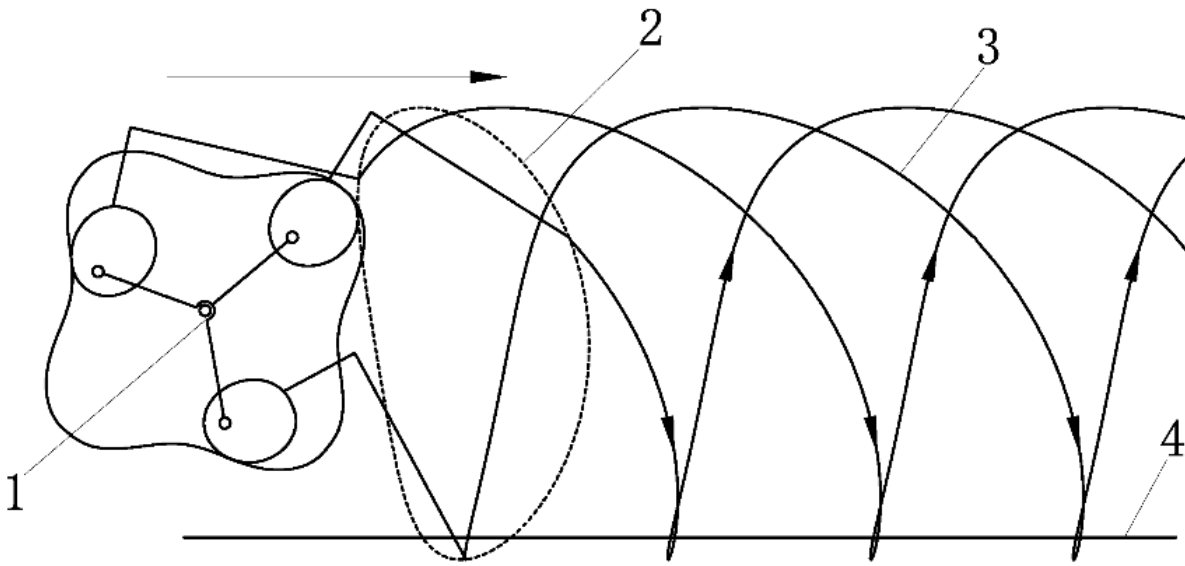
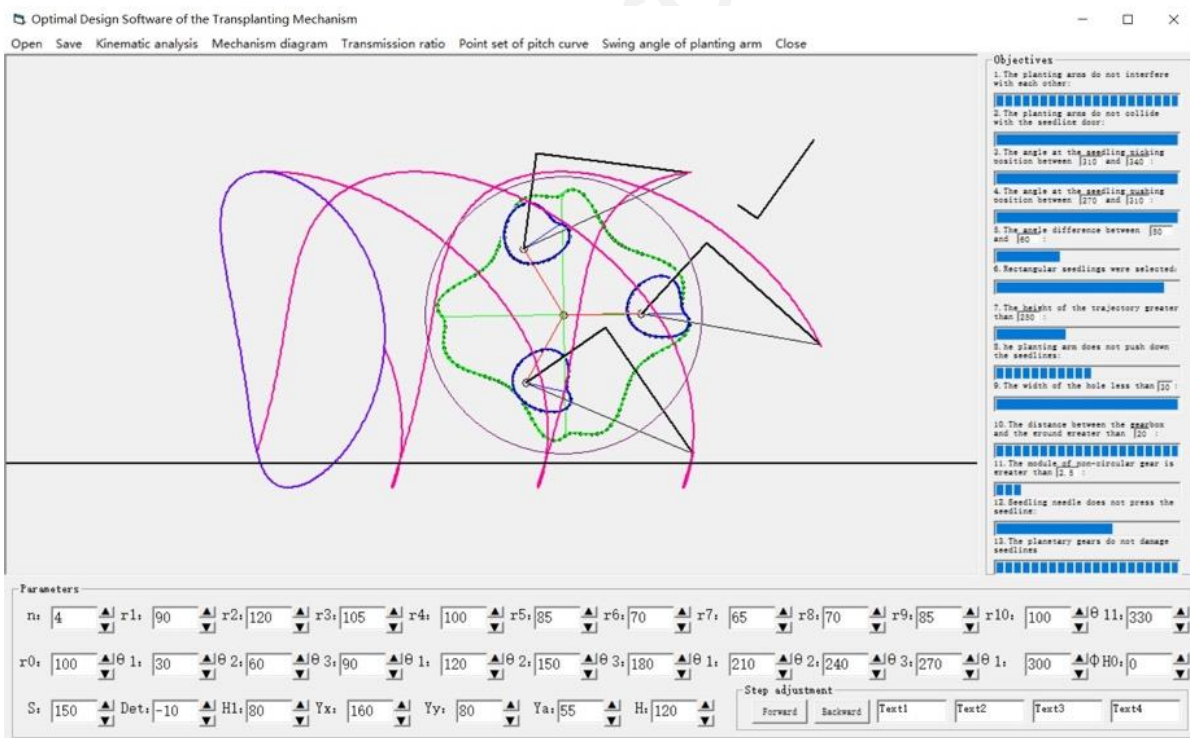


