

Response to Reviewer 1 Comments

Point 1: I think the resolution of some images should be increased. I also suggest that the font of the texts in the flowcharts should be the same as the main text (See Fig.5, 6..).

Response 1: Thank you for your valuable suggestions. I apologize that some of the images in this manuscript are too low resolution. I also apologize that the font of the texts in the flowcharts are not the same as the main text. The modified figures are shown in Figure 1(a) to Figure 8(a).



Figure 1(a). SLIDE FW leafy vegetable harvester.



Figure 2(a). 4UGS2 type double row sweet potato harvester.

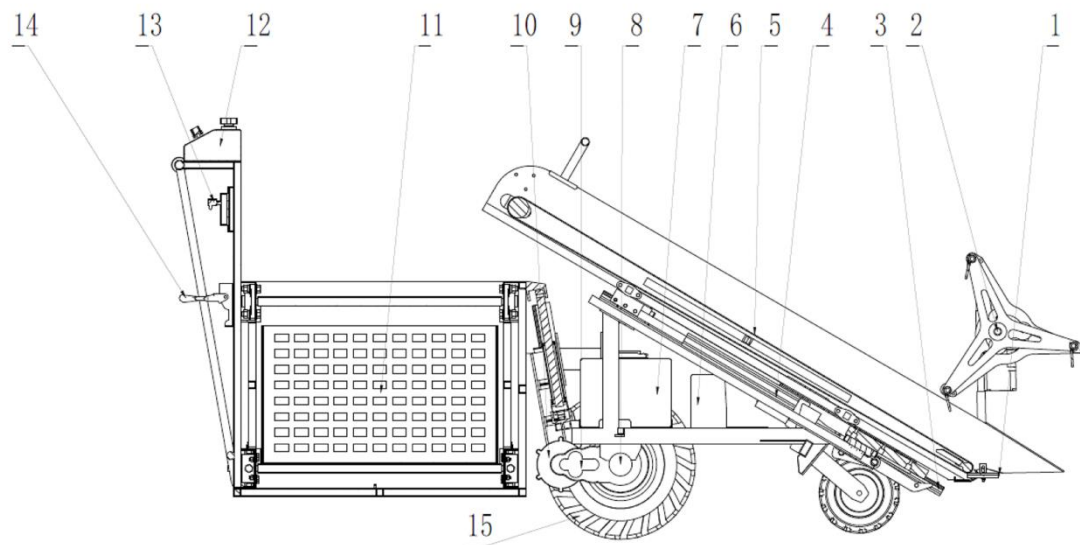


Figure 3(a). Sketch of the structure of the 4UM-120D electric leafy vegetable harvester.

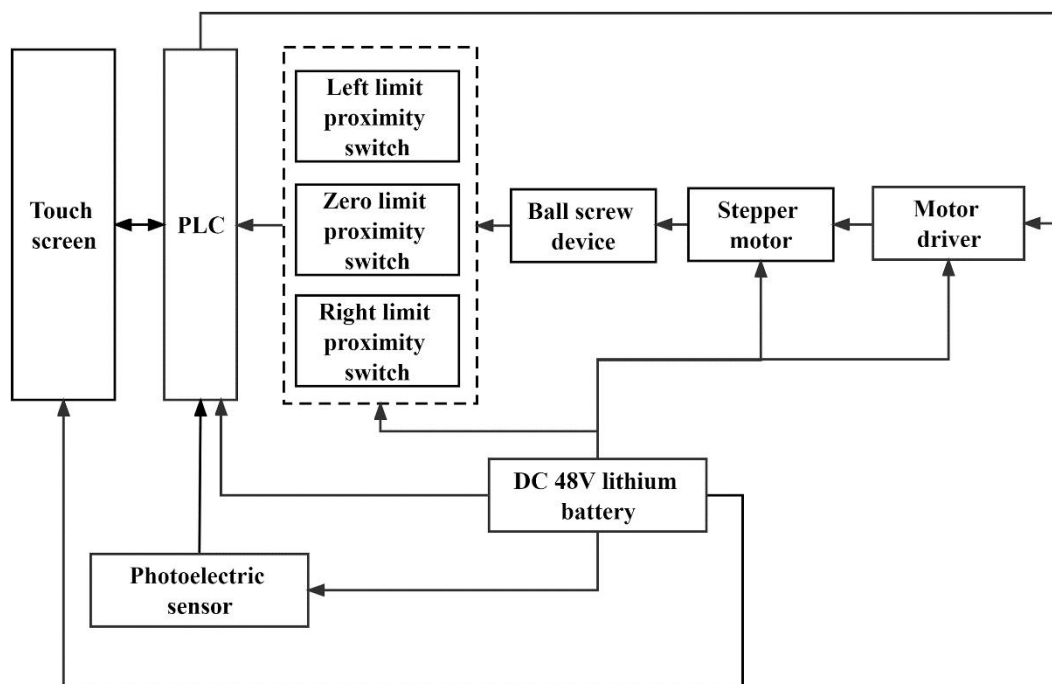


Figure 4(a). Automatic adjustment system of cutter height from the ground.

