The authors state that the H index would take "a value of 0 if an entire grid cell is occupied with only a single PFT". In such a case, it seems that we should have $f_i = 1.0$ for one of the 9 PFTs, and $f_i = 0.0$ for the other 8 PFTs. $\bar{f}$ is defined as "the mean PFT fractional coverage", which I interpret as the mean of the individual f_i values ($\bar{f} = \frac{1}{N}\sum_{i=1}^{N=9} f_i$), i.e., $\bar{f} = 1/9$ in this case. Putting these values in Equation (5) from the manuscript leads to:

$$H = 1 - \frac{\frac{1}{N}\sum_{i=1}^{N=9}(f_i - \bar{f})^2}{\bar{f}} \tag{1}$$

$$= 1 - \frac{1}{N \times \bar{f}} \times \left[\sum_{i=1}^{N=9}(f_i - \bar{f})^2\right] \tag{2}$$

$$= 1 - \frac{1}{9 \times 1/9} \times \left[(1.0 - 1/9)^2 + 8 \times (0.0 - 1/9)^2\right] \tag{3}$$

$$= 1 - \frac{1}{1} \times \left[(64/81) + 8 \times (1/81)\right] \tag{4}$$

$$= 1 - \left[72/81\right] \tag{5}$$

$$= 1/9 \tag{6}$$

In fact, we can show that $H = 1/N$ in general when a single PFT occupies the entire grid cell. Maybe the definition of $\bar{f}$ provided in the manuscript is misleading and the authors mean something else? But note that even if $\bar{f} = 1.0$ in the example above (i.e., $\bar{f}$ would rather be the *total* PFT coverage), we still end up with $H = 1/N$.

This point is important because, if I understand correctly the definition of the H index, I do not see under which circumstances it can be equal to zero (which occurs frequently in Fig. 6 of the manuscript).