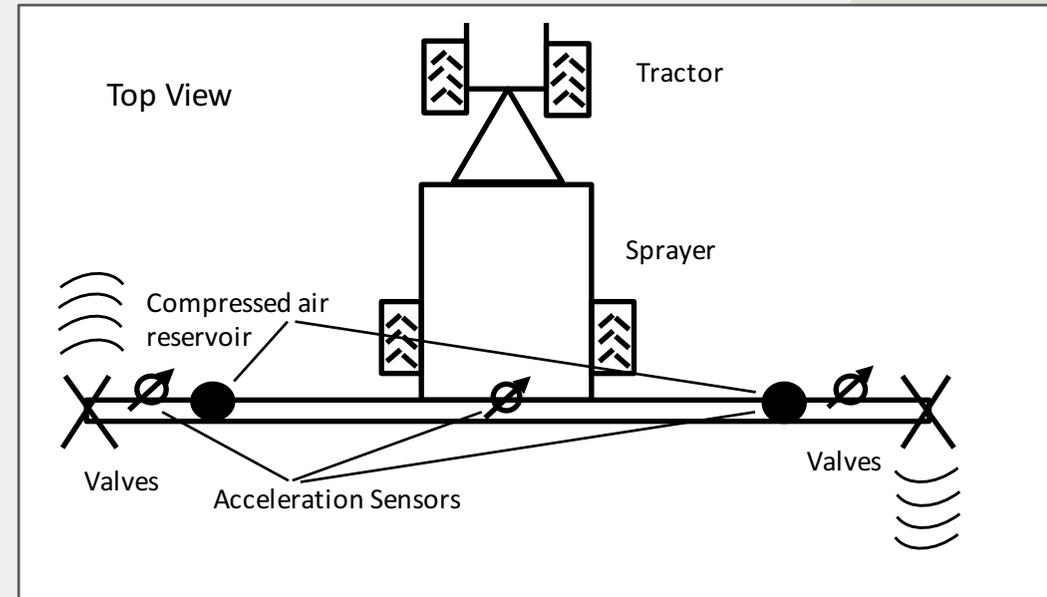


# Device to compensate yawing and /or rolling movements in sprayer booms

Project 10014

## Description:

In agriculture, sprayers are the most important implements for applying pesticides, with even surface distribution being an issue of utmost importance. To date, greater field capacity and work efficiency are usually achieved by increasing both sprayer working width and work speed in the field. This approach has resulted in a significant increase in interfering boom movements which in turn lead to an uneven distribution of the respective pesticide. The invention is intended to make sure that yawing and rolling movements are compensated for in order to ensure that output quantities are evenly distributed. The procedure revolves around a compressed air unit capable of recoil in order to generate compensation pulses (see illustration). The two boom ends are fitted with four air pressure valves pointing towards and away from the direction of movement as well as downward and upward (not shown in the illustration). This allows the generation of pulses for compensation movements in every direction defined by the plain created by the four valves. The direction and intensity of the respective compensation pulse is governed by an electronic control system. Acceleration sensors, which are fixed to each boom end, record yawing and rolling movements. A third sensor installed at the center of the boom is used as a default. An electronic control system serves to record and analyze acceleration sensor data yielding the parameters used to generate the respective compensation pulse. The electronic control system also takes into account tractor data such as direction of movement, speed, tractor position and length of planned route, to be incorporated into the calculation of compensation pulses.



Aufbau der Erfindung

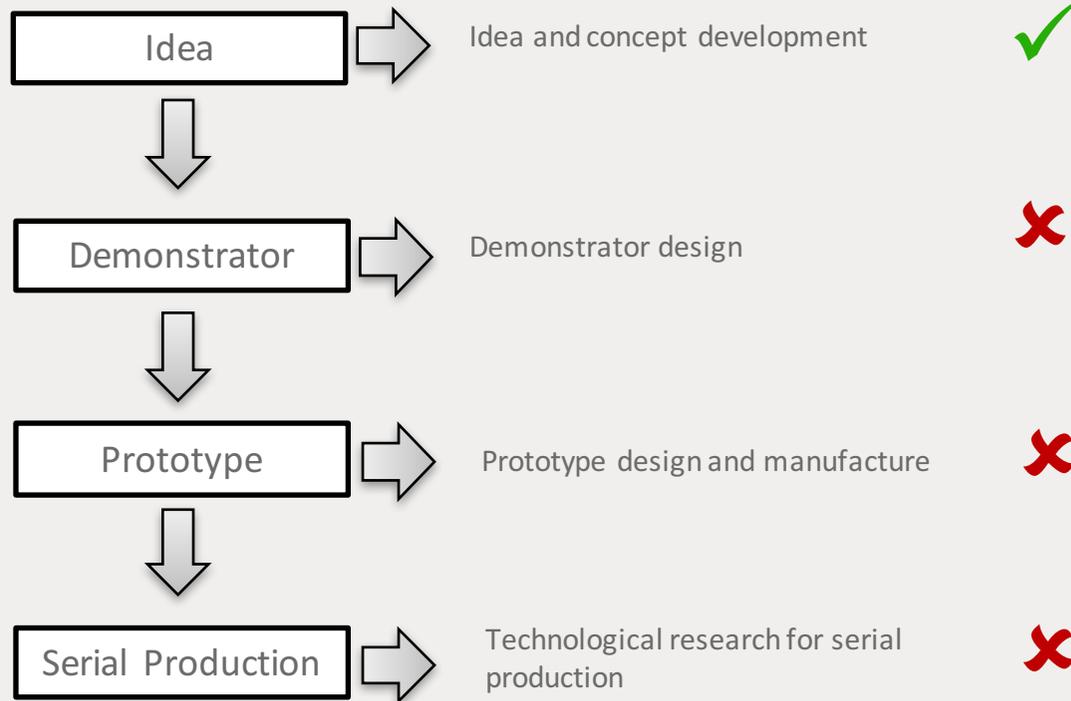
## Benefits:

- Reduction of yawing and rolling movements resulting in an optimal distribution of control chemicals
- Use of tractor data for further optimization
- Also suitable for sprayers with air support

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Project 10014

## Status to date and future steps



## Property rights:

- Patent pending DE 102015204992.2



The patent is owned by the University of Applied Sciences Dresden, inventor: Prof. Dr. Karl Wild

SPVA offers R&D services and licenses for further research and the subsequent manufacturing of this invention to all interested enterprises.

**For further inquiries please refer to:  
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**Make sure to specify the project identification number ID 10014.**

For further development we are looking for an industrial company, which is willing to participate in an optimization or the application of the technology.