

CORRIGENDUM

No. 1
18 February 2025

Necessary Corrections made to the Tender document

Title: Supply, Deliver and Installation of Greenhouses for the CARICOM Member States

REFERENCE: CCS/GRANT/WPG-2025-SB

Supply Contract Notice

7. Number and titles of lots

Ten (10) Lots

- Lot 1 Title: Supply, Deliver and Installation of Greenhouses for Belize
- Lot 2 Title: Supply, Deliver and Installation of Greenhouses for Dominica
- Lot 3 Title: Supply, Deliver and Installation of Greenhouses for Grenada
- Lot 4 Title: Supply, Deliver and Installation of Greenhouses for Guyana
- Lot 5 Title: Supply, Deliver and Installation of Greenhouses for Haiti
- Lot 6 Title: Supply, Deliver and Installation of Greenhouses for Jamaica
- Lot 7 Title: Supply, Deliver and Installation of Greenhouses for St. Lucia
- Lot 8 Title: Supply, Deliver and Installation of Greenhouses for St. Vincent and the Grenadines
- Lot 9 Title: Supply, Deliver and Installation of Greenhouses for Montserrat
- Lot 10 Title: Supply, Deliver and Installation of Greenhouses for Suriname

INSTRUCTIONS TO TENDERERS

- 1 Supplies to be provided
- 1.1 The subject of the contract is the supply, delivery and installation of the items in LOT 1 to 10.
- Lot 1 Title: Supply, Deliver and Installation of Greenhouses for Belize
Lot 2 Title: Supply, Deliver and Installation of Greenhouses for Dominica
Lot 3 Title: Supply, Deliver and Installation of Greenhouses for Grenada
Lot 4 Title: Supply, Deliver and Installation of Greenhouses for Guyana
Lot 5 Title: Supply, Deliver and Installation of Greenhouses for Haiti
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Lot 10 Title: Supply, Deliver and Installation of Greenhouses for Suriname

ANNEX II + III : TECHNICAL SPECIFICATIONS + TECHNICAL OFFER

Contract title : Supply of [.....] **p 1 /...**

Ref. No.:

Column 1-2 should be completed by the CARICOM Secretariat
Column 3-4 should be completed by the tenderer
Column 5 is reserved for the evaluation committee

Annex III - the Contractor's technical offer

The tenderers are requested to complete the template on the next pages:

- Column 2 is completed by the CARICOM Secretariat shows the required specifications (not to be modified by the tenderer),
- Column 3 is to be filled in by the tenderer and must detail what is offered (for example the words “compliant” or “yes” are not sufficient)
- Column 4 allows the tenderer to make comments on its proposed supply and to make eventual references to the documentation

The eventual documentation supplied should clearly indicate (highlight, mark) the models offered and the options included, if any, so that the evaluators can see the exact configuration. Offers that do not permit to identify precisely the models and the specifications may be rejected by the evaluation committee.

The offer must be clear enough to allow the evaluators to make an easy comparison between the requested specifications and the offered specifications.

Lot 1 Title: Supply, Deliver and Installation of Greenhouses for Belize

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
1	<p>Location and Orientation of the Structure</p> <p>Green house should be oriented in an East to West direction for maximum interception of light. In addition they should be placed perpendicular to the prevailing wind flow.</p> <p>Greenhouse Size</p> <p>A maximum greenhouse width of 10 meters (30 feet) and a length 18.2 meters (60 feet) Height of the side of the roof should be 4 meters (13 feet) from the floor. Height to the highest point of the roof should be minimum 5.2 meters (17 feet). A roof ridge vent to the top of 0.9 meters (3 feet)</p> <p>Foundation</p> <p>Holes 0.4m in diameter and 1 metre deep. Pillars of 80 X 40 X 2mm will be installed 0.75 m underground.</p> <p>Structural Design</p> <p>Double Gothic Arch greenhouse with zhenital vent to top. Or 2M Horizontal vent with openings on both sides to maximize air flow by convection.</p> <p>Frame</p> <p>Number of vertical pillars: 9 for each lateral.</p> <p>Distance between pillars: 2.5 m. - Columns or pillars made of hot-dipped galvanized steel, square shaped with dimensions of 80 x 80 x 2 mm and 4.75 m in length. The galvanized coating thickness in columns shall be 450 gr/m2. –</p>	5			

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	<p>Double dipped galvanized pipes</p> <p>Number of curved arches on the roof: 13. - Curved arched made of galvanized (Sendzimir AZ-275) steel rounded pipes of 60 x 1.5 mm.</p> <p>Number of capitel to join gutter, arches, pillars and crop bar: 18 - Capitel made of galvanized (Sendzimir AZ-275) steel with 2 mm thickness. –</p> <p>Number of frontal pillars: four frontal pillars (2 at the front and 2 at the back) with rectangular shape and dimensions of 80 x 50 x 2 mm. - Four diagonal reinforcements galvanized steel rounded pipes with dimensions of 60 x 1.5 mm. (Two at the front and two at the back). - Reinforcements in corners: Rectangular shaped made of galvanized steel with dimensions of 80 x 50 x 1.5 mm. One diagonally positioned and two units each 2.5 m. in each corner. –</p> <p>Purlins with profile model “C” and “H” made of galvanized (Sendzimir AZ-275) steel of 1.5 mm thickness and PVC clips.</p>				

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	<p>Roof and Ventilation requirements</p> <p>Height of the side of the roof should be 3 meters (10 feet) from the floor. Height to the highest point of the roof should be 5.2 meters (17 feet). A roof ridge vent to the top of 0.9 meters (3 feet) must be created, the roof ridge vent must be placed on the leeward side of the greenhouse. Ensure this roof vent is 20% of the area 4 meters to the gutter, minimum 6feet wide vent Curved roof design with one opening vent at the top of the roof.</p> <p>Guttering</p> <p>A 15 centimetre wide with 10 centimetre down pipe every 80 centimetre square (864 square feet).</p> <p>Roof Covering</p> <p>Anti-thermic plastic 200 microns ne anti drip, anti-dust greenhouse grade plastic.</p> <p>Greenhouse anti-thermic plastic film, thickness of 200 microns. Enough to cover 190m² greenhouse - Additives – EVA, IR, AF, UV; - Resins: PE, EVA; Characterized by the following: - UV treated - High quality covers, - High light transparency, - High thermicity, - Anti-drop, - Anti-dust, - High light diffusion, - Color: Transparent/clear.</p> <p>Premium quality Poly-film with 63.5% NIR blocking properties for cooling effect Dimensions: width 7; length 65 meters Mechanical: Tensile strength at break (DM/DT): 24/22 MPa Mechanical: Elongation at break point (DM/DT): 860/920 % Mechanical: Tear resistance (DM/DT): 1300/ > 1600 g Mechanical: Dart drop test (F50) – Side: 900 cN Mechanical: Dart drop test (F50) – Fold: 650 cN Optical: Total transmission of visible light: 81 % Diffusion: 75 % Thermic Effect: 80 %; NIR transmission: 36.5 %</p>				

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	<p>Insect screen</p> <p>An Antiviral insect netting (22-25 mesh)</p> <ul style="list-style-type: none"> - UV treated - Installed on the sidewalls and zhenital ventilations <p>Shade Net</p> <p>Retractable, to cover 190m². It has to be installed inside from gutter to gutter, plus covering front and back. 100% High Density Polyethylene Monofilament mesh (HDPE). Color: White, UV Resistant, Shade factor: 30 %</p> <p>Ground Cover Plastic mulch</p> <p>Dimension: 1.7 meters width x 1,000 meters length per roll</p> <p>Thickness: 30 microns UV Resistant</p> <p>Color: inner black outer white</p> <p>Doors</p> <p>A double door entrance design is recommended with a minimum width of 1.5 m and a minimum of 2 m in length.</p> <p>Side Walls</p> <p>70 cm high are in poly carbonate with the higher parts in insect screen</p> <p>Size or Area Under Cover</p> <p>182 square metre (10 M Wide by 18.2 M wide)</p> <p>Water Storage</p> <p>2 x 1000 Gallon Plastic Tanks</p>				

