$$\mathbf{LHS} \ni f = \{\coprod_p X^p \otimes Y^{n-p} \to Z^n\}_{n\in\mathbb{Z}}$$

$$= \{X^p \otimes Y^{n-p} \to Z^n\}_{p,n\in\mathbb{Z}}$$

$$= \{X^p \to (Y^{n-p}, Z^n)\}_{p,n\in\mathbb{Z}}$$

$$\mathbf{RHS} \ni g = \{X^p \to \prod_n (Y^{n-p}, Z^n)\}_{p\in\mathbb{Z}}$$