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## **Technical review on the applications of ultrasound in the engineering of biotechnical systems**

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### **ABSTRACT:**

Ultrasonic is new science that is being intensively developed in recent years. Sound velocity is a valuable engineering tool and non-destructive, non-invasive, non-intrusive technique of measurement. The authors were highly motivated to collect data from as many research papers as possible in order to see the possibilities and examples of applying this technology. The various effects of ultrasound were discussed and outlined in a context of different uses to accelerate or support agricultural production processes like: the effects of ultrasound waves, the commercial and diagnostic applications possibilities. The field of biotechnical engineering is very multidisciplinary and, accordingly, there is a diversity in approaches and possibilities of applying ultrasound. The overall conclusion of our work is that the use of ultrasound in biotechnical research brings various benefits, and in some cases, it is extremely supported and recommended. Also, there is great flexibility in the ways in which this technology can be applied, which leaves engineers a lot of freedom in expressing creative solutions and applications.

***Keywords:** Ultrasonics, ultrasound waves, biotechnical engineering, applications.*