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	<p>Warranty , Manual References</p> <p>Statement and terms as well as conditions of the product warranty that will be available with the goods offered. Plastic and netting covers guaranteed for 24 months under Estwani conditions. Structure is guaranteed for 10 years against corrosion. A full and clear manufacturer's warranty statement transferable with the ownership of the equipment must be submitted with the bid detailing the terms and conditions being offered.</p> <p>Technical / operational manuals in local and English Language shall be included in offer.</p>				

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Lot 4 Title: Supply, Deliver and Installation of Greenhouses for Guyana

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
1	<p>Location and Orientation of the Structure</p> <p>Green house should be oriented in an East to West direction for maximum interception of light. In addition they should be placed perpendicular to the prevailing wind flow.</p> <p>Greenhouse Size</p> <p>A maximum greenhouse width of 10 meters (30 feet) and a length 18.2 meters (60 feet) Height of the side of the roof should be 4 meters (13 feet) from the floor. Height to the highest point of the roof should be minimum 5.2 meters (17 feet). A roof ridge vent to the top of 0.9 meters (3 feet)</p> <p>Foundation</p> <p>Holes 0.4m in diameter and 1 metre deep. Pillars of 80 X 40 X 2mm will be installed 0.75 m underground.</p> <p>Structural Design</p> <p>Double Gothic Arch greenhouse with zhenital vent to top. Or 2M Horizontal vent with openings on both sides to maximize air flow by convection.</p> <p>Frame</p> <p>Number of vertical pillars: 9 for each lateral.</p> <p>Distance between pillars: 2.5 m. - Columns or pillars made of hot-dipped galvanized steel, square shaped with dimensions of 80 x 80 x 2 mm and 4.75 m in length. The galvanized coating thickness in columns shall be 450 gr/m2. –</p>	5			

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Double dipped galvanized pipes</p> <p>Number of curved arches on the roof: 13. - Curved arched made of galvanized (Sendzimir AZ-275) steel rounded pipes of 60 x 1.5 mm.</p> <p>Number of capitel to join gutter, arches, pillars and crop bar: 18 - Capitel made of galvanized (Sendzimir AZ-275) steel with 2 mm thickness. –</p> <p>Number of frontal pillars: four frontal pillars (2 at the front and 2 at the back) with rectangular shape and dimensions of 80 x 50 x 2 mm. - Four diagonal reinforcements galvanized steel rounded pipes with dimensions of 60 x 1.5 mm. (Two at the front and two at the back). - Reinforcements in corners: Rectangular shaped made of galvanized steel with dimensions of 80 x 50 x 1.5 mm. One diagonally positioned and two units each 2.5 m. in each corner. –</p> <p>Purlins with profile model “C” and “H” made of galvanized (Sendzimir AZ-275) steel of 1.5 mm thickness and PVC clips.</p>				

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Crop bar: Rounded pipe galvanized (Sendzimir AZ-275) steel of 40 x 1.5 mm. Located every 2,5 m. –</p> <p>Vertical central reinforcements: Rounded pipe galvanized (Sendzimir AZ-275) steel of 30 x 1.5 mm. Located every 2.5 m. One for each crop bar. –</p> <p>Vertical side reinforcements: Rounded pipe galvanized (Sendzimir AZ275) steel of 30 x 1.5 mm. Located every 2, 5 m. Two for each crop bar. - Reinforcements in “V”: Rounded pipe galvanized (Sendzimir AZ-275) steel of 30 x 1.2 mm. Located every 2, 5 m. Two for each crop bar</p> <p>Materials to be used in structural frames</p> <p>3inch Aluzinc pipes for the post. Crossbeam rafters (centre thrust) constructed from 1 1/4inch Aluzinc post and arches (ribs) made from 1 inch Aluzinc post. Arched ribs should be spaced at 0.9meter intervals.</p> <p>The structure should withstand wind speeds up to 145 km/hr.</p> <p>Clamps made of galvanized (Sendzimir AZ-275) steel of 2.5 mm thickness. - Screws/bolts made of high quality against corrosion.</p> <p>Also wind resistance should be 120 km/hr</p>				

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Roof and Ventilation requirements</p> <p>Height of the side of the roof should be 3 meters (10 feet) from the floor. Height to the highest point of the roof should be 5.2 meters (17 feet). A roof ridge vent to the top of 0.9 meters (3 feet) must be created, the roof ridge vent must be placed on the leeward side of the greenhouse. Ensure this roof vent is 20% of the area 4 meters to the gutter, minimum 6feet wide vent Curved roof design with one opening vent at the top of the roof.</p> <p>Guttering</p> <p>A 15 centimetre wide with 10 centimetre down pipe every 80 centimetre square (864 square feet).</p> <p>Roof Covering</p> <p>Anti-thermic plastic 200 microns ne anti drip, anti-dust greenhouse grade plastic.</p> <p>Greenhouse anti-thermic plastic film, thickness of 200 microns. Enough to cover 190m² greenhouse - Additives – EVA, IR, AF, UV; - Resins: PE, EVA; Characterized by the following: - UV treated - High quality covers, - High light transparency, - High thermicity, - Anti-drop, - Anti-dust, - High light diffusion, - Color: Transparent/clear.</p> <p>Premium quality Poly-film with 63.5% NIR blocking properties for cooling effect Dimensions: width 7; length 65 meters Mechanical: Tensile strength at break (DM/DT): 24/22 MPa Mechanical: Elongation at break point (DM/DT): 860/920 % Mechanical: Tear resistance (DM/DT): 1300/ > 1600 g Mechanical: Dart drop test (F50) – Side: 900 cN Mechanical: Dart drop test (F50) – Fold: 650 cN Optical: Total transmission of visible light: 81 % Diffusion: 75 % Thermic Effect: 80 %; NIR transmission: 36.5 %</p>				

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Insect screen</p> <p>An Antiviral insect netting (22-25 mesh)</p> <ul style="list-style-type: none"> - UV treated - Installed on the sidewalls and zhenital ventilations <p>Shade Net</p> <p>Retractable, to cover 190m². It has to be installed inside from gutter to gutter, plus covering front and back. 100% High Density Polyethylene Monofilament mesh (HDPE). Color: White, UV Resistant, Shade factor: 30 %</p> <p>Ground Cover Plastic mulch</p> <p>Dimension: 1.7 meters width x 1,000 meters length per roll</p> <p>Thickness: 30 microns UV Resistant</p> <p>Color: inner black outer white</p> <p>Doors</p> <p>A double door entrance design is recommended with a minimum width of 1.5 m and a minimum of 2 m in length.</p> <p>Side Walls</p> <p>70 cm high are in poly carbonate with the higher parts in insect screen</p> <p>Size or Area Under Cover</p> <p>182 square metre (10 M Wide by 18.2 M wide)</p> <p>Water Storage</p> <p>2 x 1000 Gallon Plastic Tanks</p>				

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Irrigation</p> <p>The irrigation system will be an automated drip timer controlled system and fertigation system. Drip line thickness: 0.2 – 0.25 mm Drip line diameter: 16 mm Flow per hour: from 1 to 1.6 litres per hour Working pressure: 1.2 1.6 bar Distance between drippers: 20 cm</p> <p>Fertigation System</p> <p>Two 1 inch venturi with pressure provided by a 0.5 HP water pump and two 55 gallon water fertigation tanks . One for NPK fertilizer and One for Calcium Nitrate.</p> <p>Lighting and Electrical</p> <p>The electrical control unit for the irrigation timer</p> <p>Certifications</p> <p>Quality certificates are required for the greenhouse frame, plastic cover, anti- insect netting and shade net</p> <p>Plant Support Systems</p> <p>10 turn buckles with 200 metres of 10 gauge trellis support wire will be required.</p> <p>Planting Accessories to be provided</p> <p>Coconut Coir Grow Bags</p>				

