



Growers SOLUTION^{COM}

Low Sidewall Instruction Manual

Please read all instructions before assembling your greenhouse.

This manual includes instructions for ALL add-ons that you can purchase with your greenhouse.

We also recommend that you visit The Learning Center at GrowersLearning.com, click on the style Greenhouse you have. This will have all instructions, Frequently Asked Questions (FAQs), and larger images.

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LOW SIDEWALL GREENHOUSE INSTRUCTIONS

!!!! CAUTION: Tubing ends may be sharp!!!!

Step 1 – Ground Stakes

- Open all boxes and layout contents. All packages and bundles will be labeled. Locate the stake driver used to drive the ground stakes into the ground and your ground stakes. They are 1 5/8 x 5' 3". (2" for superduty)
- Mark your layout and drive corner stakes. You must square the corner stakes with each other. Take all measurements on the outer edge of pipe (**Figure 1.1**). When you are squared lay a tape measure the length of the greenhouse on both sides. You should use a string (**Figure 1.2**): tie it to a ground stake and stretch it completely around all 4 corner stakes (make sure the string is pulled tight). Mark the ground every 4 ft below the string. This is going to give you the 4 ft spacing for the ground stakes. Use the string to keep your ground stakes in line. The stakes should be driven in 24 inches. If you damage them you can cut off the damaged portion. Do not cut down to the ground. Your sidewalls will be about 3'.
- Drive remaining stakes on 4 ft. centers.
- The stakes should be approximately 24" below the ground. The section above ground (about 3") will be the height of your sidewall.

NOTE: Images are examples, on this greenhouse your stakes will be 3½ feet tall.



Figure 1.1



Figure 1.2

Step 2 – Bow Assembly - Please see notes in red below

- Lay out all bow sections on flat ground (**Figure 2.1**).
- Slide sections together and secure at joints with self-tapping screws. The screw heads must be on the inside of the bow. (**Figure 2.2**).
- After bows have been assembled, raise upright and place ends in ground stakes to the reference mark (**Figure 2.3**). Insert until they stop at a sharp bend. Secure with tek screw.

NOTE: 16' & 20' have a 2 piece bow. 24' have 3 pieces. 30' & 32' have 4 pieces.

NOTE: Place swedged (crimped) ends on the same side of the Greenhouse. This will keep the bows even and lined up.



Figure 2.1



Figure 2.2



Figure 3.1

Step 3 – Purlins

- The straight purlin pipe sections connect together with self-tapping tek screw. Place the purlin alongside the ground stakes insuring that one end is flush with the corner stake (not protruding past the stake), **Figure 4.1**. Take a sharpie and mark your purlin at the center of each ground stake (**Figure 4.2**). That way when you raise your purlin you just align the bow with reference mark on the purlin pipe. You will have proper spacing. The assembled purlin is attached to the first and last bow using a two hole strap **YOU MUST USE A TEK SCREW THROUGH THE CLAMPS AND 2 HOLE STRAPS INTO THE BOW ASSEMBLY.** (**Figure 4.3**). The purlin clamps are used on the remaining bows (**Figure 4.4**). Trim extra pipe off. Make sure to view illustrations.

NOTE: You will also install a purlin at approximately 10 and 2 o'clock for houses 24 ft. and wider.

NOTE: Wind bracing is only on houses over 40ft OR special order.



Figure 4.1



Figure 4.2

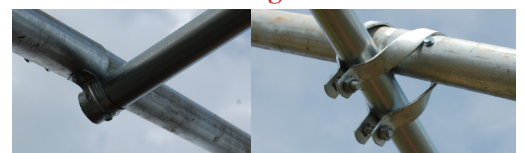


Figure 4.3



Figure 4.4

Step 4 – Base Boards

- Attach base boards (2 x 6 pressure-treated recommended) at the bottom of the sidewall with 2-hole pipe straps and wood screws. See **Figure 5.1**.

NOTE: You must attach 2 hole strap to ground stake using self-tapping screws.



Figure 5.1

Figure 5.2

Step 5 – End Walls

- For Best results, we recommend the use of our End Wall Kits.
- Refer to Endwall Section of this manual, pages 4 - 5.

