

# Solar farm sheep graze more

**Master's student Emma Kampherbeek's research on the combination of sheep and solar panels, which took her to California, resulted in a publication this month in *Applied Animal Behaviour Science*.**

The official name for such dual land use where the production of solar energy is combined with forms of agriculture is agri-voltaics. Emma Kampherbeek studied whether solar panels and sheep make a good combination. The Animal Sciences Master's student, who has now graduated, went to Gold Tree Solar Farm in California, where she studied

## **The microclimate around the panels boosts the protein content**

what she calls 'solar sheep': sheep that graze in solar fields. Using data loggers on their collars, she studied whether and how the sheep use solar fields for

grazing. She also looked at the effect that the presence of solar panels had on the quality of the feed in this Mediterranean climate.

## **Heat stress**

She found that the sheep grazed more in fields with solar panels than in similar fields without such panels. Kampherbeek explains the increased grazing as partly due to the fact that the solar panels protect the sheep from the heat and extreme weather conditions, which increases time spent grazing. Secondly, the solar panels affect the vegetation: the microclimate around the panels (more shadow, more condensation) leads to a higher protein content and improved digestibility. Of course the climate in the Netherlands is not the same as in California, says Kampherbeek. But parallels can be drawn, especially given climate change. She points out that cases of heat stress and deaths among Dutch livestock have risen substantially in the past ten years. ME