EUROPEAN UNION PEGASUS AGRICULTURE has to control activities of farmers who receive their support. Field aids are very expensive and time consuming. Therefore remote sensing has to be used as much as possible. Presently available data from Copernicus Sentinel relate measures already found research on radar and optical data use in agriculture. Studies of 2016 were very similar to Latvia and showed that most of the Sentinel observations were not reliable and other monitoring purposes should be adopted. Sentinel data are independent of weather conditions and can be used to calculate the backscatter coefficient and coherence between the data and activity data is based on the observation. An example is the case of rice where Sentinel data are not reliable due to the cultivation period. Monitoring of agricultural activities is used by the field owners to maintain yields to the farmers, who might violate regulations, although this approach still needs testing and verifying.

INTRODUCTION

The first year of operation of the Sentinel-1 satellite proves that even minor radar data are very useful for monitoring the activities of farmers. Despite various data that can be obtained, Sentinel is the only satellite that allows the detection of agricultural activities using the backscatter coefficient. Sentinel's frequency and SARimaging allow the clear visualization of rice cultivation periods and the specific characteristics. Sentinel data are used to detect activities and monitor agricultural activities using the backscatter coefficient. Sentinel data are independent of weather conditions and can be used to calculate the backscatter coefficient and coherence between the data and activity data is based on the observation. An example is the case of rice where Sentinel data are not reliable due to the cultivation period. Monitoring of agricultural activities is used by the field owners to maintain yields to the farmers, who might violate regulations, although this approach still needs testing and verifying.

OBJECTIVE

The objective of this study is to assess the potential of Sentinel-1 data processing to monitor agricultural activities in Latvia. The main goal is to select farmers who violate the terms of European Union or Latvia Government financial support. This means that there are no major differences in Sentinel-1 data that can be obtained, Sentinel is the only satellite that allows the detection of agricultural activities using the backscatter coefficient. Sentinel data are independent of weather conditions and can be used to calculate the backscatter coefficient and coherence between the data and activity data is based on the observation. An example is the case of rice where Sentinel data are not reliable due to the cultivation period. Monitoring of agricultural activities is used by the field owners to maintain yields to the farmers, who might violate regulations, although this approach still needs testing and verifying.

METHODS

Study area is covered by several farmers' fields and other agricultural fields are used. Data collected in the study area were collected from 2015 to 2016. Sentinel-1 data are processed using ENVI 5.3 software. A Python script was compiled to permit the processing of Sentinel-1 data on a regular basis. Sentinel-1 data are collected using the WMTS protocol, which allows for the use of Sentinel-1 data to detect agricultural activities. Sentinel-1 data are processed using ENVI 5.3 software. A Python script was compiled to permit the processing of Sentinel-1 data on a regular basis. Sentinel-1 data are collected using the WMTS protocol, which allows for the use of Sentinel-1 data to detect agricultural activities. Sentinel-1 data are processed using ENVI 5.3 software. A Python script was compiled to permit the processing of Sentinel-1 data on a regular basis. Sentinel-1 data are collected using the WMTS protocol, which allows for the use of Sentinel-1 data to detect agricultural activities.

RESULTS

The research on agricultural activities monitoring based on Sentinel-1 data series needs to be continued. Although this particular Sentinel-1 field is not yet fully developed, this particular Sentinel-1 field is not yet fully developed, this particular Sentinel-1 field is not yet fully developed, this particular Sentinel-1 field is not yet fully developed, this particular Sentinel-1 field is not yet fully developed, this particular Sentinel-1 field is not yet fully developed, this particular Sentinel-1 field is not yet fully developed, this particular Sentinel-1 field is not yet fully developed.

CONCLUSION

Changes in SAR backscatter and coherence indicate agricultural activities. Ploughing, seeding, and mowing can be detected as significant changes in SAR backscatter and coherence are observed. Sentinel-1 data are collected using the WMTS protocol, which allows for the use of Sentinel-1 data to detect agricultural activities.

REFERENCES