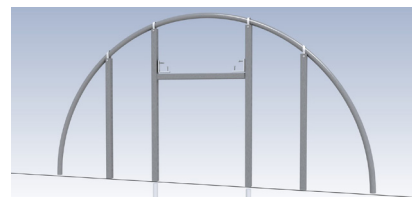


Figure 6.1

Step 6 – Wire Lock

- Attach the Wire Lock Channel on the first bow and last bow using tek screws (included) every 18”.
- Attach the Wire Lock Channel on either the hip or base boards (depending on whether you are using roll-up sides) all the way around the base of the greenhouse in the same manner using 1 1/2” wood screws. **TEK SCREWS ARE NOT RECOMMENDED FOR THIS.**
- If you do not have Roll Up Sides, start at the base board on one side. Attach Wire base on face of board (**Figure 7.1**) and install on bow running all the way over bow to other base board. Screw every 18” with self-tapping screws. If you have Roll Up Sides cut and fit a piece of wire base in between hip board and base board (**Figure 7.2**). Attach wire base to face of hip board (**Figure 7.3**) Install over bow to other hip board.
- Once you have the wire base installed on first and last bows it is time to install it on the base board or hip board. If you do not have Roll Up Sides install wire base on the base board the length of your house. If you have Roll Up Sides run the wire base on your hip board the length of the house. Now it is time to install the wire base on the ends of your house. Wire base is only used on the base board - you must cut to fit. End kit door opening vary in sizes so each end is different.



Figure 7.1



Figure 7.2

Figure 7.3

Step 7 – Film Installation

- Pick a CALM day to install your film. **Install the END WALL FILM BEFORE THE MAIN FILM!!** Start by locating the film for the **ends** of the greenhouse. Gather 3 pieces of wiggle wire to hold this film in place. Stretch the film over the bow and attach the film with the wire. If needed, you can adjust film by removing wiggle wire and reinstalling. Once end film is in place it is time for the main film. Roll main film out along side of the green house. Lay wiggle wire out around the house. Pull film across house and attach on one end. Go to the other end and pull tight. You may need to go back and adjust again. Once in place wire lock completely.



Figure 8.1

NOTE: Plastic normally has 12” or larger overhang on all sides. Do not cut this off. It helps to guide water away from our baseboard.

- Lay film over the Wire Lock Channel, and fasten the plastic into the channel by placing the wiggle wire into the channel on top of the plastic (**Figure 8.1**).

LOW SIDEWALL END WALL INSTRUCTIONS

Most Greenhouses may require trimming of uprights for proper fit, because of the unknown grade of your land. Any upright over 12 ft. in length is spliced and labeled connect A to A, B to B, etc.

These instructions are for a 36" storm door and rough in for door is 36.5".

36" Door

- Number of uprights on the size house you purchase, includes door frame uprights. This is for 36" door opening. (Table A)

8 ft. to 16 ft.	20 ft. to 24 ft.	28 ft. to 32 ft.
2 uprights	4 uprights	6 uprights

Table A

8' or 10' Door

- Number of uprights on the size house you purchase, includes door frame uprights. This is for 8 or 10 ft. door opening. (Table B)

8 ft. to 16 ft.	20 ft. to 24 ft.	28 ft. to 32 ft.
2 uprights	4 uprights	6 uprights

Table B

Step 1

- On front end-wall, measure to find the center of the house (Figure 2.1).

Step 2

- From the center, mark 18.5" to the left and right of that point. This gives you the door frame size (Figure 2.1).

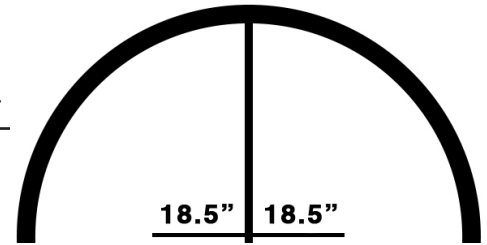


Figure 2.1

Step 3

- Drive a 1" ground stake in each of these two points (will be approximately 36" apart). This is where your storm door will be (Figure 3.1).



Figure 3.1

Step 4 - SKIP THIS STEP IF YOU HAVE A 16FT GREENHOUSE

- From that point, if you have another upright measure 48" over and drive another 1" ground stake (Figure 4.1).



Figure 4.1

Step 5

- Measure the distance between the base of these ground stakes and peak of the bow where they will be connecting (Figure 5.1).



