Vayantis® is a new, systemic fungicide seed treatment developed to protect corn and soybean seedlings from key diseases like *Pythium* and *Phytophthora* that are caused by oomycete plant pathogens. It contains a new active ingredient, picarbutrazox, belonging to the tetrazoloxyimes chemical group of fungicides (FRAC code U17), with a new mode of action.

Vayantis is unique to any class of chemistry in the seed treatment market for protection against *Pythium* in corn and *Phytophthora* and *Pythium* in soybeans. It has no known cross resistance to any other oomycete fungicide compounds and will play a key role in broadening integrated pest management strategies through multiple, effective modes of action.

The use of Vayantis (picarbutrazox) in combination with Apron XL® (mefenoxam) improves the consistency of oomycete protection through overlapping effective modes of action and improves stewardship of the phenylamide (FRAC code 4) chemistry group, of which mefenoxam is a member.

Lab, greenhouse and in-field trials show Vayantis delivers:

- Enhanced activity against the most damaging seedling diseases
- Better consistency that enables seed emergence and stand uniformity across variable soil types and environmental conditions
- Greater yield potential:

  **Corn – Heavy Pythium**
  (>20% stand loss between non-inoculated and inoculated checks)
  +4.1 Bu/A over Maxim® Quattro + Vibrance® fungicide seed treatments
  +6.6 Bu/A over Acceleron® Standard

  **Corn – Broad Acre**
  +1.6 Bu/A over Maxim® Quattro + Vibrance®

  **Soybean – Heavy Pythium**
  +2.9 Bu/A over CruiserMaxx® Vibrance® Beans insecticide/fungicide seed treatment

  **Soybean – Broad Acre**
  +1.6 Bu/A over CruiserMaxx Vibrance Beans

  **Soybean – Phytophthora**
  +1 Bu/A over CruiserMaxx Vibrance Beans
Vayantis Activity on Pythium

Vayantis provides the most robust level of protection against Pythium species from a single molecule.

Vayantis provides root protection against heavy Pythium infection in corn (top) compared to check treatments (bottom) without oomycete fungicide protection. Larger, healthier plants have increased yield potential compared to check treatments.

Source: Syngenta trial, June 2016, Fishers, Indiana.
Vayantis is more active gram for gram than ethaboxam

Vayantis requires about 1/4 the active ingredient compared to ethaboxam in corn inoculated with *Pythium ultimum* to achieve effective control*. Note the additional healthier, larger plants present. *Pythium ultimum* is a commonly occurring *Pythium* species in the Midwest.

Why is this important?
A lower use rate means more space on the seed for rhizobia or other treatment technologies, allowing more flexibility.

Source: Syngenta research laboratory, October 2016, Vero Beach, FL.
*Performance assessments are based upon results or analysis of public information, field observations and/or internal Syngenta evaluations.

Active on more species of *Pythium* than ethaboxam

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<tr>
<th>Picarbutrazox sensitivity of 203 <em>Pythium</em> isolates collected in the United States and belonging to 25 <em>Pythium</em> species</th>
<th>Ethaboxam sensitivity of 109 <em>Pythium</em> isolates collected in the United States and belonging to 18 <em>Pythium</em> species</th>
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<td>The lower the value and the flatter the entire range of the curve, the stronger the molecule is against the range of isolates presented. As you can see on the left, the range of values across the 203 <em>Pythium</em> isolates for picarbutrazox is much flatter and lower overall as compared to the ethaboxam value range. This is the key difference between the two molecules; picarbutrazox has activity on all 203 isolates, whereas the range presented for ethaboxam has many values at or greater than 100 (this means they were NOT sensitive to ethaboxam) and therefore ethaboxam does not control or have activity on these isolates.</td>
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Benefits of Early-Season Disease Protection

- Improved germination
- Increased early season plant health
- Higher yield potential

Syngenta Seedcare Commitment

Vayantis is one of many seed treatment innovations in our pipeline that further proves our commitment to bringing forth the best, most sustainable long-term solutions for growers. It adds another new mode of action for protection against seedling pathogens to our Syngenta Seedcare portfolio that is based on world-class research, product development and support capabilities. We call our three-pillar offer P.A.S. – Products, Application and Services – which delivers value to our customers Beyond Seed Protection™.

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Trials reflect treatment rates and mixing partners commonly recommended in the marketplace.

Performance assessments are based upon results or analysis of public information, field observations and/or internal Syngenta evaluations.

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