Motivated by questions in transcendental number theory, K. Mahler asked in 1976 whether there exists an entire transcendental function $f : \mathbb{C} \to \mathbb{C}$ with the property that $f(\mathbb{Q}) \subseteq \mathbb{Q}$ and $f^{-1}(\mathbb{Q}) \subseteq \mathbb{Q}$. Mahler’s question was answered in the affirmative by Marques and Moreira in 2016. In this talk we will discuss some dynamical properties of this type of function $f$, in particular the structure of the directed graph of algebraic preperiodic points of $f$. (Received September 17, 2019)