Figure 5.1

Step 6

- Cut your square uprights (if needed) to meet these measurements, slide square uprights over the ground stakes with pre-drilled side at the top (Figure 6.1).



Figure 6.1

Step 7

- Attach brace bands over the bow and into the square uprights (Figure 7.1). YOU MUST USE A TEK SCREW THROUGH THE BANDS INTO THE BOW ASSEMBLY.



Figure 7.1

Step 8

- Insert bolts through brace bands and square upright (Tighten completely after door is installed). (Figure 8.1)



Figure 8.1

Step 9

- Place one self-tapping TEK screw through the brace band securing it to the bow on the inside of the house, (Figure 9.1).



Figure 9.1

Step 10 - **SKIP THIS STEP IF YOU HAVE A 16FT GREENHOUSE**

- You may install header supports at chest high, approximately 60” (Figure 10.1).



Figure 10.1

Step 11

- Using TEK screws, install header with corner braces, see Figure 11.1.



Figure 11.1

Step 12

- The installation of the rear end-wall is the same. However, header & upright spacing can be adjusted to accommodate a fan or vent if you choose to install one.

Step 13

- Do not install door header for storm door until door is in place. When using a storm door you will use the frame of the door to seal the end film (Figure 13.1). Cut the film opening, place a 2 x 4 in the opening. Have your helper pull the film towards the inside of the greenhouse. Set the door in the opening. Push into place and shoot a screw or 2 to hold in position. Remove 2 x 4 and check for operation. If door opens freely, finish installing screws. Install door header, trim film around opening.

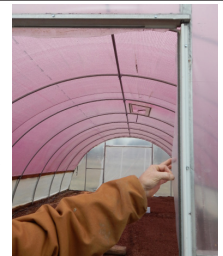
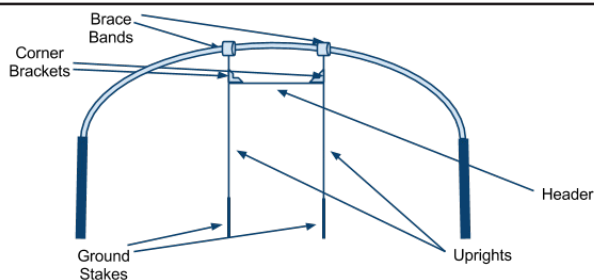
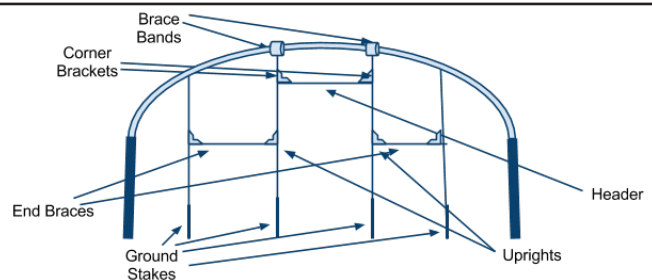


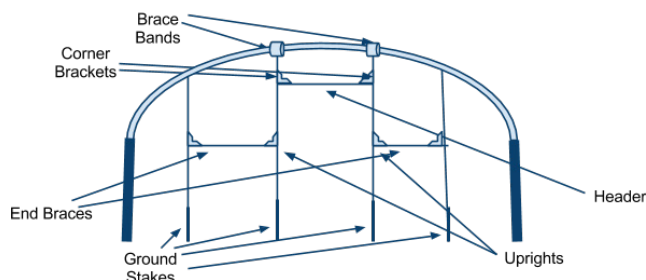
Figure 13.1



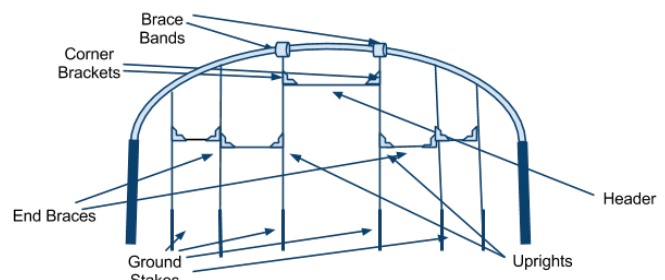
16 ft. Low Sidewall



20 ft. Low Sidewall



24 ft. Low Sidewall



30 ft. & 32 ft. Low Sidewall

ROLL UP SIDE INSTRUCTIONS

Step 1

- You will need two different side boards, a bottom board and a hip board. Recommended lumber is pressure treated 2 x 6's. You will use 1 1/2" wood screws to attach your wire base. We recommend mounting the hip board at 3 ft. high however; this can go higher or lower depending on personal preference (**Figure 1.1**).