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Warranty , Manual References</p> <p>Statement and terms as well as conditions of the product warranty that will be available with the goods offered. Plastic and netting covers guaranteed for 24 months under Estwani conditions. Structure is guaranteed for 10 years against corrosion. A full and clear manufacturer's warranty statement transferable with the ownership of the equipment must be submitted with the bid detailing the terms and conditions being offered.</p> <p>Technical / operational manuals in local and English Language shall be included in offer.</p>				

Lot 5 Title: Supply, Deliver and Installation of Greenhouses for Haiti

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
1	<p>Location and Orientation of the Structure</p> <p>Green house should be oriented in an East to West direction for maximum interception of light. In addition they should be placed perpendicular to the prevailing wind flow.</p> <p>Greenhouse Size</p> <p>A maximum greenhouse width of 10 meters (30 feet) and a length 18.2 meters (60 feet) Height of the side of the roof should be 4 meters (13 feet) from the floor. Height to the highest point of the roof should be minimum 5.2 meters (17 feet). A roof ridge vent to the top of 0.9 meters (3 feet)</p> <p>Foundation</p> <p>Holes 0.4m in diameter and 1 metre deep. Pillars of 80 X 40 X 2mm will be installed 0.75 m underground.</p> <p>Structural Design</p> <p>Double Gothic Arch greenhouse with zhenital vent to top. Or 2M Horizontal vent with openings on both sides to maximize air flow by convection.</p> <p>Frame</p> <p>Number of vertical pillars: 9 for each lateral.</p> <p>Distance between pillars: 2.5 m. - Columns or pillars made of hot-dipped galvanized steel, square shaped with dimensions of 80 x 80 x 2 mm and 4.75 m in length. The galvanized coating thickness in columns shall be 450 gr/m2. –</p>	4			

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Double dipped galvanized pipes</p> <p>Number of curved arches on the roof: 13. - Curved arched made of galvanized (Sendzimir AZ-275) steel rounded pipes of 60 x 1.5 mm.</p> <p>Number of capitel to join gutter, arches, pillars and crop bar: 18 - Capitel made of galvanized (Sendzimir AZ-275) steel with 2 mm thickness. –</p> <p>Number of frontal pillars: four frontal pillars (2 at the front and 2 at the back) with rectangular shape and dimensions of 80 x 50 x 2 mm. - Four diagonal reinforcements galvanized steel rounded pipes with dimensions of 60 x 1.5 mm. (Two at the front and two at the back). - Reinforcements in corners: Rectangular shaped made of galvanized steel with dimensions of 80 x 50 x 1.5 mm. One diagonally positioned and two units each 2.5 m. in each corner. –</p> <p>Purlins with profile model “C” and “H” made of galvanized (Sendzimir AZ-275) steel of 1.5 mm thickness and PVC clips.</p>				

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Crop bar: Rounded pipe galvanized (Sendzimir AZ-275) steel of 40 x 1.5 mm. Located every 2,5 m. –</p> <p>Vertical central reinforcements: Rounded pipe galvanized (Sendzimir AZ-275) steel of 30 x 1.5 mm. Located every 2.5 m. One for each crop bar. –</p> <p>Vertical side reinforcements: Rounded pipe galvanized (Sendzimir AZ275) steel of 30 x 1.5 mm. Located every 2, 5 m. Two for each crop bar. - Reinforcements in “V”: Rounded pipe galvanized (Sendzimir AZ-275) steel of 30 x 1.2 mm. Located every 2, 5 m. Two for each crop bar</p> <p>Materials to be used in structural frames</p> <p>3inch Aluzinc pipes for the post. Crossbeam rafters (centre thrust) constructed from 1 1/4inch Aluzinc post and arches (ribs) made from 1 inch Aluzinc post. Arched ribs should be spaced at 0.9meter intervals.</p> <p>The structure should withstand wind speeds up to 145 km/hr.</p> <p>Clamps made of galvanized (Sendzimir AZ-275) steel of 2.5 mm thickness. - Screws/bolts made of high quality against corrosion.</p> <p>Also wind resistance should be 120 km/hr</p>				

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Roof and Ventilation requirements</p> <p>Height of the side of the roof should be 3 meters (10 feet) from the floor. Height to the highest point of the roof should be 5.2 meters (17 feet). A roof ridge vent to the top of 0.9 meters (3 feet) must be created, the roof ridge vent must be placed on the leeward side of the greenhouse. Ensure this roof vent is 20% of the area 4 meters to the gutter, minimum 6feet wide vent Curved roof design with one opening vent at the top of the roof.</p> <p>Guttering</p> <p>A 15 centimetre wide with 10 centimetre down pipe every 80 centimetre square (864 square feet).</p> <p>Roof Covering</p> <p>Anti-thermic plastic 200 microns ne anti drip, anti-dust greenhouse grade plastic.</p> <p>Greenhouse anti-thermic plastic film, thickness of 200 microns. Enough to cover 190m² greenhouse - Additives – EVA, IR, AF, UV; - Resins: PE, EVA; Characterized by the following: - UV treated - High quality covers, - High light transparency, - High thermicity, - Anti-drop, - Anti-dust, - High light diffusion, - Color: Transparent/clear.</p> <p>Premium quality Poly-film with 63.5% NIR blocking properties for cooling effect Dimensions: width 7; length 65 meters Mechanical: Tensile strength at break (DM/DT): 24/22 MPa Mechanical: Elongation at break point (DM/DT): 860/920 % Mechanical: Tear resistance (DM/DT): 1300/ > 1600 g Mechanical: Dart drop test (F50) – Side: 900 cN Mechanical: Dart drop test (F50) – Fold: 650 cN Optical: Total transmission of visible light: 81 % Diffusion: 75 % Thermic Effect: 80 %; NIR transmission: 36.5 %</p>				

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Insect screen</p> <p>An Antiviral insect netting (22-25 mesh)</p> <ul style="list-style-type: none"> - UV treated - Installed on the sidewalls and zhenital ventilations <p>Shade Net</p> <p>Retractable, to cover 190m². It has to be installed inside from gutter to gutter, plus covering front and back. 100% High Density Polyethylene Monofilament mesh (HDPE). Color: White, UV Resistant, Shade factor: 30 %</p> <p>Ground Cover Plastic mulch</p> <p>Dimension: 1.7 meters width x 1,000 meters length per roll</p> <p>Thickness: 30 microns UV Resistant</p> <p>Color: inner black outer white</p> <p>Doors</p> <p>A double door entrance design is recommended with a minimum width of 1.5 m and a minimum of 2 m in length.</p> <p>Side Walls</p> <p>70 cm high are in poly carbonate with the higher parts in insect screen</p> <p>Size or Area Under Cover</p> <p>182 square metre (10 M Wide by 18.2 M wide)</p> <p>Water Storage</p> <p>2 x 1000 Gallon Plastic Tanks</p>				

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Irrigation</p> <p>The irrigation system will be an automated drip timer controlled system and fertigation system. Drip line thickness: 0.2 – 0.25 mm Drip line diameter: 16 mm Flow per hour: from 1 to 1.6 litres per hour Working pressure: 1.2 1.6 bar Distance between drippers: 20 cm</p> <p>Fertigation System</p> <p>Two 1 inch venturi with pressure provided by a 0.5 HP water pump and two 55 gallon water fertigation tanks . One for NPK fertilizer and One for Calcium Nitrate.</p> <p>Lighting and Electrical</p> <p>The electrical control unit for the irrigation timer</p> <p>Certifications</p> <p>Quality certificates are required for the greenhouse frame, plastic cover, anti- insect netting and shade net</p> <p>Plant Support Systems</p> <p>10 turn buckles with 200 metres of 10 gauge trellis support wire will be required.</p> <p>Planting Accessories to be provided</p> <p>Coconut Coir Grow Bags</p>				

