this further validates how Cibus' technologies can accelerate the time to edit additional complex traits. We believe we continue to demonstrate that our approach to trait development is additive to established industry standards, accelerating timelines compared to conventional breeding programs."

Peter Beetham, PhD, Co-Founder, President, and COO of Cibus, added, "This latest development with NUE is particularly notable in that we took a trait developed and validated by a highly reputable industry-leading third party and successfully integrated it into a Canola plant utilizing our proprietary **RTDS** technology platform – the Trait Machine™ process. This coordination and efficiency speaks to Cibus' unique capabilities to accelerate development timelines for growers, the agriculture industry, and the environment."

Rory Riggs, Co-Founder, Chairman, and CEO of Cibus, concluded, "Through the Calyxt merger, we solidified our position as a leading gene editing and trait development company for major crops, with a model geared toward licensing traits to our seed company partners for the benefit of their farmer customers. We are armed with three Developed traits – two Rice Herbicide Tolerance (HT) traits and our Canola Pod Shatter Reduction (PSR) trait – and backed by extensive field trials to support commercialization with customers. Further, trait patents such as one issued for our Pod Shatter Reduction Trait, are accompanied with field trial results supporting the patented claims."

"We are actively engaging with industry participants to bring their traits and other research & development efforts to life with our Trait Machine™ process. This latest development with NUE is important because it establishes a third Advanced trait in our pipeline to complement our ongoing work with our two other Advanced traits: White Mold (*Sclerotinia*) and HT2; we have now made successful edits for each of the Advanced traits."

"A key element of our trait business is the single-cell regeneration technology that lets us take a single cell from a customer's elite germplasm, edit the cell, and regenerate the cell into the customers' seed with the specific edit. We call these single cell regeneration models our crop platforms. At the time of the Calyxt merger, we had crop platforms in Canola, Rice, Potato, Peanut, Flax, Sugar Beet, and Cassava. Since the merger, we have added a Wheat platform and expect to complete our Soybean platform in 2024. We have edited and returned plants with desired edit configurations and trait performance to both Canola and Rice."

"This recent NUE edit is a great example showing the versatility of our crop platform approach. It demonstrates our abilities as a development partner to take customer-identified gene targets and successfully make edits in Cibus' platforms to develop a trait. Beyond Canola, we leverage these developments through our Trait Machine™ process which enables us to edit a developed trait in different plants representing great optionality to expand value-enhancing traits to other crops."

### About Nutrient Use Efficiency

Cibus' objective for nutrient use efficiency (NUE) traited plants is to enable lower fertilizer use while maintaining or improving expected crop yields. For example, nitrogen is one of the most essential nutrients for plant growth. Each plant species has specific nitrogen requirements to grow and thrive, and is one of the primary determinants of crop yield. Plants themselves are inefficient at using the nitrogen to which they have access. In addition, nitrogen can be leached from the soil during flooding events or fertilizer overuse, polluting the air, rivers, soils, and seas. Moreover, nitrous oxide emissions from fertilizer use are 300 times more potent than carbon dioxide and deplete the ozone layer. The amount of reactive nitrogen in our environment has already breached safe limits, dramatically impacting plant biodiversity, plant and soil health, and climate. Managing nutrient and fertilizer use while maintaining crop yields is one of the most critical needs to reducing the effects of climate change and feeding our growing population.

### About Cibus

Cibus is a leading agricultural technology company that develops and licenses plant traits to seed companies for royalties. Cibus is a leader in the new era of next generation gene-edited trait development, where plant traits (or specific genetic characteristics) that are indistinguishable from traits developed using traditional breeding are now created using gene editing. A key element of Cibus' technology breakthrough is its patented **RTDS®** technology platform: the Trait Machine™-- the industry's first semi-automated trait production facility. Cibus' Trait Machine™ materially changes the speed, breadth, and scale of trait development. This breakthrough is central to Cibus' vision for the Future of Breeding: "High Throughput Gene Editing Systems operating as an extension of seed company breeding programs". The ability to develop complex traits at a fraction of the time and cost of conventional breeding will be critical for addressing the sustainability challenges presented by climate change.

CIBUS CONTACTS:

INVESTOR RELATIONS

Karen Troeber  
[ktroeber@cibus.com](mailto:ktroeber@cibus.com)  
858-450-2636

MEDIA RELATIONS

[media@cibus.com](mailto:media@cibus.com)  
Colin Sanford  
[colin@bioscribe.com](mailto:colin@bioscribe.com)  
203-918-4347



Source: Cibus US LLC