Figure 1.1

Step 2

- After you have the boards mounted with two hole straps (**Figure 2.1**) and wood screws you will mount wire-lock base on the side top of the hip board (**Figure 2.2**), using wood screws every 12".



Figure 2.1



Figure 2.2

Step 3

- Pull the main film over the greenhouse and attach it to the wire-lock base (**Figure 3.1**). Please be aware the film for the top of greenhouse goes from ground to ground.



Figure 3.1

Step 4

- After you have the film secured in the wire-lock, take the 1 3/8" bottom pipe that is used to roll the film up on. Slide and secure together (**Figure 4.1**) with a Tek Screw.



Figure 4.1

Step 5

- Lay pipe on top of bottom board and attach the bottom pipe clips (**Figure 5.1**). Snap them evenly spaced along the pipe making sure that you have the film snug at the base.



Figure 5.1

Step 6

- Now take the black strapping and mount on hip board and bottom board at each bow/ground stake (**Figure 6.4**). Make sure to pull strapping tightly (**Figure 6.3**) from the hip board to the bottom board. Be sure to fold ends of strapping (**Figure 6.2**) where screw goes through strapping. Use the fender washer to reinforce strapping so it will not pull through (**Figure 6.1**).

NOTE: Pipe will extend about 1 foot beyond end-wall (**Figure 6.5**).

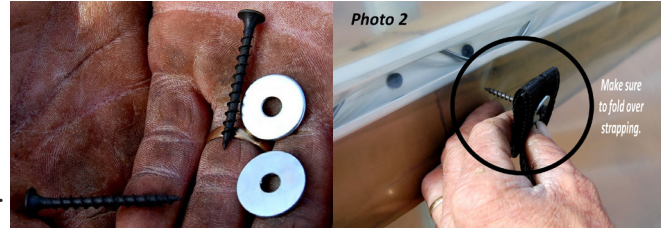


Figure 6.1

Figure 6.2



Figure 6.3

Figure 6.4



Figure 6.5

Step 7

- Put your handles in the end of the roll up pipes with the handles laying towards the center of the greenhouse. Secure with a tek screw provided.



Figure 7.1

Step 8

- To hold up your side use a piece of strapping on each end and loop under the handle and secure to the greenhouse (**Figure 8.1**). Some people will use a rubber bungee strap to hold the roll up side up.



Figure 8.1

When it gets cold, remember that you will just roll the side down and the weight of the pipe sitting on top of the bottom board and the strapping will hold the film firmly in place.

ROLL UP DOOR INSTRUCTIONS

Step 1

- Make sure the end wall kit (door frame) and greenhouse film are installed properly. Attach wire-lock base around door frame before you pull the greenhouse film. (Figure 1.1)



Figure 1.1

Step 2

- Attach roll-up door film to the top of door (header/wire-lock) with wiggle wire. (Figure 2.1)



Figure 2.1

Step 3

- Place the roll-up pipe in the bottom hook clip. Cut the excess film off the bottom in a straight line, leaving about 8 inches. Then, roll the film up on the pipe so that the film rolls on the pipe to the inside. This will keep water from collecting in door roll Pipe. (Figure 3.1)



Figure 3.1

Step 4

- Attach the film to the roll-up pipe with the bottom pipe clips by spaced equally on pipe. You will have one clip on each end and the in the center. (Figure 4.1)

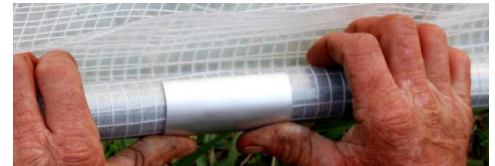


Figure 4.1

Step 5

- Assemble the swivel handle. (Figure 5.1)
- Attach the “knuckle” to the 3 ft. extension pole. (Fasten with tek screws) (Figure 5.2)
- Attach the handle to the opposite end of the 3 ft. handle extension pole. (Fasten with tek screws) (Figure 5.3)
- Slip boot over the “knuckle”. (Figure 5.4)
- Attach the swivel handle assembly to the roll-Up pipe. (Fasten with tek screws) (Figure 5.5)