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Warranty , Manual References</p> <p>Statement and terms as well as conditions of the product warranty that will be available with the goods offered. Plastic and netting covers guaranteed for 24 months under Estwani conditions. Structure is guaranteed for 10 years against corrosion. A full and clear manufacturer's warranty statement transferable with the ownership of the equipment must be submitted with the bid detailing the terms and conditions being offered.</p> <p>Technical / operational manuals in local and English Language shall be included in offer.</p>				

Lot 6 Title: Supply, Deliver and Installation of Greenhouses for Jamaica

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
1	<p>Location and Orientation of the Structure</p> <p>Green house should be oriented in an East to West direction for maximum interception of light. In addition they should be placed perpendicular to the prevailing wind flow.</p> <p>Greenhouse Size</p> <p>A maximum greenhouse width of 10 meters (30 feet) and a length 18.2 meters (60 feet) Height of the side of the roof should be 4 meters (13 feet) from the floor. Height to the highest point of the roof should be minimum 5.2 meters (17 feet). A roof ridge vent to the top of 0.9 meters (3 feet)</p> <p>Foundation</p> <p>Holes 0.4m in diameter and 1 metre deep. Pillars of 80 X 40 X 2mm will be installed 0.75 m underground.</p> <p>Structural Design</p> <p>Double Gothic Arch greenhouse with zhenital vent to top. Or 2M Horizontal vent with openings on both sides to maximize air flow by convection.</p> <p>Frame</p> <p>Number of vertical pillars: 9 for each lateral.</p> <p>Distance between pillars: 2.5 m. - Columns or pillars made of hot-dipped galvanized steel, square shaped with dimensions of 80 x 80 x 2 mm and 4.75 m in length. The galvanized coating thickness in columns shall be 450 gr/m2. –</p>	5			

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Double dipped galvanized pipes</p> <p>Number of curved arches on the roof: 13. - Curved arched made of galvanized (Sendzimir AZ-275) steel rounded pipes of 60 x 1.5 mm.</p> <p>Number of capitel to join gutter, arches, pillars and crop bar: 18 - Capitel made of galvanized (Sendzimir AZ-275) steel with 2 mm thickness. –</p> <p>Number of frontal pillars: four frontal pillars (2 at the front and 2 at the back) with rectangular shape and dimensions of 80 x 50 x 2 mm. - Four diagonal reinforcements galvanized steel rounded pipes with dimensions of 60 x 1.5 mm. (Two at the front and two at the back). - Reinforcements in corners: Rectangular shaped made of galvanized steel with dimensions of 80 x 50 x 1.5 mm. One diagonally positioned and two units each 2.5 m. in each corner. –</p> <p>Purlins with profile model “C” and “H” made of galvanized (Sendzimir AZ-275) steel of 1.5 mm thickness and PVC clips.</p>				

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Crop bar: Rounded pipe galvanized (Sendzimir AZ-275) steel of 40 x 1.5 mm. Located every 2,5 m. –</p> <p>Vertical central reinforcements: Rounded pipe galvanized (Sendzimir AZ-275) steel of 30 x 1.5 mm. Located every 2.5 m. One for each crop bar. –</p> <p>Vertical side reinforcements: Rounded pipe galvanized (Sendzimir AZ275) steel of 30 x 1.5 mm. Located every 2, 5 m. Two for each crop bar. - Reinforcements in “V”: Rounded pipe galvanized (Sendzimir AZ-275) steel of 30 x 1.2 mm. Located every 2, 5 m. Two for each crop bar</p> <p>Materials to be used in structural frames</p> <p>3inch Aluzinc pipes for the post. Crossbeam rafters (centre thrust) constructed from 1 1/4inch Aluzinc post and arches (ribs) made from 1 inch Aluzinc post. Arched ribs should be spaced at 0.9meter intervals.</p> <p>The structure should withstand wind speeds up to 145 km/hr.</p> <p>Clamps made of galvanized (Sendzimir AZ-275) steel of 2.5 mm thickness. - Screws/bolts made of high quality against corrosion.</p> <p>Also wind resistance should be 120 km/hr</p>				

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Roof and Ventilation requirements</p> <p>Height of the side of the roof should be 3 meters (10 feet) from the floor. Height to the highest point of the roof should be 5.2 meters (17 feet). A roof ridge vent to the top of 0.9 meters (3 feet) must be created, the roof ridge vent must be placed on the leeward side of the greenhouse. Ensure this roof vent is 20% of the area 4 meters to the gutter, minimum 6feet wide vent Curved roof design with one opening vent at the top of the roof.</p> <p>Guttering</p> <p>A 15 centimetre wide with 10 centimetre down pipe every 80 centimetre square (864 square feet).</p> <p>Roof Covering</p> <p>Anti-thermic plastic 200 microns ne anti drip, anti-dust greenhouse grade plastic.</p> <p>Greenhouse anti-thermic plastic film, thickness of 200 microns. Enough to cover 190m² greenhouse - Additives – EVA, IR, AF, UV; - Resins: PE, EVA; Characterized by the following: - UV treated - High quality covers, - High light transparency, - High thermicity, - Anti-drop, - Anti-dust, - High light diffusion, - Color: Transparent/clear.</p> <p>Premium quality Poly-film with 63.5% NIR blocking properties for cooling effect Dimensions: width 7; length 65 meters Mechanical: Tensile strength at break (DM/DT): 24/22 MPa Mechanical: Elongation at break point (DM/DT): 860/920 % Mechanical: Tear resistance (DM/DT): 1300/ > 1600 g Mechanical: Dart drop test (F50) – Side: 900 cN Mechanical: Dart drop test (F50) – Fold: 650 cN Optical: Total transmission of visible light: 81 % Diffusion: 75 % Thermic Effect: 80 %; NIR transmission: 36.5 %</p>				

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Insect screen</p> <p>An Antiviral insect netting (22-25 mesh)</p> <ul style="list-style-type: none"> - UV treated - Installed on the sidewalls and zhenital ventilations <p>Shade Net</p> <p>Retractable, to cover 190m². It has to be installed inside from gutter to gutter, plus covering front and back. 100% High Density Polyethylene Monofilament mesh (HDPE). Color: White, UV Resistant, Shade factor: 30 %</p> <p>Ground Cover Plastic mulch</p> <p>Dimension: 1.7 meters width x 1,000 meters length per roll</p> <p>Thickness: 30 microns UV Resistant</p> <p>Color: inner black outer white</p> <p>Doors</p> <p>A double door entrance design is recommended with a minimum width of 1.5 m and a minimum of 2 m in length.</p> <p>Side Walls</p> <p>70 cm high are in poly carbonate with the higher parts in insect screen</p> <p>Size or Area Under Cover</p> <p>182 square metre (10 M Wide by 18.2 M wide)</p> <p>Water Storage</p> <p>2 x 1000 Gallon Plastic Tanks</p>				

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Irrigation</p> <p>The irrigation system will be an automated drip timer controlled system and fertigation system. Drip line thickness: 0.2 – 0.25 mm Drip line diameter: 16 mm Flow per hour: from 1 to 1.6 litres per hour Working pressure: 1.2 1.6 bar Distance between drippers: 20 cm</p> <p>Fertigation System</p> <p>Two 1 inch venturi with pressure provided by a 0.5 HP water pump and two 55 gallon water fertigation tanks . One for NPK fertilizer and One for Calcium Nitrate.</p> <p>Lighting and Electrical</p> <p>The electrical control unit for the irrigation timer</p> <p>Certifications</p> <p>Quality certificates are required for the greenhouse frame, plastic cover, anti- insect netting and shade net</p> <p>Plant Support Systems</p> <p>10 turn buckles with 200 metres of 10 gauge trellis support wire will be required.</p> <p>Planting Accessories to be provided</p> <p>Coconut Coir Grow Bags</p>				

