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## A location-allocation model of maintenance resources based on fault distribution for agricultural machinery maintenance service network

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### Abstract

Aiming at the location-allocation of maintenance resources for agricultural machinery maintenance service network, a multi-objective mixed-integer programming model is established, and an uncertain set is added to ensure the robustness of the results. Given the difference between the service network of agricultural machinery and other emergency service networks, this paper proposes a method to reduce the service cost by adjusting the fault distribution of agricultural machinery. The non-dominated sorting genetic algorithm II is applied to solve the model. Finally, a numerical example and a practical example are given to illustrate the effectiveness of the proposed model.

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