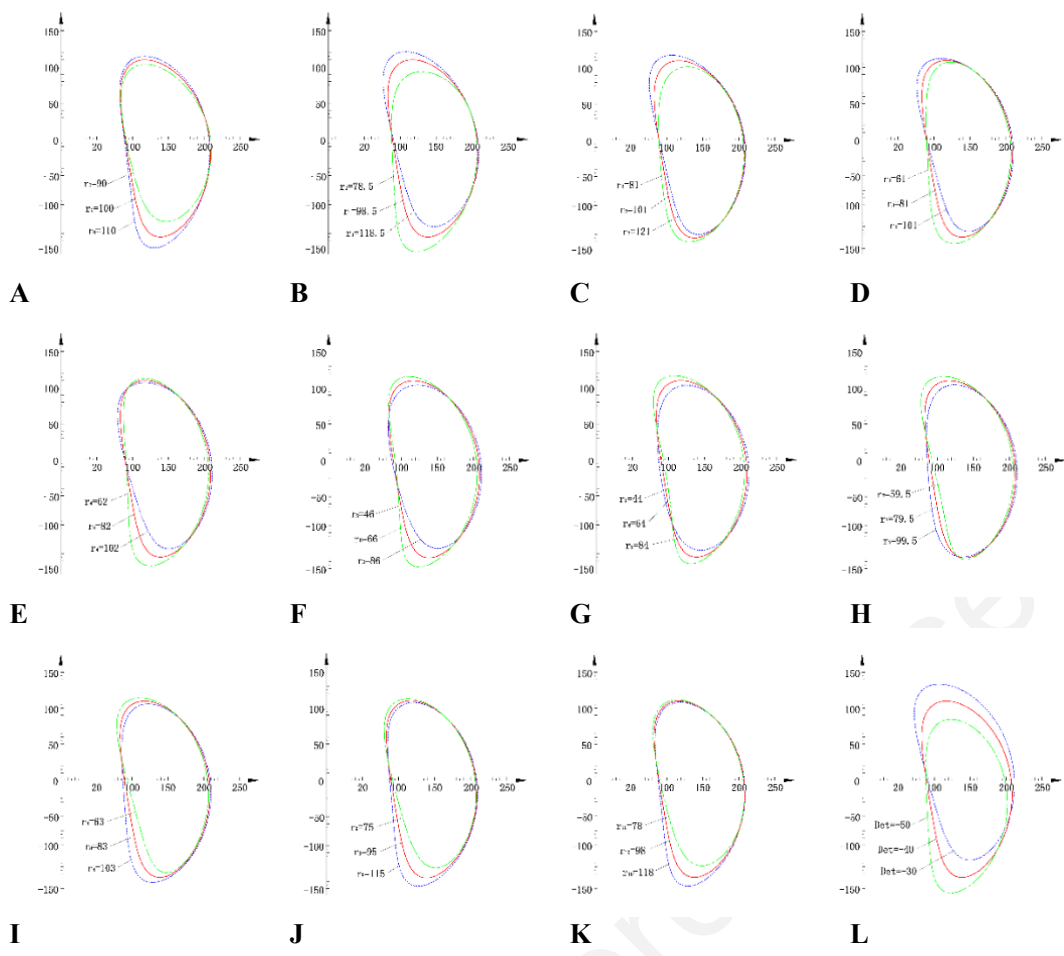
Appendix



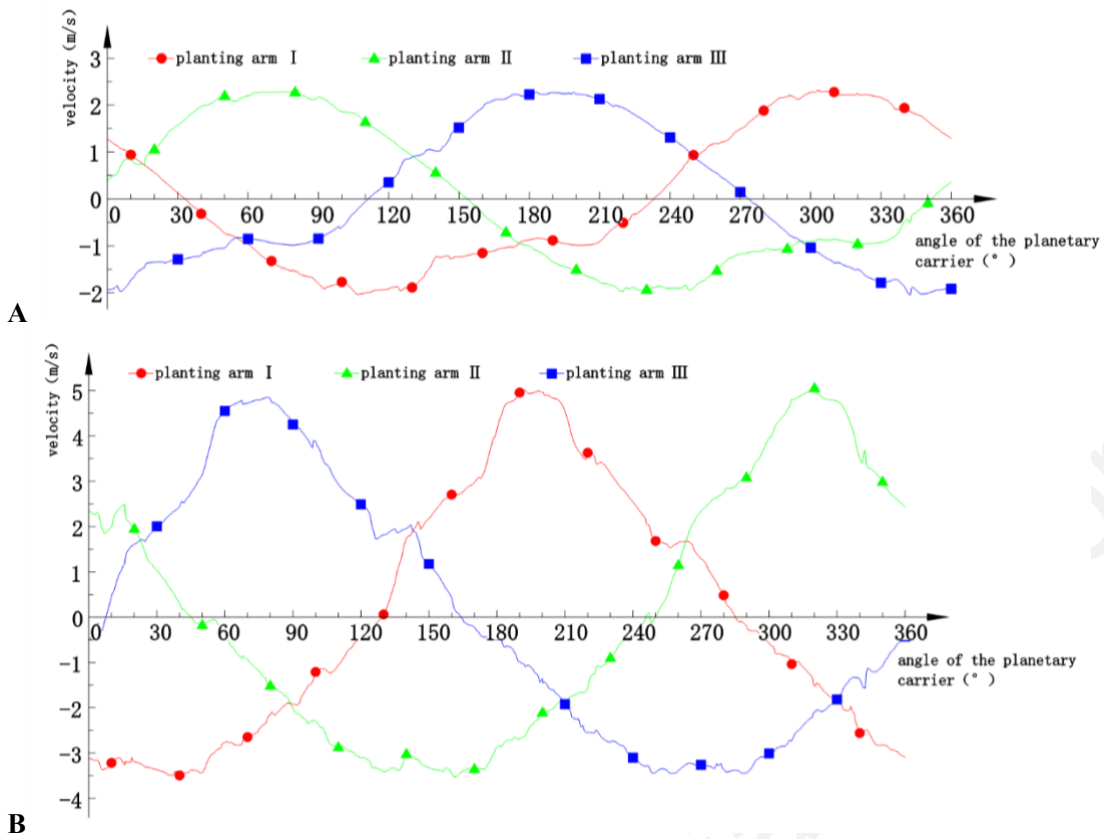
Appendix Figure 1. Trajectory of the transplanting mechanism. 1. Transplanting mechanism with differential internal engagement non-circular planetary gear trains; 2. Relative motion trajectory; 3. Absolute motion trajectory; 4. Ground.