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Warranty , Manual References</p> <p>Statement and terms as well as conditions of the product warranty that will be available with the goods offered. Plastic and netting covers guaranteed for 24 months under Estwani conditions. Structure is guaranteed for 10 years against corrosion. A full and clear manufacturer's warranty statement transferable with the ownership of the equipment must be submitted with the bid detailing the terms and conditions being offered.</p> <p>Technical / operational manuals in local and English Language shall be included in offer.</p>				

Lot 7 Title: Supply, Deliver and Installation of Greenhouses for St. Lucia

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
1	<p>Location and Orientation of the Structure</p> <p>Green house should be oriented in an East to West direction for maximum interception of light. In addition they should be placed perpendicular to the prevailing wind flow.</p> <p>Greenhouse Size</p> <p>A maximum greenhouse width of 10 meters (30 feet) and a length 18.2 meters (60 feet) Height of the side of the roof should be 4 meters (13 feet) from the floor. Height to the highest point of the roof should be minimum 5.2 meters (17 feet). A roof ridge vent to the top of 0.9 meters (3 feet)</p> <p>Foundation</p> <p>Holes 0.4m in diameter and 1 metre deep. Pillars of 80 X 40 X 2mm will be installed 0.75 m underground.</p> <p>Structural Design</p> <p>Double Gothic Arch greenhouse with zhenital vent to top. Or 2M Horizontal vent with openings on both sides to maximize air flow by convection.</p> <p>Frame</p> <p>Number of vertical pillars: 9 for each lateral.</p> <p>Distance between pillars: 2.5 m. - Columns or pillars made of hot-dipped galvanized steel, square shaped with dimensions of 80 x 80 x 2 mm and 4.75 m in length. The galvanized coating thickness in columns shall be 450 gr/m2. –</p>	5			

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	<p>Double dipped galvanized pipes</p> <p>Number of curved arches on the roof: 13. - Curved arched made of galvanized (Sendzimir AZ-275) steel rounded pipes of 60 x 1.5 mm.</p> <p>Number of capitel to join gutter, arches, pillars and crop bar: 18 - Capitel made of galvanized (Sendzimir AZ-275) steel with 2 mm thickness. –</p> <p>Number of frontal pillars: four frontal pillars (2 at the front and 2 at the back) with rectangular shape and dimensions of 80 x 50 x 2 mm. - Four diagonal reinforcements galvanized steel rounded pipes with dimensions of 60 x 1.5 mm. (Two at the front and two at the back). - Reinforcements in corners: Rectangular shaped made of galvanized steel with dimensions of 80 x 50 x 1.5 mm. One diagonally positioned and two units each 2.5 m. in each corner. –</p> <p>Purlins with profile model “C” and “H” made of galvanized (Sendzimir AZ-275) steel of 1.5 mm thickness and PVC clips.</p>				

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	<p>Crop bar: Rounded pipe galvanized (Sendzimir AZ-275) steel of 40 x 1.5 mm. Located every 2,5 m. –</p> <p>Vertical central reinforcements: Rounded pipe galvanized (Sendzimir AZ-275) steel of 30 x 1.5 mm. Located every 2.5 m. One for each crop bar. –</p> <p>Vertical side reinforcements: Rounded pipe galvanized (Sendzimir AZ275) steel of 30 x 1.5 mm. Located every 2, 5 m. Two for each crop bar. - Reinforcements in “V”: Rounded pipe galvanized (Sendzimir AZ-275) steel of 30 x 1.2 mm. Located every 2, 5 m. Two for each crop bar</p> <p>Materials to be used in structural frames</p> <p>3inch Aluzinc pipes for the post. Crossbeam rafters (centre thrust) constructed from 1 1/4inch Aluzinc post and arches (ribs) made from 1 inch Aluzinc post. Arched ribs should be spaced at 0.9meter intervals.</p> <p>The structure should withstand wind speeds up to 145 km/hr.</p> <p>Clamps made of galvanized (Sendzimir AZ-275) steel of 2.5 mm thickness. - Screws/bolts made of high quality against corrosion.</p> <p>Also wind resistance should be 120 km/hr</p>				

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Roof and Ventilation requirements</p> <p>Height of the side of the roof should be 3 meters (10 feet) from the floor. Height to the highest point of the roof should be 5.2 meters (17 feet). A roof ridge vent to the top of 0.9 meters (3 feet) must be created, the roof ridge vent must be placed on the leeward side of the greenhouse. Ensure this roof vent is 20% of the area 4 meters to the gutter, minimum 6feet wide vent Curved roof design with one opening vent at the top of the roof.</p> <p>Guttering</p> <p>A 15 centimetre wide with 10 centimetre down pipe every 80 centimetre square (864 square feet).</p> <p>Roof Covering</p> <p>Anti-thermic plastic 200 microns ne anti drip, anti-dust greenhouse grade plastic.</p> <p>Greenhouse anti-thermic plastic film, thickness of 200 microns. Enough to cover 190m² greenhouse - Additives – EVA, IR, AF, UV; - Resins: PE, EVA; Characterized by the following: - UV treated - High quality covers, - High light transparency, - High thermicity, - Anti-drop, - Anti-dust, - High light diffusion, - Color: Transparent/clear.</p> <p>Premium quality Poly-film with 63.5% NIR blocking properties for cooling effect Dimensions: width 7; length 65 meters Mechanical: Tensile strength at break (DM/DT): 24/22 MPa Mechanical: Elongation at break point (DM/DT): 860/920 % Mechanical: Tear resistance (DM/DT): 1300/ > 1600 g Mechanical: Dart drop test (F50) – Side: 900 cN Mechanical: Dart drop test (F50) – Fold: 650 cN Optical: Total transmission of visible light: 81 % Diffusion: 75 % Thermic Effect: 80 %; NIR transmission: 36.5 %</p>				

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Insect screen</p> <p>An Antiviral insect netting (22-25 mesh)</p> <ul style="list-style-type: none"> - UV treated - Installed on the sidewalls and zhenital ventilations <p>Shade Net</p> <p>Retractable, to cover 190m². It has to be installed inside from gutter to gutter, plus covering front and back. 100% High Density Polyethylene Monofilament mesh (HDPE). Color: White, UV Resistant, Shade factor: 30 %</p> <p>Ground Cover Plastic mulch</p> <p>Dimension: 1.7 meters width x 1,000 meters length per roll</p> <p>Thickness: 30 microns UV Resistant</p> <p>Color: inner black outer white</p> <p>Doors</p> <p>A double door entrance design is recommended with a minimum width of 1.5 m and a minimum of 2 m in length.</p> <p>Side Walls</p> <p>70 cm high are in poly carbonate with the higher parts in insect screen</p> <p>Size or Area Under Cover</p> <p>182 square metre (10 M Wide by 18.2 M wide)</p> <p>Water Storage</p> <p>2 x 1000 Gallon Plastic Tanks</p>				

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Irrigation</p> <p>The irrigation system will be an automated drip timer controlled system and fertigation system. Drip line thickness: 0.2 – 0.25 mm Drip line diameter: 16 mm Flow per hour: from 1 to 1.6 litres per hour Working pressure: 1.2 1.6 bar Distance between drippers: 20 cm</p> <p>Fertigation System</p> <p>Two 1 inch venturi with pressure provided by a 0.5 HP water pump and two 55 gallon water fertigation tanks . One for NPK fertilizer and One for Calcium Nitrate.</p> <p>Lighting and Electrical</p> <p>The electrical control unit for the irrigation timer</p> <p>Certifications</p> <p>Quality certificates are required for the greenhouse frame, plastic cover, anti- insect netting and shade net</p> <p>Plant Support Systems</p> <p>10 turn buckles with 200 metres of 10 gauge trellis support wire will be required.</p> <p>Planting Accessories to be provided</p> <p>Coconut Coir Grow Bags</p>				

