

Appendix

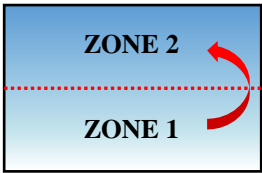
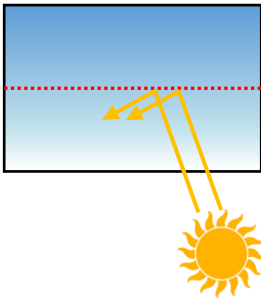
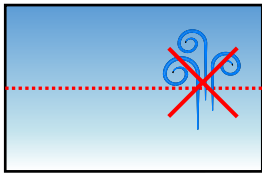
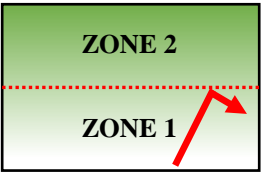
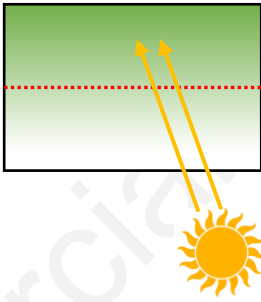
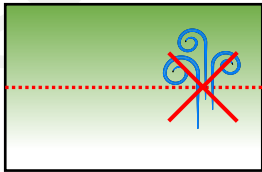
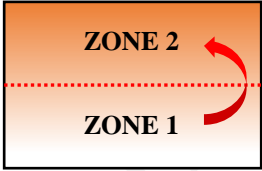
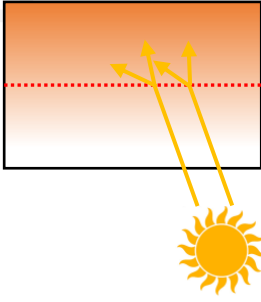
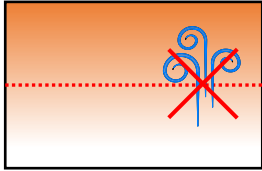
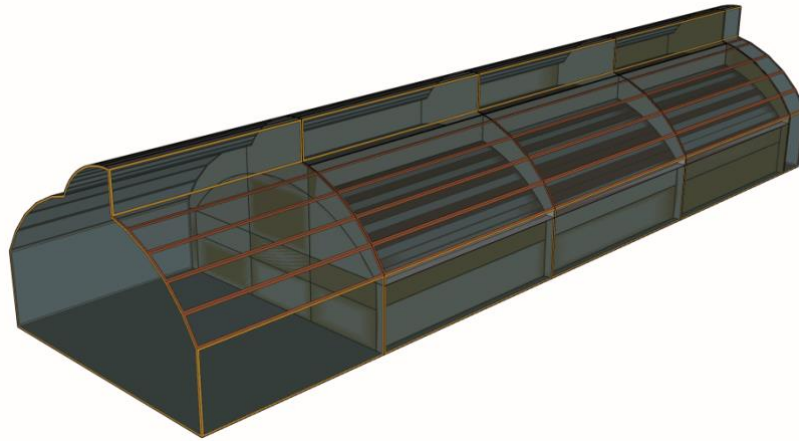
DIVISION	THERMAL TRANSFER	RADIATION MODE	AIR FLOW
MASSLESS LAYER			
VIRTUAL SURFACE			
VIRTUAL WINDOWS			

Figure A1. Limitations of a massless layer, virtual surface, and virtual window in TRNSYS 17 [Source: Baglivo *et al.*, (2020)].

A



B

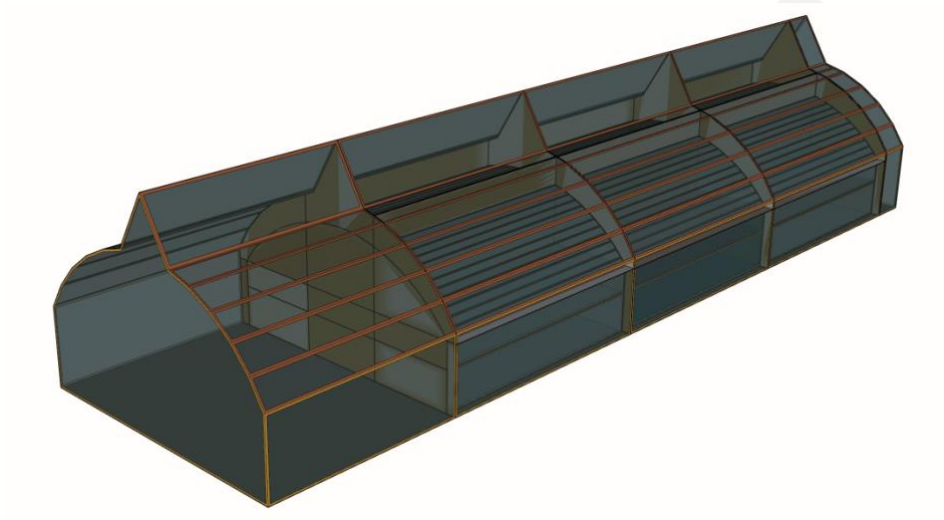


Figure A2. 3D model of stacked air node/zone. A) Multiple zones; B) single zone, multiple air nodes.