Figure 5.1



Figure 5.2

Figure 5.3

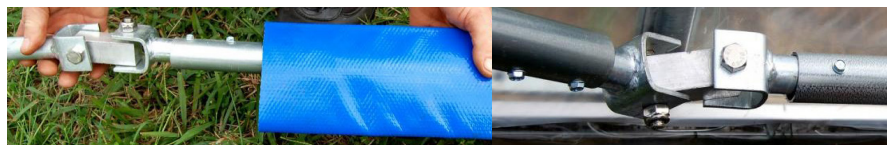


Figure 5.4

Figure 5.5

Step 6

- Tightly attach black strap to the top and bottom of the roll-up door. Attach the batten tape with 2 tek screws and washers to the upright on top and the wood base on bottom. (**Figure 6.1**)
- Remember to fold over ends double to reinforce. This keeps strap from tearing out. (**Figure 6.2**)



Figure 6.1



Figure 6.2

Step 7

- Roll-up the door, and trim off the existing greenhouse film. Leave about 2 inches of over-lapping film. (**Figure 7.1**)



Figure 7.1

Step 8

- You can use wire-lock to seal your door shut if needed (**Figure 8.1**).



Figure 8.1



Finished Roll Up Door

SPIN HANDLE INSTRUCTIONS

Step 1

- Slip small sleeve over the bolt. (Figure 1.1)



Figure 1.1

Step 2

- Slip large sleeve over small sleeve on bolt. (Figure 2.1)



