

(54) Title of the invention : TRACTOR-MOUNTED FARM MACHINE TO TRANSFORM CROP WASTE INTO VALUE-ADDED POWDER

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| <p>(51) International classification :C10L0005440000, B29B0013020000, C08L0097020000, B02C0023080000, C05F0005000000</p> <p>(86) International Application No :NA<br/>Filing Date :NA</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number :NA<br/>Filing Date :NA</p> <p>(62) Divisional to Application Number :NA<br/>Filing Date :NA</p> | <p>(71)Name of Applicant :</p> <p><b>1)Chitkara University</b><br/>Address of Applicant :Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India. Patiala -----</p> <p><b>2)Chitkara Innovation Incubator Foundation</b><br/>Name of Applicant : NA<br/>Address of Applicant : NA</p> <p>(72)Name of Inventor :</p> <p><b>1)SINGH, Maninderjeet</b><br/>Address of Applicant :Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India. Patiala -----</p> <p><b>2)SALUJA, Nitin Kumar</b><br/>Address of Applicant :Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India. Patiala -----</p> <p><b>3)SINGH, Varinder</b><br/>Address of Applicant :Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India. Patiala -----</p> |
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(57) Abstract :

A mobile crop waste conversion apparatus (100) for on-field agricultural residue (i.e. crop waste) management is disclosed. The apparatus (100), is detachably coupled to a vehicle (102), the apparatus (100) encompasses multiple components for converting residue into fine powder, and these components are controlled by a control unit (118). A conveyor belt (108) efficiently transports crop waste from an attached hopper, directing through a shredder unit (110) that reduces it into small pieces. A cyclone separator (112) removes moisture through cesntrifugal force, followed by heating in a hot air oven (114). A grinder (116) transforms the dried material into a high heating value powder. Additionally, the apparatus (100) includes a generator (120) that powers the apparatus (100), enhancing mobility. This apparatus ensures efficient, on-site conversion of crop waste into a valuable resource, addressing both environmental concerns and resource optimization in agriculture.

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