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Mosaic Biosciences launches Enzara to speed crop residue breakdown and improve field readiness

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New enzyme-based solution targets heavy crop residue to support faster decomposition, planting efficiency and early crop establishment

Mosaic Biosciences has introduced Renuvis Enzara, a new residue-management product designed to accelerate the breakdown of crop residues and help growers prepare fields more efficiently for the next planting season.

The launch comes as higher-yielding hybrids, continuous corn and the expansion of no-till and reduced-tillage systems leave growers dealing with increasingly heavy residue loads. Excess residue can complicate field operations, restrict planting windows and contribute to uneven seed placement and emergence.

Enzara is designed to address that challenge by accelerating the biological breakdown of structural components in crop residue, potentially helping growers achieve more consistent, plant-ready soil conditions ahead of planting.

Turning residue into a field-management opportunity

Heavy crop residue can create a chain of operational problems. Large quantities of plant material may interfere with planting equipment, limit seed-to-soil contact and make achieving consistent planting depth more difficult. For growers operating within increasingly narrow spring windows, those challenges can translate into additional tillage, slower field operations and higher fuel and machinery costs.

Renuvis Enzara uses targeted enzyme technology to accelerate residue decomposition. By breaking down the structural fibres that hold plant material together, the product is designed to make residue more accessible to naturally occurring soil microorganisms, which can then continue the decomposition process.

The result is intended to be a cleaner and more manageable seedbed, helping improve conditions for seed placement, emergence and early crop development.

Enzyme technology targets residue at low temperatures

A key feature of Enzara is its endoglucanase enzyme technology, which is designed to begin breaking down residue without waiting for microbial populations to establish.

The technology can function in cold conditions, with activity reported at temperatures as low as 32°F. This could be particularly relevant for spring applications, when low soil temperatures can slow biological activity and naturally occurring residue decomposition.

By initiating the breakdown of tough structural fibres earlier, Enzara is intended to create additional access points through which native soil microbes can continue the decomposition process.

Potential to reduce field-operation pressure

Faster residue decomposition could also influence how growers approach tillage.

When residue levels are reduced, planting and tillage equipment can move more efficiently through fields, potentially lowering equipment wear and reducing the need for aggressive mechanical residue management.

Over time, improved residue breakdown may allow growers to reduce tillage intensity, which could help lower fuel consumption while supporting soil conservation and erosion-management objectives.

For growers using no-till, reduced-till or conventional systems, the product is positioned as a complementary tool rather than a replacement for existing residue-management practices.

Field trials support product development

Mosaic Biosciences says Enzara has been evaluated through laboratory research and on-farm trials.

Field trials conducted in 2025 examined the product in corn-after-corn and soybean-after-corn production systems. Spring applications were associated with improvements in residue decomposition as well as emergence, plant population and stand uniformity in the tested crops.

The results point to the potential for residue management to influence not only field preparation but also the conditions crops encounter during establishment.

Designed for existing farm programmes

Enzara is intended to fit into established crop-production systems without requiring major changes to farm operations.

The product can be applied in either autumn or spring and is compatible with tank-mix applications involving commonly used fertilizer and herbicide programmes. This allows growers to incorporate residue management into existing application passes rather than adding a separate field operation.

The technology is aimed particularly at corn-on-corn fields, no-till and reduced-tillage systems, areas with heavy residue accumulation and fields following high-yielding crops.

Residue management moves beyond mechanical control

The launch reflects a broader shift towards biological and biochemical approaches to crop-residue management.

Mechanical residue handling can require additional passes, consume fuel and increase equipment wear. Microbial-based approaches, meanwhile, may depend on environmental conditions and the establishment of microbial populations before significant decomposition occurs.

By using enzymes to initiate the breakdown of structural residue components, Enzara is designed to complement natural microbial activity while accelerating the process earlier in the production cycle.

For growers, the commercial proposition is ultimately linked to field readiness: less persistent residue, more manageable planting conditions and greater flexibility during critical spring field operations.