Figure 2.1

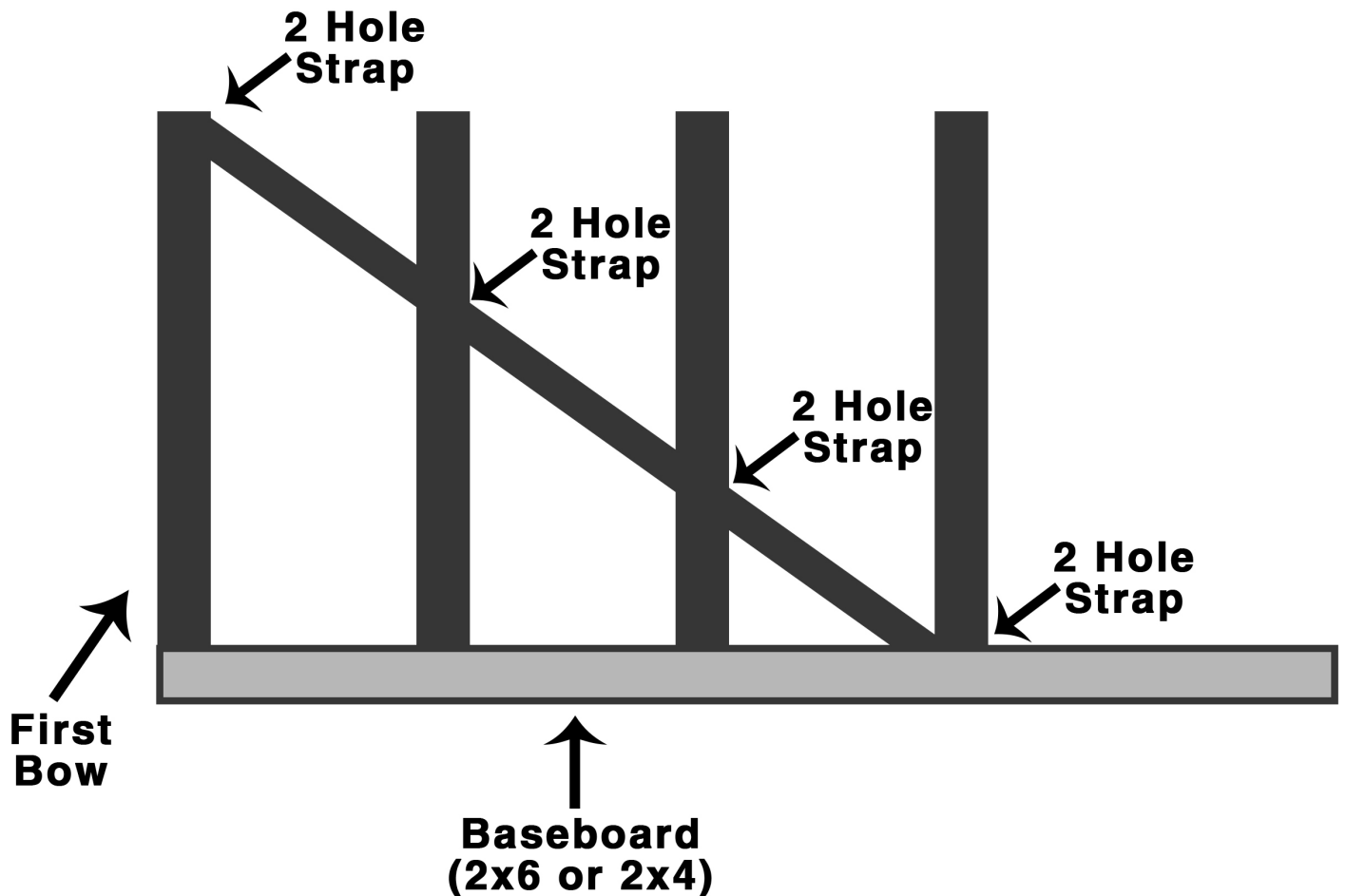
Step 3

- Insert thru pre-drilled hole. Attach nut and tighten. (Figure 3.1)



Figure 3.1

WIND BRACING INSTRUCTIONS



WIND STRAPPING INSTRUCTIONS

Step 1

- We have found the best way to throw your wind strapping over the Greenhouse is to use a water bottle or soda bottle filled with water. It will not puncture or cut your film. Simply tie strapping onto the bottle (**Figure 1.1**) and throw over the greenhouse.



Figure 1.1

Step 2

- Place wind strapping between the first and second bow, then between the next to last and the last bow. With the remaining wind strapping, equally space your strapping the length of your greenhouse. Strapping should be placed between the hoops (**Figure 2.1**). **It is not required between every bow; Figure 2.1 is just an example.**



Figure 2.1

Step 3

- When attaching strapping to your base or head board, fold over twice for strength (**Figure 3.1**). Use a washer and wood screw to attach (**Figure 3.2**).



Figure 3.1



Figure 3.2

FREQUENTLY ASKED QUESTIONS (FAQs)

How do I attach the Main Film?

- The main film attaches in the same channel as the End Film.

My Wind Bracing has a gap at the Bow, what do I do?

- Use a hammer to slightly bend the end to eliminate the gap.

I do not have enough purlin clamps, what do I do?

- The 1st and last bow use 1" 2-hole straps - NOT purlin clamps.

I do not have enough wire lock for my door, what do I do?

- Wire lock is not used for the door. The door frame will hold the film in place.

Did I get dual poly?

- No. Our greenhouses are sold with single poly. Dual poly can be purchased.

I only have 1 run of purlin, what do I do?

- 24 foot and wider greenhouses get 3 runs of purlin. 20 foot and smaller sizes only get 1 run of purlin.

How do I install my storm door?

- Please read the End Wall Section, page 4-5.

I do not have enough wind strapping, what do I do?

- It is not necessary to install strapping in between every bow. Just equally space what you have. You have been provided the proper amount.

What if my site is unlevel, what do I do?

- Find the highest corner and use a string level to make sure all ground stakes are level. You may need to back fill with soil or add extra boards. If you do not want your house level build it to the lay of the land. Keep in mind ground stakes should be driven in the ground 24 inches.

Please feel free to call us with additional questions, 866.928.3390.

Additional Information Concerning Weather

During windy/stormy/winter conditions it is mandatory to roll sides down and wire lock ends. Lack of doing this may result in greenhouse damage due to wind uplift. If you are expecting severe snow, 6" plus you should sweep snow off of the greenhouse. Feel free to call for more explanation, 866-928-3390.

LIMITATION OF WARRANTY: Grower's Solution, LLC makes no warranty either expressed or implied, as to any matter in connection with the sale or use of goods or services offered nor does the company make any warranty of merchantability of fitness for any purpose. Grower's Solution, LLC is not responsible for improper assembly or improper installation of any products. If any item is warranted by the manufacturer, the buyer shall look solely to the manufacturer for redress of the manufacturer's warranty.

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