The ABC algorithm also has the advantages of strong robustness, fast convergence and high flexibility. However, it has the disadvantages premature convergence in the later search period. The accuracy of the optimal value cannot meet the requirements sometimes.

Artificial Bee Colony (ABC) algorithm is a swarm-based optimization algorithm with advantages like **simplicity and proper exploration ability**. However, it suffers from improper exploitation in solving complicated problems. In order to overcome this disadvantage, modifications on all three bee types are proposed.

Table 1. Advantages and disadvantages of ABC.

PROS	CONS
Easy to implement.	Lack of use of secondary information about the problem (gradients).
Broad applicability, even in complex functions, or with continuous, discrete or mixed variables.	-
High flexibility, which allows adjustments and the introduction of specific knowledge of the problem by observing nature	Requires new fitness tests on the new algorithm parameters to improve performance
It does not require that objective function be differentiable, continuous or mathematically representable.	The possibility of losing relevant information on the behaviour of the function to be optimized.
Robust against initialization, regardless of feasibility and distribution of the initial solutions population.	High number of objective function evaluations.
The structure of the algorithm is favourable for parallel processing, thus saving time.	Slow down when used in sequential processing.
Population of solutions (implicit parallelism). Possibility of creating regions of Pareto.	The population of solutions increases the computational cost due to slowdown, many iterations and memory capacity required.
Ability to explore local solutions.	Slow to obtain accurate solutions.
Global optimizer, with effective search process even under high complexity, and with low risk of premature convergence.	Deterministic methods have higher accuracy in finding solutions when it does not get stuck in a local minimum.