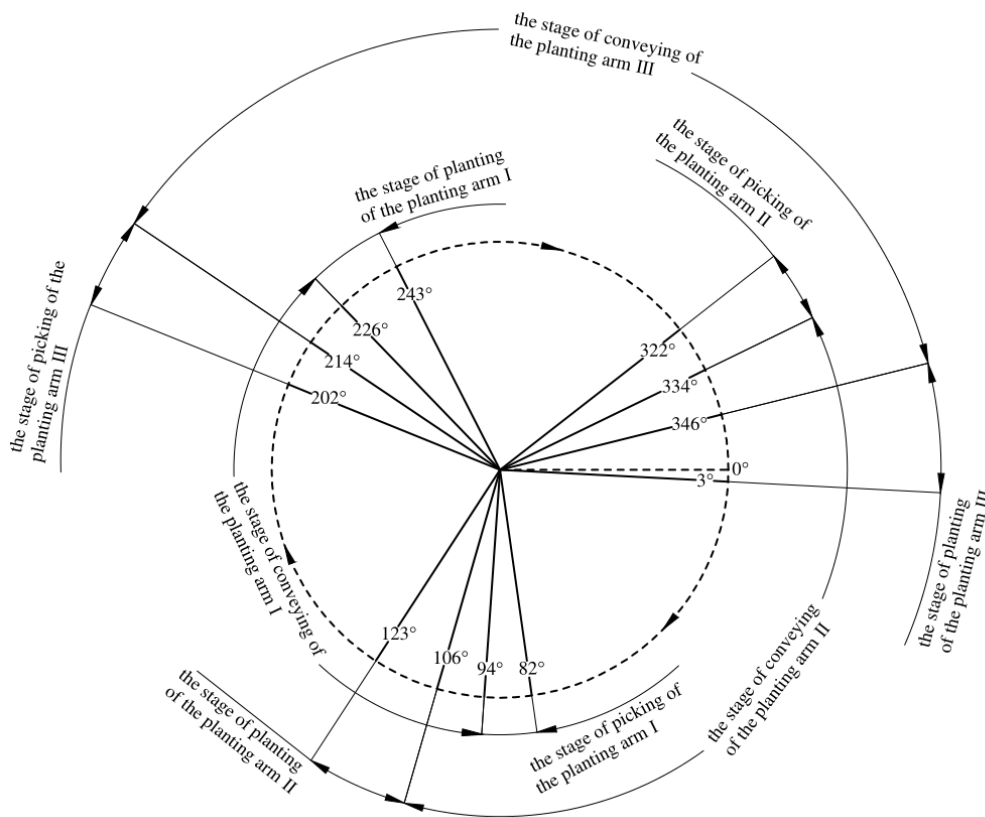
Appendix Figure 2. Optimal design software of the transplanting mechanism.



Appendix Figure 3. Corresponding analysis of parameters.



Appendix Figure 4. Velocities of the planting arms. A) Velocity in the X direction; B) Velocity in the Y direction.



Appendix Figure 5. Work cycle diagram.