We develop a version of cluster algebra extending the ring of Laurent polynomials by adding Grassmann variables. These algebras can be described in terms of “extended quivers” which are oriented hypergraphs. We describe mutations of such objects and define a corresponding commutative superalgebra. Our construction includes the notion of weighted quivers that has already appeared in different contexts. This project is a step towards understanding the notion of cluster superalgebra. (Received July 05, 2019)