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## THE ROLE OF AGRICULTURE MACHINERY IN THE DEVELOPMENT OF ARID ZONES

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### ABSTRACT

The development of arid zones depends mainly on agricultural machinery. Researches in this field are concerned with machine design and construction for the different types of crops and soils. This study will classify the different suitable and unsuitable types of tractors for arid zones and emphasizes the importance of engine maintenance as well.

### INTRODUCTION

The early farm tractor which was an essential substitute for the draft horse, was at first powered by steam engine. In 1877, the internal combustion engine was invented in Germany. Then the tractor was powered by the diesel engine. The first tractor was large and cumbersome, and it had been used for plowing and threshing only. Then, the tractor was developed for many purposes. There are many types of tractors used to perform major farm operations. Recently, the modern models for high speed tractors are developed, and their vibration have been treated in order to improve their ride comfort.