Reply

J. ROBERT THOMPSON

Rocky Mountain Forest and Range Experiment Station, Arizona State University, Tempe 85281

The assumption that $G=0$ on a daily basis is not valid, unless 5–12% of R is considered negligible. Our G and H values (as a percent of R) are tabulated below, along with LE/PE and LE/R.

Site	Date	G	H	LE/PE	LE/R
Forest	8/6/69	4.9	7.4	0.89	0.87
	8/8	6.2	20.5	0.76	0.74
	8/9	6.4	12.5	0.83	0.82
Cienega	6/12/69	11.0	41.1	0.63	0.50
	6/13	9.8	41.3	0.59	0.47
	6/14	11.7	46.2	0.48	0.49
	5/12/70	12.3	46.9	0.53	0.39
Clearcut	8/12/69	7.2	34.3	0.64	0.58
	8/13	8.3	31.9	0.66	0.58
	5/4/70	7.7	44.3	0.62	0.58
	7/13	10.5	26.0	0.70	0.72

It may be naive to trust this limited data set, but the relationship of LE/PE to LE/R seems quite evident. And although it is not exclusive, the situation where $LE \rightarrow R$ seems logically to be *one* case of potential evapotranspiration (in the absence of advection and when assessed over periods of 24 h or more). Certainly $LE/R=1$ can exist at various temperatures—just as potential evaporation occurs at various temperatures. The final temperature, however, depends on R (and its partitioning), not vice versa. When all of the available energy is consumed by the latent heat of evaporation, actual evaporation *must* equal the maximum (potential) rate, regardless of the temperature level achieved.

The argument against the use of LE/R instead of aridity index would seem strongest if attacked because of non-availability of the information needed to calculate this ratio.