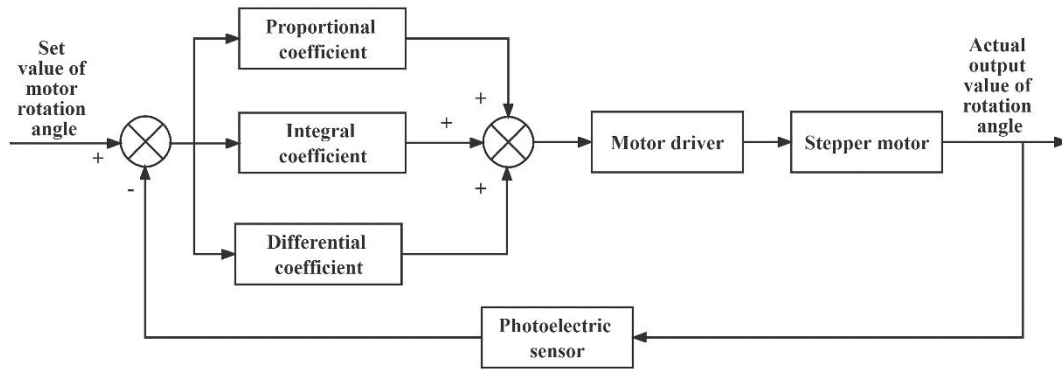


Figure 7(a). Position-based PID control schematic.

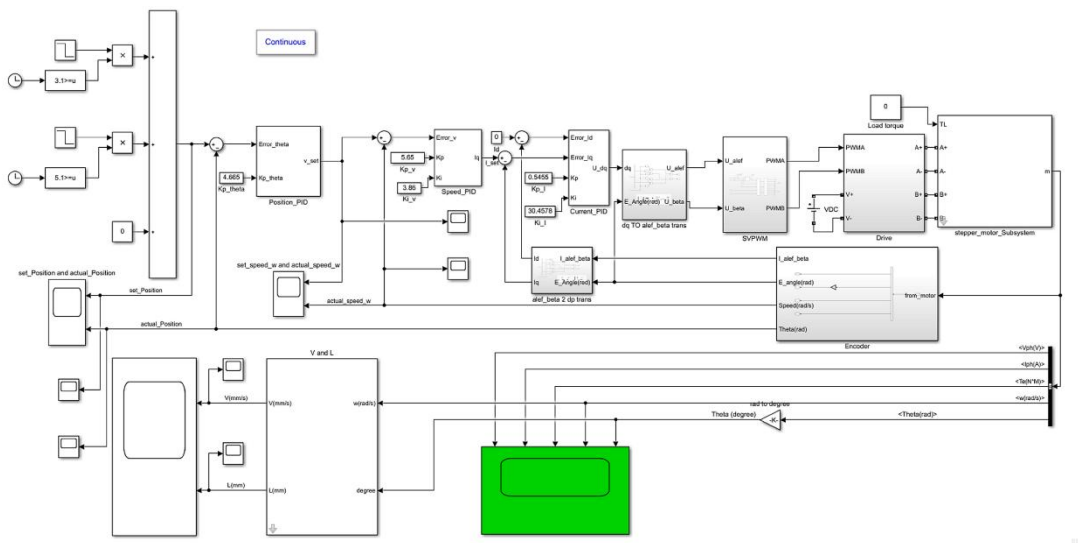


Figure 8(a). Incremental PID-based model for automatic control system of cutter height off the ground.

Point 2: Any faults and warnings indicated by the system? Limitations of this study? I think it would be better if an explanation could be added to the article about these issues.

Response 2: Thank you for your valuable suggestions. If the left limit switch of the automatic adjustment system of cutter height from the ground was on, the system would issue a warning and the stepper motor would stop rotating to prevent the slide block from hitting the stepper motor and causing motor damage. If the right limit switch of the automatic adjustment system of cutter height from the ground was on, the system would also issue a warning and the stepper motor would stop rotating to prevent the cutter from being damaged by touching the ground due to the low height of the cutter from the ground. As the automatic control system for the height of the cutter off the ground was a semi-closed loop system, i.e. sampled from the motor, there must be an error in accuracy, and it was an order of magnitude difference compared to a closed loop system, but at this stage the "yes" and "no" problems were first ensured and the rest was left for later. However, there was a need to acknowledge

the errors and recognize the problems involved, as well as providing a basis for further research on the subject to improve accuracy.

Point 3: Battery capacity was not given in Table 1.

Response 3: Thank you for your valuable suggestions. I apologize that the battery capacity is not given in Table 1. The battery capacity is 50Ah. The modified table is shown in Table 1(a).

Table 1(a) 4UM-120D electric leafy vegetable harvester structural parameters and technical parameters

Parameters	Values
Whole machine size(length×width×height)/(mm×mm×mm)	2180×1500×1200
Battery capacity/Ah	50
Working width/mm	1200
Cutter height adjustment range/mm	0~100
Conveyor belt width/mm	1200
Conveyor belt installation inclination/°	30
Wheelbase/mm	550
Wheel radius/mm	175
Minimum ground clearance/mm	70
Productivity/hm ² /h	0.04~0.08

Point 4: I think the work is very important. Thank you for contributing to the scientific literature on the subject.

Response 4: Thank you very much for taking time out of your busy schedule to make invaluable suggestions to me. Thank you for your recognition and support of our work. "Agriculture" magazine is a very good journal. It is my honor to have my manuscript accepted by "Agriculture", and I also hope that my manuscript can be accepted by it. Please also kindly contact me if you have any suggestions during the review of my manuscript. Thanks again for the suggestion you gave me during your busy schedule.