|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Pathway**  | **DNA 3-Color Target Area** | **Associated Chromosome Quadrant** | **DNA** | **Translated RNA Sequence and 3-Color Target Area** **(Only for Gene Editing Group Step 5)** |
| Ethylene Production  | Green Yellow Blue | 3 | **GE:** GCT AAC CGA TTC ACG TAC GGC TGC CTC**T:** GCT TCA ATG GTG CTG GAC ATA CAA TTC | **RNA:** CGA UUG GCU AAG UGC AUG CCG ACG GAG**Color Sequence:** Yellow Green Red |
| Pectin Production  | Blue Red Green | 1 | **GE:** TAG GCT ATA AGG TAC CGT TCG GAG CAT**T:** TAG CTG AGA CAC GCA AAT TAT GTA CGT | **RNA:** ACC CGA UAU UCC AUG GCA AGC CUC GUA**Color Sequence:** Red Blue Yellow |
| Fusarium Wilt  | Yellow Red Blue | 4 | **GE:** CAT GCT ATA AGG CGA TTC ACG TAC GGC**T:** CAT ATA CAA TTC TGT CTG AGA CAC TAT | **RNA:** ACC CGA UAU UCC GCU AAG UGC GCU CCG**Color Sequence:** Green Blue Red |

**DNA to RNA Translation Teacher Cheat Sheet**

**GCT AAC CGA TTC ACG TAC GGC TGC CTC**

**GCT TCA ATG GTG CTG GAC ATA CAA TTC**

**TAG GCT ATA AGG TAC CGT TCG GAG CAT**

**TAG CTG AGA CAC GCA AAT TAT GTA CGT**

**CAT GCT ATA AGG CGA TTC ACG TAC GGC**

**CAT ATA CAA TTC TGT CTG AGA CAC TAT**

**GCT AAC CGA TTC ACG TAC GGC TGC CTC**

**GCT TCA ATG GTG CTG GAC ATA CAA TTC**

**TAG GCT ATA AGG TAC CGT TCG GAG CAT**

**TAG CTG AGA CAC GCA AAT TAT GTA CGT**

**CAT GCT ATA AGG CGA TTC ACG TAC GGC**

**CAT ATA CAA TTC TGT CTG AGA CAC TAT**

**GCT AAC CGA TTC ACG TAC GGC TGC CTC**

**GCT TCA ATG GTG CTG GAC ATA CAA TTC**

**TAG GCT ATA AGG TAC CGT TCG GAG CAT**

**TAG CTG AGA CAC GCA AAT TAT GTA CGT**

**CAT GCT ATA AGG CGA TTC ACG TAC GGC**

**CAT ATA CAA TTC TGT CTG AGA CAC TAT**

**GCT AAC CGA TTC ACG TAC GGC TGC CTC**

**GCT TCA ATG GTG CTG GAC ATA CAA TTC**

**TAG GCT ATA AGG TAC CGT TCG GAG CAT**

**TAG CTG AGA CAC GCA AAT TAT GTA CGT**

**CAT GCT ATA AGG CGA TTC ACG TAC GGC**

**CAT ATA CAA TTC TGT CTG AGA CAC TAT**

**GCT AAC CGA TTC ACG TAC GGC TGC CTC**

**GCT TCA ATG GTG CTG GAC ATA CAA TTC**

**TAG GCT ATA AGG TAC CGT TCG GAG CAT**

**TAG CTG AGA CAC GCA AAT TAT GTA CGT**

**CAT GCT ATA AGG CGA TTC ACG TAC GGC**

**CAT ATA CAA TTC TGT CTG AGA CAC TAT**

**GCT AAC CGA TTC ACG TAC GGC TGC CTC**

**GCT TCA ATG GTG CTG GAC ATA CAA TTC**

**TAG GCT ATA AGG TAC CGT TCG GAG CAT**

**TAG CTG AGA CAC GCA AAT TAT GTA CGT**

**CAT GCT ATA AGG CGA TTC ACG TAC GGC**

**CAT ATA CAA TTC TGT CTG AGA CAC TAT**

**GCT AAC CGA TTC ACG TAC GGC TGC CTC**

**GCT TCA ATG GTG CTG GAC ATA CAA TTC**

**TAG GCT ATA AGG TAC CGT TCG GAG CAT**

**TAG CTG AGA CAC GCA AAT TAT GTA CGT**

**CAT GCT ATA AGG CGA TTC ACG TAC GGC**

**CAT ATA CAA TTC TGT CTG AGA CAC TAT**

**GCT AAC CGA TTC ACG TAC GGC TGC CTC**

**GCT TCA ATG GTG CTG GAC ATA CAA TTC**

**TAG GCT ATA AGG TAC CGT TCG GAG CAT**

**TAG CTG AGA CAC GCA AAT TAT GTA CGT**

**CAT GCT ATA AGG CGA TTC ACG TAC GGC**

**CAT ATA CAA TTC TGT CTG AGA CAC TAT**

**GCT AAC CGA TTC ACG TAC GGC TGC CTC**

**GCT TCA ATG GTG CTG GAC ATA CAA TTC**

**TAG GCT ATA AGG TAC CGT TCG GAG CAT**

**TAG CTG AGA CAC GCA AAT TAT GTA CGT**

**CAT GCT ATA AGG CGA TTC ACG TAC GGC**

**CAT ATA CAA TTC TGT CTG AGA CAC TAT**

**GCT AAC CGA TTC ACG TAC GGC TGC CTC**

**GCT TCA ATG GTG CTG GAC ATA CAA TTC**

**TAG GCT ATA AGG TAC CGT TCG GAG CAT**

**TAG CTG AGA CAC GCA AAT TAT GTA CGT**

**CAT GCT ATA AGG CGA TTC ACG TAC GGC**

**CAT ATA CAA TTC TGT CTG AGA CAC TAT**