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**REVOLUTIONARY FARMING: ADVANCEMENTS IN SEEDERS OVER THE PAST DECADE**

**Title and name of the researcher 1,**

Affiliation of the researcher (e.g. Texas A&M University, Department of Biological&Agricultural Engineering)

...............@..........com, Phone number

ORCID NO: 0000-0000-0000-0000

**Title and name of the researcher 2**

Affiliation of the researcher

...............@..........com, Phone number

ORCID NO: 0000-0000-0000-0000

**ABSTRACT**

In the past decade, there have been significant advancements in agricultural technologies, which have revolutionized the agricultural industry. The use of modern technology has led to the development of more efficient, precise, and versatile machinery that can optimize crop yield while reducing labor costs, workload and environmental impact. The success of the planting phase in agriculture can affect the success of all plant production at the very beginning. The aim of this paper is to review the advancements in seeders over the past decade. In recent years, there has been a focus on developing seed flow and in-row seed distribution of seeders. To achieve this there have been conducted several research to produce prediction models that provide improvement on arrangements of present seeders. Development of no-till seeders reduce soil erosion and improve soil health, as well as reducing the time and energy required for tillage. Thus, farmers save money by reducing the need for fuel and labor costs. Additionally, planting multiple crops simultaneously have been achieved and that provide time and resource saving where farmers need to maximize their yield on a limited space while maximizing crop diversity. Precision agriculture, which includes GPS-guided seeders that can provide accurate and consistent seed placement, has significantly reduced seed waste and increased crop yield by ensuring planting at right depth and spacing. Precision technology has paved the way for development of robotic seeders as well. In conclusion, the advancements in seeders over the last decade have had a significant impact on the agricultural industry. Theoretical an practical imprevements have contributed to the development of more efficient and sustainable seeders. These advancements have helped farmers increase crop yield, reduce labor costs, and minimize environmental impact. As technology continues to advance, it is likely to see further improvements to ensure food security for future generations.

**Keywords**: Precision agriculture, no-till, multi-crop seeding, seed distribution, sustainable agriculture