Group 11  Microbial disruptors of insect midgut membranes
Protein toxins that bind to receptors on the midgut membrane and induce pore formation, resulting in ionic imbalance and septicemia.

Group 11: Microbial disruptors of insect midgut membranes
Different B.t. products that target different insect orders may be used together without compromising their resistance management. Rotation between certain specific B.t. microbial products may provide resistance management benefits for some pests. Consult product-specific recommendations.

* Where there are differences among the specific receptors within the midguts of target insects, transgenic crops containing certain combinations of these proteins provide resistance management benefits.

11A Bacillus thuringiensis
11B Bacillus sphaericus

Bacillus thuringiensis and the insecticidal proteins produced
- B.t. israelensis
- B.t. aizawai
- B.t. kurstaki
- B.t. tenebrionis

Bt crop proteins
- Cry1Ab
- Cry1Ac
- Cry1Fa
- Cry1A.105
- Cry2Ab
- Vip3A
- mCry3A
- Cry3Ab
- Cry 3Bb
- Cry34Ab1/Cry35Ab1

Includes transgenic crops expressing Bacillus thuringiensis toxins (however, specific guidance for resistance management of transgenic crops is not based on rotation of modes of action)