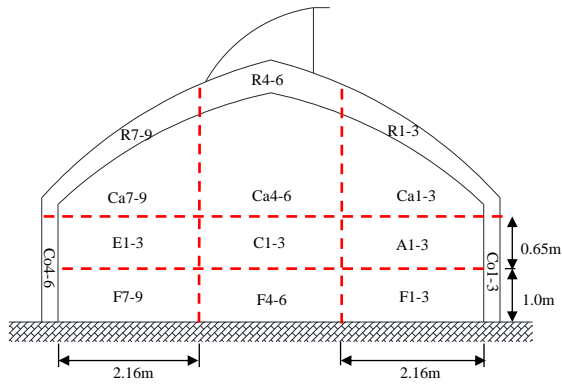
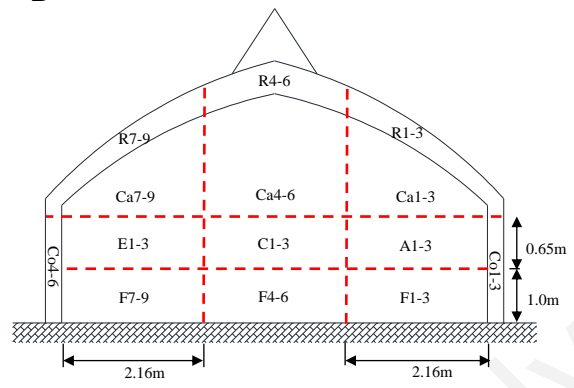
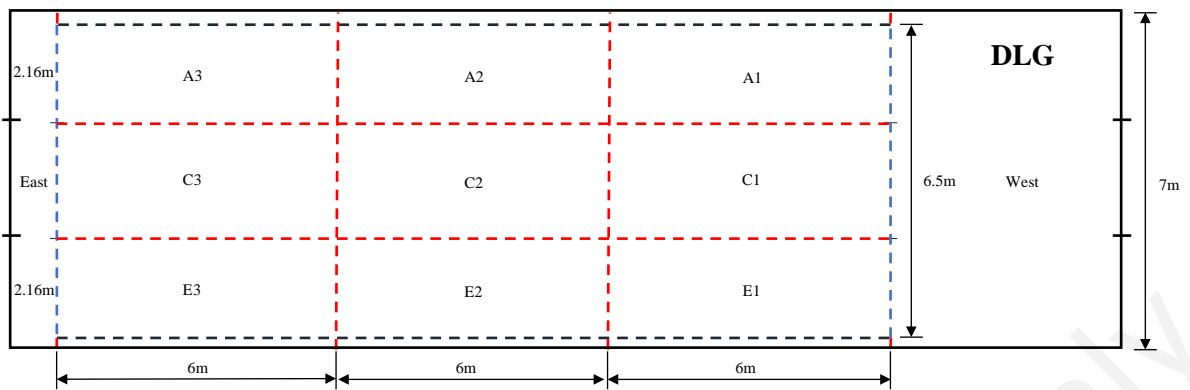
A**B**

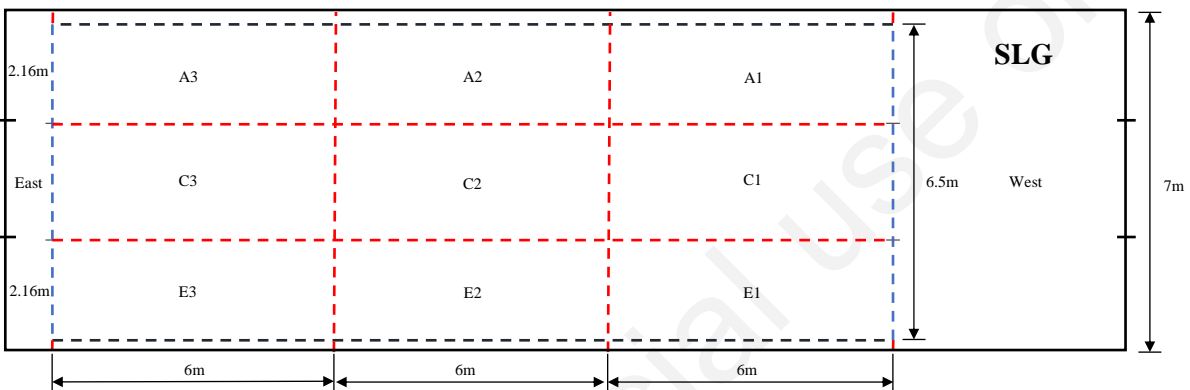
Figure A3. Air node/zone dimension and definition in TRNBuild. A) Front view of double-layer greenhouses; B) front view of single-layer greenhouses.

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A



B



Legend

- External Wall/ First Layer - - - - Adjacent Wall 1/ Second Layer
- . - . - . Adjacent Wall 2 - . - . - . Adjacent Wall 3 ▨ Boundary/ Ground Floor

Figure A4. Air node/zone dimension and definition in TRNBuild. A) Plan view of double-layer greenhouses; B) plan view of single-layer greenhouses.