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**Dr. Joshua Cerra**

444 Kennedy Hall

Ithaca, NY 14853

Dear Dr. Cerra,

This letter is to confirm the specification that we discussed yesterday. You are asking for a system that is capable of controlling the temperature within a high tunnel to stay a set amount above the external ambient temperature.

The system:

* shall be capable of regulating the internal temperature of a high tunnel to stay at 5.0±0.5 °F above the external ambient temperature.
* shall be capable of operating in temperatures between -20 to 130 °F.
* shall make use of two winches (T2000, SuperWinch, Putnam, CT), each of which consumes a maximum of 0.5 kW, to trim the wall height of the high tunnel for ventilation and heating or cooling.
* shall further use two ventilation fans (yet to be specified) to draw in air at a rate no less than 500 CFM to cool the high tunnel.
* shall be capable of running on solar power only in an environment with a maximum insolation power of 2 kWh/m2/Day (NREL, 2005).
* shall be fully compliant with the IP66W rating, and shall have its sensitive electronics enclosed in a NEMA 4 or 4X series enclosure.
* shall have a thermal mass element to keep temperatures sufficiently high at night comprised of a minimum of 3 gal./sqft. for the south wall of the high tunnel, comprising a total of 15 55 gallon drums or 20 35 gallon drums.

Please review this specification and get back to me with any comments or corrections so that we might proceed expeditiously to component selection.

Sincerely,

Pete Marchetto