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Warranty , Manual References</p> <p>Statement and terms as well as conditions of the product warranty that will be available with the goods offered. Plastic and netting covers guaranteed for 24 months under Estwani conditions. Structure is guaranteed for 10 years against corrosion. A full and clear manufacturer's warranty statement transferable with the ownership of the equipment must be submitted with the bid detailing the terms and conditions being offered.</p> <p>Technical / operational manuals in local and English Language shall be included in offer.</p>				

Lot 8 Title: Supply, Deliver and Installation of Greenhouses for St. Vincent and the Grenadines

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
1	<p>Location and Orientation of the Structure</p> <p>Green house should be oriented in an East to West direction for maximum interception of light. In addition they should be placed perpendicular to the prevailing wind flow.</p> <p>Greenhouse Size</p> <p>A maximum greenhouse width of 10 meters (30 feet) and a length 18.2 meters (60 feet) Height of the side of the roof should be 4 meters (13 feet) from the floor. Height to the highest point of the roof should be minimum 5.2 meters (17 feet). A roof ridge vent to the top of 0.9 meters (3 feet)</p> <p>Foundation</p> <p>Holes 0.4m in diameter and 1 metre deep. Pillars of 80 X 40 X 2mm will be installed 0.75 m underground.</p> <p>Structural Design</p> <p>Double Gothic Arch greenhouse with zhenital vent to top. Or 2M Horizontal vent with openings on both sides to maximize air flow by convection.</p> <p>Frame</p> <p>Number of vertical pillars: 9 for each lateral.</p> <p>Distance between pillars: 2.5 m. - Columns or pillars made of hot-dipped galvanized steel, square shaped with dimensions of 80 x 80 x 2 mm and 4.75 m in length. The galvanized coating thickness in columns shall be 450 gr/m2. –</p>	5			

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Double dipped galvanized pipes</p> <p>Number of curved arches on the roof: 13. - Curved arched made of galvanized (Sendzimir AZ-275) steel rounded pipes of 60 x 1.5 mm.</p> <p>Number of capitel to join gutter, arches, pillars and crop bar: 18 - Capitel made of galvanized (Sendzimir AZ-275) steel with 2 mm thickness. –</p> <p>Number of frontal pillars: four frontal pillars (2 at the front and 2 at the back) with rectangular shape and dimensions of 80 x 50 x 2 mm. - Four diagonal reinforcements galvanized steel rounded pipes with dimensions of 60 x 1.5 mm. (Two at the front and two at the back). - Reinforcements in corners: Rectangular shaped made of galvanized steel with dimensions of 80 x 50 x 1.5 mm. One diagonally positioned and two units each 2.5 m. in each corner. –</p> <p>Purlins with profile model “C” and “H” made of galvanized (Sendzimir AZ-275) steel of 1.5 mm thickness and PVC clips.</p>				

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Crop bar: Rounded pipe galvanized (Sendzimir AZ-275) steel of 40 x 1.5 mm. Located every 2,5 m. –</p> <p>Vertical central reinforcements: Rounded pipe galvanized (Sendzimir AZ-275) steel of 30 x 1.5 mm. Located every 2.5 m. One for each crop bar. –</p> <p>Vertical side reinforcements: Rounded pipe galvanized (Sendzimir AZ275) steel of 30 x 1.5 mm. Located every 2, 5 m. Two for each crop bar. - Reinforcements in “V”: Rounded pipe galvanized (Sendzimir AZ-275) steel of 30 x 1.2 mm. Located every 2, 5 m. Two for each crop bar</p> <p>Materials to be used in structural frames</p> <p>3inch Aluzinc pipes for the post. Crossbeam rafters (centre thrust) constructed from 1 1/4inch Aluzinc post and arches (ribs) made from 1 inch Aluzinc post. Arched ribs should be spaced at 0.9meter intervals.</p> <p>The structure should withstand wind speeds up to 145 km/hr.</p> <p>Clamps made of galvanized (Sendzimir AZ-275) steel of 2.5 mm thickness. - Screws/bolts made of high quality against corrosion.</p> <p>Also wind resistance should be 120 km/hr</p>				

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Roof and Ventilation requirements</p> <p>Height of the side of the roof should be 3 meters (10 feet) from the floor. Height to the highest point of the roof should be 5.2 meters (17 feet). A roof ridge vent to the top of 0.9 meters (3 feet) must be created, the roof ridge vent must be placed on the leeward side of the greenhouse. Ensure this roof vent is 20% of the area 4 meters to the gutter, minimum 6feet wide vent Curved roof design with one opening vent at the top of the roof.</p> <p>Guttering</p> <p>A 15 centimetre wide with 10 centimetre down pipe every 80 centimetre square (864 square feet).</p> <p>Roof Covering</p> <p>Anti-thermic plastic 200 microns ne anti drip, anti-dust greenhouse grade plastic.</p> <p>Greenhouse anti-thermic plastic film, thickness of 200 microns. Enough to cover 190m² greenhouse - Additives – EVA, IR, AF, UV; - Resins: PE, EVA; Characterized by the following: - UV treated - High quality covers, - High light transparency, - High thermicity, - Anti-drop, - Anti-dust, - High light diffusion, - Color: Transparent/clear.</p> <p>Premium quality Poly-film with 63.5% NIR blocking properties for cooling effect Dimensions: width 7; length 65 meters Mechanical: Tensile strength at break (DM/DT): 24/22 MPa Mechanical: Elongation at break point (DM/DT): 860/920 % Mechanical: Tear resistance (DM/DT): 1300/ > 1600 g Mechanical: Dart drop test (F50) – Side: 900 cN Mechanical: Dart drop test (F50) – Fold: 650 cN Optical: Total transmission of visible light: 81 % Diffusion: 75 % Thermic Effect: 80 %; NIR transmission: 36.5 %</p>				

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Insect screen</p> <p>An Antiviral insect netting (22-25 mesh)</p> <ul style="list-style-type: none"> - UV treated - Installed on the sidewalls and zhenital ventilations <p>Shade Net</p> <p>Retractable, to cover 190m². It has to be installed inside from gutter to gutter, plus covering front and back. 100% High Density Polyethylene Monofilament mesh (HDPE). Color: White, UV Resistant, Shade factor: 30 %</p> <p>Ground Cover Plastic mulch</p> <p>Dimension: 1.7 meters width x 1,000 meters length per roll</p> <p>Thickness: 30 microns UV Resistant</p> <p>Color: inner black outer white</p> <p>Doors</p> <p>A double door entrance design is recommended with a minimum width of 1.5 m and a minimum of 2 m in length.</p> <p>Side Walls</p> <p>70 cm high are in poly carbonate with the higher parts in insect screen</p> <p>Size or Area Under Cover</p> <p>182 square metre (10 M Wide by 18.2 M wide)</p> <p>Water Storage</p> <p>2 x 1000 Gallon Plastic Tanks</p>				

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Irrigation</p> <p>The irrigation system will be an automated drip timer controlled system and fertigation system. Drip line thickness: 0.2 – 0.25 mm Drip line diameter: 16 mm Flow per hour: from 1 to 1.6 litres per hour Working pressure: 1.2 1.6 bar Distance between drippers: 20 cm</p> <p>Fertigation System</p> <p>Two 1 inch venturi with pressure provided by a 0.5 HP water pump and two 55 gallon water fertigation tanks . One for NPK fertilizer and One for Calcium Nitrate.</p> <p>Lighting and Electrical</p> <p>The electrical control unit for the irrigation timer</p> <p>Certifications</p> <p>Quality certificates are required for the greenhouse frame, plastic cover, anti- insect netting and shade net</p> <p>Plant Support Systems</p> <p>10 turn buckles with 200 metres of 10 gauge trellis support wire will be required.</p> <p>Planting Accessories to be provided</p> <p>Coconut Coir Grow Bags</p>				

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Warranty , Manual References</p> <p>Statement and terms as well as conditions of the product warranty that will be available with the goods offered. Plastic and netting covers guaranteed for 24 months under Estwani conditions. Structure is guaranteed for 10 years against corrosion. A full and clear manufacturer's warranty statement transferable with the ownership of the equipment must be submitted with the bid detailing the terms and conditions being offered.</p> <p>Technical / operational manuals in local and English Language shall be included in offer.</p>				

