Developing a sugar beet counting framework based on deep learning algorithms

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# ABSTRACT

## Keywords

Deep learning, YOLOv6, crop science, photogrammetry, sugar beet, single plant counting.

# INTRODUCTION

# MATERIALS AND METHODS

## Study area

## Data

## Method

Create workflow figure.

Comparison of different image resolutions for model training (same settings).

# RESULTS

Present notebooks and program.

Show some images of detected plants.

Present performance measures.

Show model results on orthophoto and counting result.

# DISCUSSION

No possibility to check on other data (e.g. drone data, different weather conditions or regions). Overfitting?

Limitation of the model to decide between sugar beet and no sugar beet, weeds might cause trouble.

Pretty basic model and approach but already usable in practice.

# CONCLUSION

# REFERENCES

# APPENDIX