Let $n$ be a fixed natural number. An $m$-tuple $(a_1, ..., a_m)$ is said to be a Diophantine $m$-tuple with property $D(n)$ if $a_i a_j + n$ is a perfect square for $i, j$ distinct and less than or equal to $m$. It is conjectured that the number of such tuples is bounded by an absolute constant. We will relate this question to the Paley graph conjecture which predicts the following. Let $\epsilon > 0$ be a real number, $S, T \subseteq \mathbb{F}_p$ for an odd prime $p$ with $|S|, |T| > p^\epsilon$, and $\chi$ any nontrivial multiplicative character modulo $p$. Then, there is some number $\delta = \delta(\epsilon)$ for which the inequality

$$\left| \sum_{a \in S, b \in T} \chi(a + b) \right| \leq p^{-\delta}|S||T|$$

holds for primes larger than some constant $C(\epsilon)$. We show the Paley graph conjecture implies that the number of Diophantine $m$-tuples with property $D(n)$ is $O((\log n)^c)$ for any $c > 0$. This is joint work with Ahmet Güloğlu.