CLAIMS

What is claimed is:

1. A computer implemented method of operating a product condition system comprising:

measuring first and second conditions of a perishable product by respective first and second detectors;

measuring a first environment parameter of a containment where the perishable product is located;

comparing the first and second conditions to respective first and second pre-programmed thresholds; and

determining a first environment parameter target when at least one of the first and second pre-programmed thresholds are met from a pre-programmed data table as a function of both of the measured first and second measured conditions; and

sending a command signal to an environmental control assembly to meet the first environment parameter target.

2. The computer implemented method set forth in claim 1, wherein the first environment parameter target is established to reduce degradation of the perishable product.

3. The computer implemented method set forth in claim 1 or claim 2, wherein the first condition is a gas emitted by the perishable product and the first detector is a gas detector.

4. The computer implemented method set forth in any one of the previous claims, further comprising:

a first condition signal associated with the measured first condition is sent from the first detector and to a detector data module.

5. The computer implemented method set forth in any one of the previous claims, wherein the pre-programmed data table is indicative of a perishable product type by an analysis module and from a product information database, wherein the pre-programmed data table includes a plurality of condition types, at least one threshold associated with each condition type of the plurality of condition types, and at least one environment parameter associated with each threshold.

6. The computer implemented method set forth in claim 5, wherein a report is outputted by a reporting module when at least one threshold is met.

7. The computer implemented method set forth in claim 6, wherein the report comprises the command signal to the environmental control assembly.

8. The computer implemented method set forth in claim 6 or claim 7, wherein the analysis module and the reporting module are software-based.

9. The computer implemented method set forth in any one of claims 5-8, wherein the detector data module and the product information database are contained within a computer readable and writeable storage medium.

10. The computer implemented method set forth in any one of claims 5-10, wherein the analysis module is supported by a microprocessor.

11. The computer implemented method set forth in claim 1, further comprising:

determining a second environment parameter target when the second pre-programmed threshold is met.

12. The computer implemented method set forth in claim 1, wherein the perishable product is one type of a plurality of types of perishable products, and the data table is one of a plurality of data tables stored in the product information database with each type of perishable products associated with a respective one of the plurality of data tables.

13. The computer implemented method set forth in claim 12 further comprising:

selecting a type of perishable product via a user interface by a user; and

communicating the selection to the analysis module.

14. The computer implemented method set forth in claim 3, wherein the gas is Ethylene.

15. A computer implemented method of operating a cargo transport system according to any preceding claim comprising:

measuring an environment parameter of containment air by a parameter detector;

measuring a first and second conditions of a perishable product by respective first and second condition detectors;

sending at least one condition signal indicative of the first and second conditions to a control module by the first and second condition detectors;

sending a parameter signal indicative of the measured environment parameter to the control module by the parameter detector;

comparing the first and second condition signal to respective first and second thresholds;

accessing a data table containing pre-programmed environment parameter targets based on met thresholds to determine an environment parameter target based on the met threshold association with the at least one condition signal of the condition detector; and

utilizing the thresholds, the environment parameter target and the parameter signal to control an environmental control assembly thereby reaching the environment parameter target.

16. A computer program product for preserving perishable products stored within a containment, the computer program product includes:

a detector data module configured to receive and store product condition data measured by a condition detector;

a product information database configured to store at least one pre-programmed product type table, wherein each product type table is associated with a respective product type of a plurality of product types;

an analysis module configured to retrieve the product condition data and the product type table associated with a perishable product in the containment and determine if a threshold in the product type table is met by the condition data; and

a reporting module configured to output a report at least when the threshold is met.

17. The computer program product set forth in claim 16, wherein the detector data module is configured to receive and store environment parameter data measured by a parameter detector.

18. The computer program product set forth in claim 17, wherein analysis module is configured to compare the met threshold to at least one environment parameter target of the product type table and output a command signal to a environmental control assembly to meet the environment parameter target.