



One of some 30 Sol-Air systems which have been installed to date in Pennsylvania and neighboring states.

LETS SUNSHINE IN, KEEPS RAIN OUT

Louvered Barn Roof Opens, Closes Automatically

Some of the most futuristic looking farm buildings you ever saw dot the countryside in Eastern Pennsylvania and neighboring areas of New Jersey and New York. They're equipped with louvered roofs that open and close automatically to let sunshine in, and to keep rain and snow out.

"We've built about 30 of them, relying mostly on word of mouth advertising," says Caleb Wenger, veteran farm builder headquartered at Quarryville, Pa.

So far as he knows, his patented Sol-Air roof system is the first and only one like it on the market. Drive motors activated by a light sensitive switch automatically open and close the jalousie-type, louvered roof of the south-facing roof section. When the sun is shining, the louvers stay open to allow solar rays to keep the barn warm and dry. At sunset, the sensors automatically close, thus keeping out any rain or snow that falls. A time-delay mechanism prevents closing of the louvers if a single cloud momentarily passes over during the day.

Wenger feels the concept is ideally suited to housing for beef cattle, dairy cows and dairy calves. Incorporating a Sol-Air louvered roof and automatic controls into new construction adds up to \$50 per animal to construction costs.

"Much of this cost is offset by ventilation features incorporated into the design, which means having to spend less on heating and ventilating equipment," Wenger points out. In his immediate area, he and his crews build the complete Sol-Air building. For farmers and ranchers located too far from his base of operations to make it feasible to custom build complete buildings, he custom-fabricates the louvered roof sections. If prefabricated roof sections can't be shipped economically because of distance, he'll work with individual

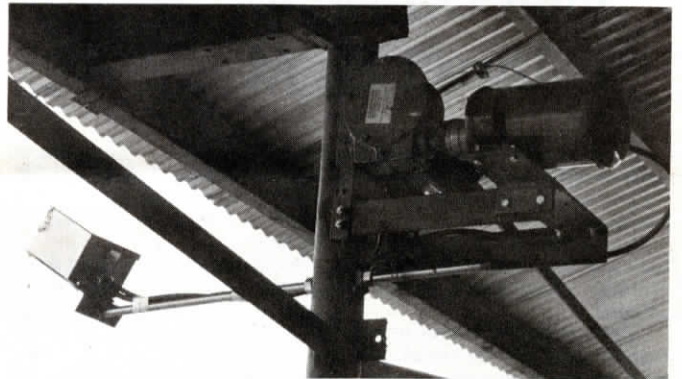
farmers and their building contractor is designing and custom fabricating the necessary hardware and automatic controls for a given size Sol-Air building.

"The louvered roof concept could be adapted to existing buildings but it would involve a lot of labor and expense," he points out. He feels the concept offers a "headstart" in solving pollution problems: "With our completely covered lots, and a sun roof with an open peak, rain doesn't enter the bay area and maximum evaporation of animal liquids is obtained. An all-drained floor system is installed and a curbed fenceline keeps manure in place to be scraped into a liquid pit or push-off loading system."

Wenger has plans for a Sol-Air calf barn on the drawing boards. He built a 12 by 24 ft. prototype which, he says, is performing with flying colors. Patterned after Sol-Air structures, it incorporates the patented solid state control which opens and closes roof louvers automatically.

"Our main idea with Sol-Air is to give animals an outdoor atmosphere, yet protect them from undesirable weather. Another important feature is that it consistently provides dry surroundings to help prevent chilling of animals. Sun entering through opened louvers not only warms animals but also speeds evaporation for faster dry-off. "This warming of the inside floor area, along with body heat from the animals, causes warm moist air to rise and ventilate out while fresh air is drawn in from the open front. Lower moisture levels result in less bacterial activity and fewer odors," Wenger points out.

For more details on the complete array of Sol-Air building and feedlot systems, contact: FARM SHOW Followup, Caleb Wenger, Rt. 1, Quarryville, Pa. 17566 (ph. 717 548-2116).



Individual drive motors, activated by light sensitive switches, open and close the louvered roof sections. Each unit requires less electricity to operate than a 40 watt bulb.



Jalousie-type louvers built into south-facing roof section open and close automatically to let sunshine in or keep rain and snow out.