Hunger and nutrient deficiency remain serious challenges in rainfed regions of India. In these areas, women are primarily responsible for purchasing and providing food for their household, and when women make decisions about household budgets, they buy more diverse and healthy foods as compared to men. Therefore, to reduce food insecurity in these regions, women need to be empowered to make these decisions. Our research looks at how women’s empowerment affects food security at both the household level and individual level. Women’s empowerment can be described by five main domains: credit, labor allocation, participation, assets, and income. Using household surveys collected across four rainfed regions of India monthly for a year, we calculated women’s empowerment using these domains as well as household food security and the dietary diversity of individuals in the household. We found that increased women’s empowerment is correlated to increased food security at the household level. Furthermore, we discovered that more empowered women enjoy higher dietary diversity than less empowered women from similar households. This information not only increases our understanding of the relationship between food security and women’s empowerment; it also has the potential to inform current food security and women’s empowerment programs enacted by our partner NGOs in the study site.