Lot 9 Title: Supply, Deliver and Installation of Greenhouses for Montserrat

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
1	<p>Location and Orientation of the Structure</p> <p>Green house should be oriented in an East to West direction for maximum interception of light. In addition they should be placed perpendicular to the prevailing wind flow.</p> <p>Greenhouse Size</p> <p>A maximum greenhouse width of 10 meters (30 feet) and a length 18.2 meters (60 feet) Height of the side of the roof should be 4 meters (13 feet) from the floor. Height to the highest point of the roof should be minimum 5.2 meters (17 feet). A roof ridge vent to the top of 0.9 meters (3 feet)</p> <p>Foundation</p> <p>Holes 0.4m in diameter and 1 metre deep. Pillars of 80 X 40 X 2mm will be installed 0.75 m underground.</p> <p>Structural Design</p> <p>Double Gothic Arch greenhouse with zhenital vent to top. Or 2M Horizontal vent with openings on both sides to maximize air flow by convection.</p> <p>Frame</p> <p>Number of vertical pillars: 9 for each lateral.</p> <p>Distance between pillars: 2.5 m. - Columns or pillars made of hot-dipped galvanized steel, square shaped with dimensions of 80 x 80 x 2 mm and 4.75 m in length. The galvanized coating thickness in columns shall be 450 gr/m2. –</p>	4			

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Double dipped galvanized pipes</p> <p>Number of curved arches on the roof: 13. - Curved arched made of galvanized (Sendzimir AZ-275) steel rounded pipes of 60 x 1.5 mm.</p> <p>Number of capitel to join gutter, arches, pillars and crop bar: 18 - Capitel made of galvanized (Sendzimir AZ-275) steel with 2 mm thickness. –</p> <p>Number of frontal pillars: four frontal pillars (2 at the front and 2 at the back) with rectangular shape and dimensions of 80 x 50 x 2 mm. - Four diagonal reinforcements galvanized steel rounded pipes with dimensions of 60 x 1.5 mm. (Two at the front and two at the back). - Reinforcements in corners: Rectangular shaped made of galvanized steel with dimensions of 80 x 50 x 1.5 mm. One diagonally positioned and two units each 2.5 m. in each corner. –</p> <p>Purlins with profile model “C” and “H” made of galvanized (Sendzimir AZ-275) steel of 1.5 mm thickness and PVC clips.</p>				

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Crop bar: Rounded pipe galvanized (Sendzimir AZ-275) steel of 40 x 1.5 mm. Located every 2,5 m. –</p> <p>Vertical central reinforcements: Rounded pipe galvanized (Sendzimir AZ-275) steel of 30 x 1.5 mm. Located every 2.5 m. One for each crop bar. –</p> <p>Vertical side reinforcements: Rounded pipe galvanized (Sendzimir AZ275) steel of 30 x 1.5 mm. Located every 2, 5 m. Two for each crop bar. - Reinforcements in “V”: Rounded pipe galvanized (Sendzimir AZ-275) steel of 30 x 1.2 mm. Located every 2, 5 m. Two for each crop bar</p> <p>Materials to be used in structural frames</p> <p>3inch Aluzinc pipes for the post. Crossbeam rafters (centre thrust) constructed from 1 1/4inch Aluzinc post and arches (ribs) made from 1 inch Aluzinc post. Arched ribs should be spaced at 0.9meter intervals.</p> <p>The structure should withstand wind speeds up to 145 km/hr.</p> <p>Clamps made of galvanized (Sendzimir AZ-275) steel of 2.5 mm thickness. - Screws/bolts made of high quality against corrosion.</p> <p>Also wind resistance should be 120 km/hr</p>				

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Roof and Ventilation requirements</p> <p>Height of the side of the roof should be 3 meters (10 feet) from the floor. Height to the highest point of the roof should be 5.2 meters (17 feet). A roof ridge vent to the top of 0.9 meters (3 feet) must be created, the roof ridge vent must be placed on the leeward side of the greenhouse. Ensure this roof vent is 20% of the area 4 meters to the gutter, minimum 6feet wide vent Curved roof design with one opening vent at the top of the roof.</p> <p>Guttering</p> <p>A 15 centimetre wide with 10 centimetre down pipe every 80 centimetre square (864 square feet).</p> <p>Roof Covering</p> <p>Anti-thermic plastic 200 microns ne anti drip, anti-dust greenhouse grade plastic.</p> <p>Greenhouse anti-thermic plastic film, thickness of 200 microns. Enough to cover 190m² greenhouse - Additives – EVA, IR, AF, UV; - Resins: PE, EVA; Characterized by the following: - UV treated - High quality covers, - High light transparency, - High thermicity, - Anti-drop, - Anti-dust, - High light diffusion, - Color: Transparent/clear.</p> <p>Premium quality Poly-film with 63.5% NIR blocking properties for cooling effect Dimensions: width 7; length 65 meters Mechanical: Tensile strength at break (DM/DT): 24/22 MPa Mechanical: Elongation at break point (DM/DT): 860/920 % Mechanical: Tear resistance (DM/DT): 1300/ > 1600 g Mechanical: Dart drop test (F50) – Side: 900 cN Mechanical: Dart drop test (F50) – Fold: 650 cN Optical: Total transmission of visible light: 81 % Diffusion: 75 % Thermic Effect: 80 %; NIR transmission: 36.5 %</p>				

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Insect screen</p> <p>An Antiviral insect netting (22-25 mesh)</p> <ul style="list-style-type: none"> - UV treated - Installed on the sidewalls and zhenital ventilations <p>Shade Net</p> <p>Retractable, to cover 190m². It has to be installed inside from gutter to gutter, plus covering front and back. 100% High Density Polyethylene Monofilament mesh (HDPE). Color: White, UV Resistant, Shade factor: 30 %</p> <p>Ground Cover Plastic mulch</p> <p>Dimension: 1.7 meters width x 1,000 meters length per roll</p> <p>Thickness: 30 microns UV Resistant</p> <p>Color: inner black outer white</p> <p>Doors</p> <p>A double door entrance design is recommended with a minimum width of 1.5 m and a minimum of 2 m in length.</p> <p>Side Walls</p> <p>70 cm high are in poly carbonate with the higher parts in insect screen</p> <p>Size or Area Under Cover</p> <p>182 square metre (10 M Wide by 18.2 M wide)</p> <p>Water Storage</p> <p>2 x 1000 Gallon Plastic Tanks</p>				

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Irrigation</p> <p>The irrigation system will be an automated drip timer controlled system and fertigation system. Drip line thickness: 0.2 – 0.25 mm Drip line diameter: 16 mm Flow per hour: from 1 to 1.6 litres per hour Working pressure: 1.2 1.6 bar Distance between drippers: 20 cm</p> <p>Fertigation System</p> <p>Two 1 inch venturi with pressure provided by a 0.5 HP water pump and two 55 gallon water fertigation tanks . One for NPK fertilizer and One for Calcium Nitrate.</p> <p>Lighting and Electrical</p> <p>The electrical control unit for the irrigation timer</p> <p>Certifications</p> <p>Quality certificates are required for the greenhouse frame, plastic cover, anti- insect netting and shade net</p> <p>Plant Support Systems</p> <p>10 turn buckles with 200 metres of 10 gauge trellis support wire will be required.</p> <p>Planting Accessories to be provided</p> <p>Coconut Coir Grow Bags</p>				

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Warranty , Manual References</p> <p>Statement and terms as well as conditions of the product warranty that will be available with the goods offered. Plastic and netting covers guaranteed for 24 months under Estwani conditions. Structure is guaranteed for 10 years against corrosion. A full and clear manufacturer's warranty statement transferable with the ownership of the equipment must be submitted with the bid detailing the terms and conditions being offered.</p> <p>Technical / operational manuals in local and English Language shall be included in offer.</p>				

