

Growing with a Cravo Retract-a-Roof Greenhouse

Thomas Fessler

Woodburn Nursery and Azaleas, Inc., Woodburn, OR

At Woodburn Nursery and Azaleas the decision to build a retractable roof structure was easy once we had all the facts and costs. The number one thing we looked at was the cost of producing the plant. The question was asked how could we produce plants quicker and less expensively. We grow certain plants inside plastic covered houses, out in the full sun, under a shade or lathe house. Certain plants performed better under different conditions. The biggest problem we had was when Mother Nature prevented us from doing things when necessary thus creating production problems. This increased our expenses and jeopardized crop quality. Flexibility was an issue that was high on the priority list. The greenhouse had to be flexible for several different crops, with easy accessibility for moving product in and out of the structure. Labor that was needed to cover and uncover the greenhouse in the winter months was a big consideration. We needed a structure that required minimal labor because we were maxed out already when cold weather approached. Cold protection was another consideration. We needed something to protect the crop similar to a cold frame covered with polyethylene. Shade in the summertime was something I considered, but was not concerned about at the time. After growing under the Retract-a-roof for two seasons, I have changed my mind considerably. It now ranks very high on the priority list. I was very surprised how well the plants performed using this system.

The retractable roof concept is very new to the industry, having the first commercial installation in 1993. I knew when we first looked at it there was going to be a learning curve for us to become proficient at growing with this technology. We have always looked for challenges so we thought we would give it a shot. I guess I saw the potential to produce a better crop. I looked at one in Oregon prior to purchasing it, but had made up my mind already.

Plants really benefit from growing in this system. During a nice warm sunny day the roof is open exposing plants to direct sunlight and wind. Plants are more compact and tend to be more disease resistant, just as if they had been grown outdoors. When temperatures get too warm the roof moves to the shading position (about 15% open) to shade the plants and protect them from excessive temperatures. In the winter when a cold front approaches the roof is completely closed, blocking excessive dehydration. All this is under the automated control of an Argus computer to avoid human error.

The grower benefits also from fewer diseases to contend with, since plants are grown hardier. There is greater flexibility in chemical applications because the roof can be open or closed depending on the weather. Irrigation costs are also reduced because the plants are not exposed to the hot sun.

In closing, we are very pleased with the performance of our Cravo and plan to add addition covered acreage in the future.