Lot 10 Title: Supply, Deliver and Installation of Greenhouses for Suriname

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
1	<p>Location and Orientation of the Structure</p> <p>Green house should be oriented in an East to West direction for maximum interception of light. In addition they should be placed perpendicular to the prevailing wind flow.</p> <p>Greenhouse Size</p> <p>A maximum greenhouse width of 10 meters (30 feet) and a length 18.2 meters (60 feet) Height of the side of the roof should be 4 meters (13 feet) from the floor. Height to the highest point of the roof should be minimum 5.2 meters (17 feet). A roof ridge vent to the top of 0.9 meters (3 feet)</p> <p>Foundation</p> <p>Holes 0.4m in diameter and 1 metre deep. Pillars of 80 X 40 X 2mm will be installed 0.75 m underground.</p> <p>Structural Design</p> <p>Double Gothic Arch greenhouse with zhenital vent to top. Or 2M Horizontal vent with openings on both sides to maximize air flow by convection.</p> <p>Frame</p> <p>Number of vertical pillars: 9 for each lateral.</p> <p>Distance between pillars: 2.5 m. - Columns or pillars made of hot-dipped galvanized steel, square shaped with dimensions of 80 x 80 x 2 mm and 4.75 m in length. The galvanized coating thickness in columns shall be 450 gr/m2. –</p>	4			

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Double dipped galvanized pipes</p> <p>Number of curved arches on the roof: 13. - Curved arched made of galvanized (Sendzimir AZ-275) steel rounded pipes of 60 x 1.5 mm.</p> <p>Number of capitel to join gutter, arches, pillars and crop bar: 18 - Capitel made of galvanized (Sendzimir AZ-275) steel with 2 mm thickness. –</p> <p>Number of frontal pillars: four frontal pillars (2 at the front and 2 at the back) with rectangular shape and dimensions of 80 x 50 x 2 mm. - Four diagonal reinforcements galvanized steel rounded pipes with dimensions of 60 x 1.5 mm. (Two at the front and two at the back). - Reinforcements in corners: Rectangular shaped made of galvanized steel with dimensions of 80 x 50 x 1.5 mm. One diagonally positioned and two units each 2.5 m. in each corner. –</p> <p>Purlins with profile model “C” and “H” made of galvanized (Sendzimir AZ-275) steel of 1.5 mm thickness and PVC clips.</p>				

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Crop bar: Rounded pipe galvanized (Sendzimir AZ-275) steel of 40 x 1.5 mm. Located every 2,5 m. –</p> <p>Vertical central reinforcements: Rounded pipe galvanized (Sendzimir AZ-275) steel of 30 x 1.5 mm. Located every 2.5 m. One for each crop bar. –</p> <p>Vertical side reinforcements: Rounded pipe galvanized (Sendzimir AZ275) steel of 30 x 1.5 mm. Located every 2, 5 m. Two for each crop bar. - Reinforcements in “V”: Rounded pipe galvanized (Sendzimir AZ-275) steel of 30 x 1.2 mm. Located every 2, 5 m. Two for each crop bar</p> <p>Materials to be used in structural frames</p> <p>3inch Aluzinc pipes for the post. Crossbeam rafters (centre thrust) constructed from 1 1/4inch Aluzinc post and arches (ribs) made from 1 inch Aluzinc post. Arched ribs should be spaced at 0.9meter intervals.</p> <p>The structure should withstand wind speeds up to 145 km/hr.</p> <p>Clamps made of galvanized (Sendzimir AZ-275) steel of 2.5 mm thickness. - Screws/bolts made of high quality against corrosion.</p> <p>Also wind resistance should be 120 km/hr</p>				

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Roof and Ventilation requirements</p> <p>Height of the side of the roof should be 3 meters (10 feet) from the floor. Height to the highest point of the roof should be 5.2 meters (17 feet). A roof ridge vent to the top of 0.9 meters (3 feet) must be created, the roof ridge vent must be placed on the leeward side of the greenhouse. Ensure this roof vent is 20% of the area 4 meters to the gutter, minimum 6feet wide vent Curved roof design with one opening vent at the top of the roof.</p> <p>Guttering</p> <p>A 15 centimetre wide with 10 centimetre down pipe every 80 centimetre square (864 square feet).</p> <p>Roof Covering</p> <p>Anti-thermic plastic 200 microns ne anti drip, anti-dust greenhouse grade plastic.</p> <p>Greenhouse anti-thermic plastic film, thickness of 200 microns. Enough to cover 190m² greenhouse - Additives – EVA, IR, AF, UV; - Resins: PE, EVA; Characterized by the following: - UV treated - High quality covers, - High light transparency, - High thermicity, - Anti-drop, - Anti-dust, - High light diffusion, - Color: Transparent/clear.</p> <p>Premium quality Poly-film with 63.5% NIR blocking properties for cooling effect Dimensions: width 7; length 65 meters Mechanical: Tensile strength at break (DM/DT): 24/22 MPa Mechanical: Elongation at break point (DM/DT): 860/920 % Mechanical: Tear resistance (DM/DT): 1300/ > 1600 g Mechanical: Dart drop test (F50) – Side: 900 cN Mechanical: Dart drop test (F50) – Fold: 650 cN Optical: Total transmission of visible light: 81 % Diffusion: 75 % Thermic Effect: 80 %; NIR transmission: 36.5 %</p>				

1. Item Number	2. Specifications Required	Qty	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Insect screen</p> <p>An Antiviral insect netting (22-25 mesh)</p> <ul style="list-style-type: none"> - UV treated - Installed on the sidewalls and zhenital ventilations <p>Shade Net</p> <p>Retractable, to cover 190m². It has to be installed inside from gutter to gutter, plus covering front and back. 100% High Density Polyethylene Monofilament mesh (HDPE). Color: White, UV Resistant, Shade factor: 30 %</p> <p>Ground Cover Plastic mulch</p> <p>Dimension: 1.7 meters width x 1,000 meters length per roll</p> <p>Thickness: 30 microns UV Resistant</p> <p>Color: inner black outer white</p> <p>Doors</p> <p>A double door entrance design is recommended with a minimum width of 1.5 m and a minimum of 2 m in length.</p> <p>Side Walls</p> <p>70 cm high are in poly carbonate with the higher parts in insect screen</p> <p>Size or Area Under Cover</p> <p>182 square metre (10 M Wide by 18.2 M wide)</p> <p>Water Storage</p> <p>2 x 1000 Gallon Plastic Tanks</p>				

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	<p>Irrigation</p> <p>The irrigation system will be an automated drip timer controlled system and fertigation system. Drip line thickness: 0.2 – 0.25 mm Drip line diameter: 16 mm Flow per hour: from 1 to 1.6 litres per hour Working pressure: 1.2 1.6 bar Distance between drippers: 20 cm</p> <p>Fertigation System</p> <p>Two 1 inch venturi with pressure provided by a 0.5 HP water pump and two 55 gallon water fertigation tanks . One for NPK fertilizer and One for Calcium Nitrate.</p> <p>Lighting and Electrical</p> <p>The electrical control unit for the irrigation timer</p> <p>Certifications</p> <p>Quality certificates are required for the greenhouse frame, plastic cover, anti- insect netting and shade net</p> <p>Plant Support Systems</p> <p>10 turn buckles with 200 metres of 10 gauge trellis support wire will be required.</p> <p>Planting Accessories to be provided</p> <p>Coconut Coir Grow Bags</p>				

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	<p>Warranty , Manual References</p> <p>Statement and terms as well as conditions of the product warranty that will be available with the goods offered. Plastic and netting covers guaranteed for 24 months under Estwani conditions. Structure is guaranteed for 10 years against corrosion. A full and clear manufacturer's warranty statement transferable with the ownership of the equipment must be submitted with the bid detailing the terms and conditions being offered.</p> <p>Technical / operational manuals in local and English Language shall be included in offer.</p>				