

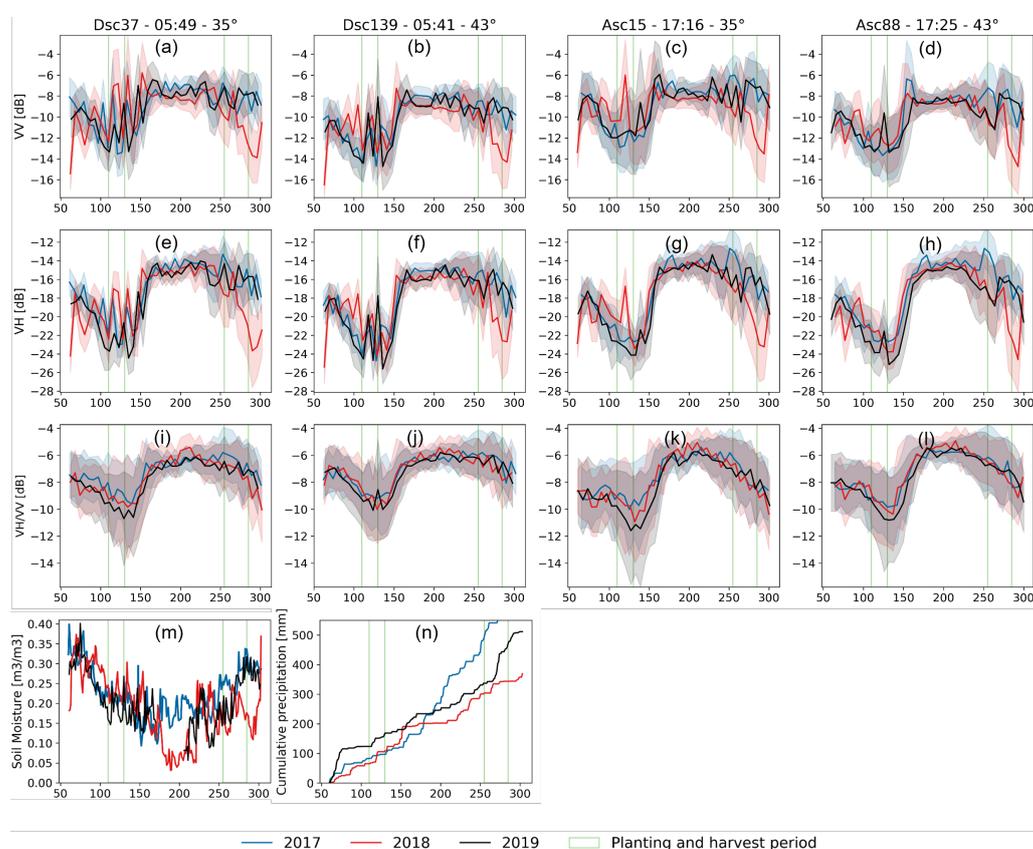
# Sentinel-1 SAR Backscatter Response to Agricultural Drought in The Netherlands

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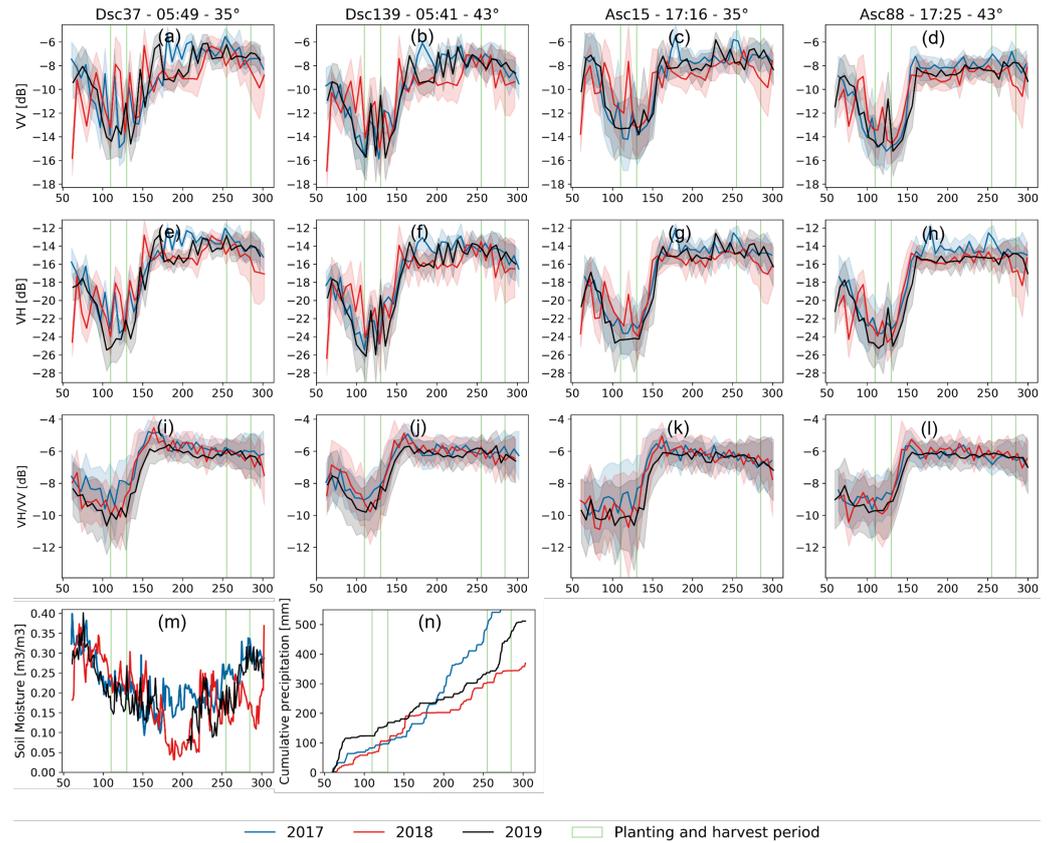
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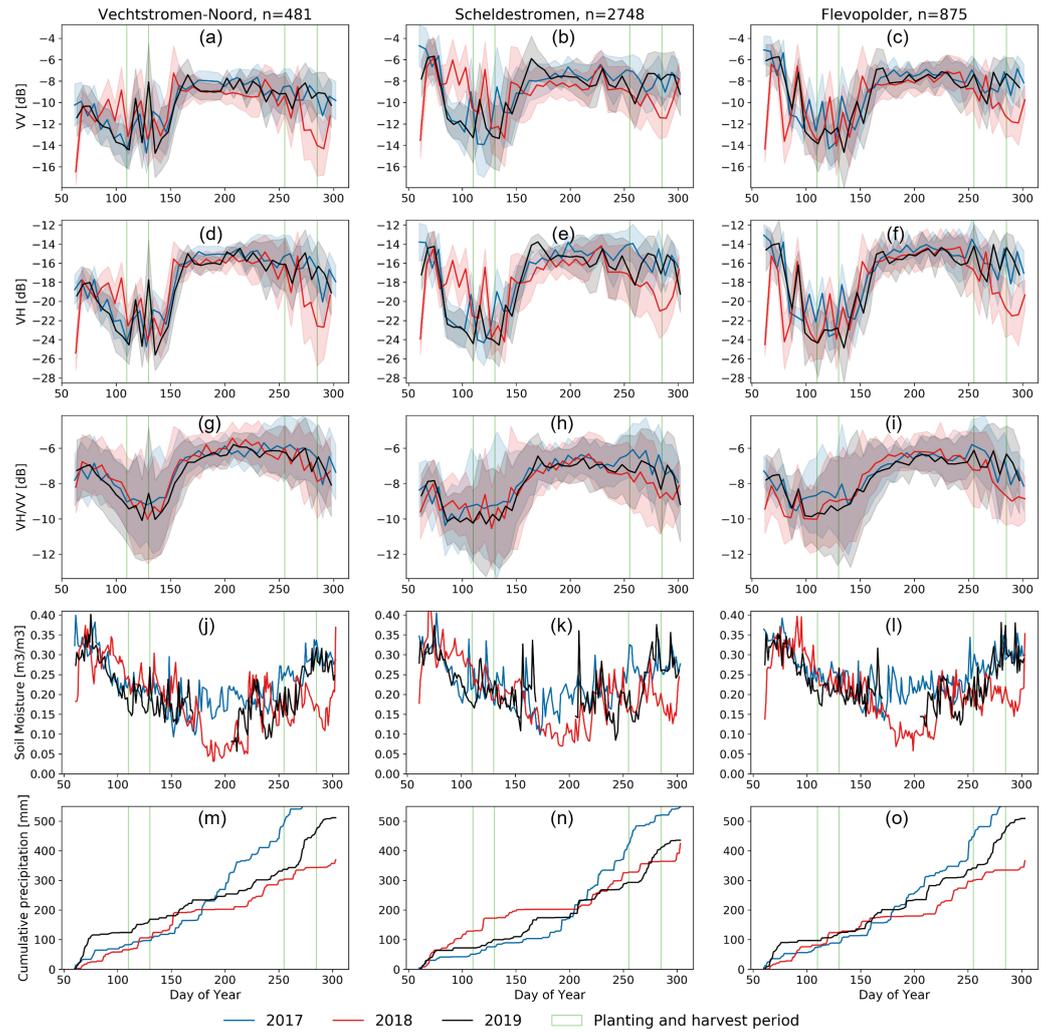
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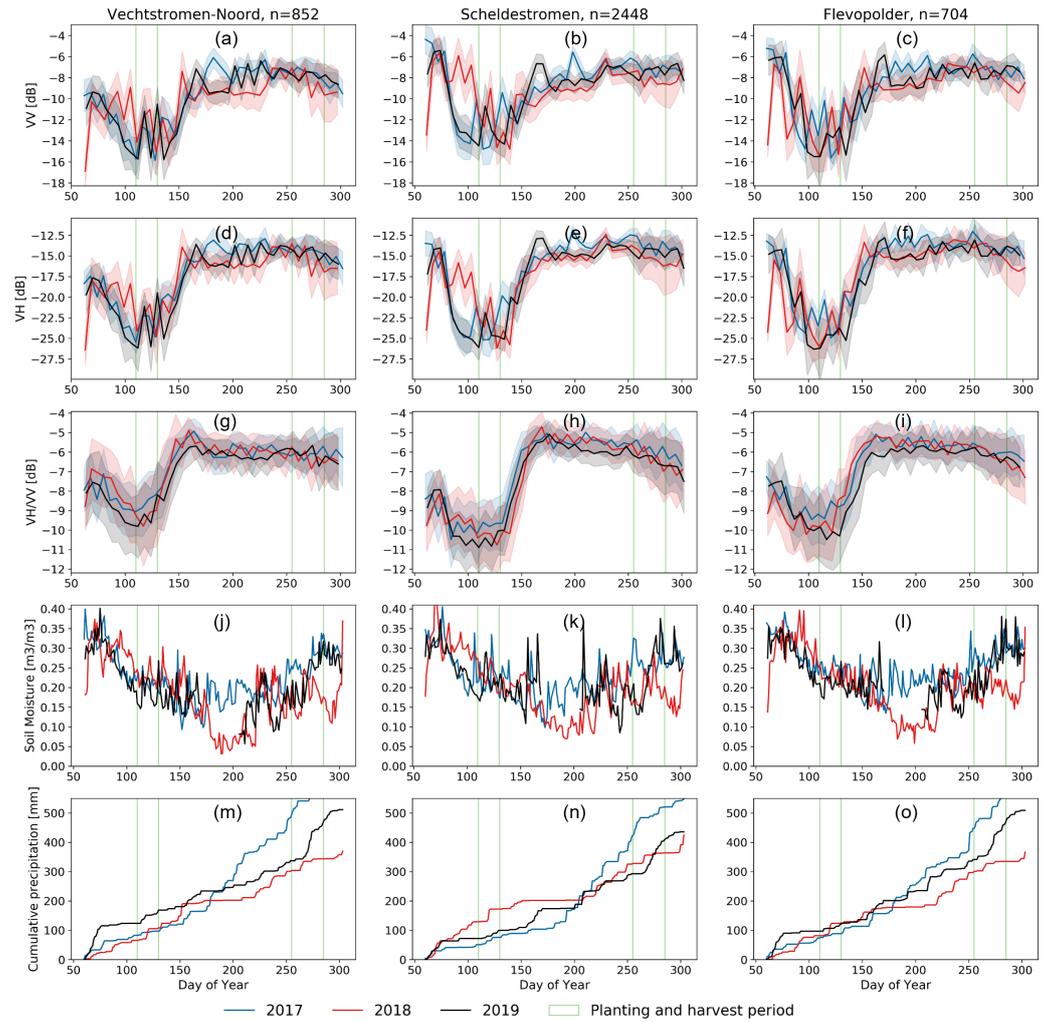
**Figure S1.** Sentinel-1 descending (RO: 37 and 139) and ascending (RO: 15 and 88) backscatter profiles of VV (a–d), VH (e–h) and VH/VV (i–l) for potato parcels in Vechtstromen-Noord for the years 2017, 2018 and 2019. The title of the columns states whether the data are from a descending (Dsc) or ascending (Asc) overpass, the RO number, the overpass time in UTC and centre incidence angle to the study area. The shaded areas indicate the standard deviation calculated across all parcels. Spatially averaged soil moisture data (m) from the Coevorden municipality and cumulative precipitation (n) from Hoogeveen weather station. Vertical green lines indicate crop sowing and harvesting periods.



**Figure S2.** Sentinel-1 descending (RO: 37 and 139) and ascending (RO: 15 and 88) backscatter profiles of VV (a–d), VH (e–h) and VH/VV (i–l) for sugar beet parcels in Vechtstromen-Noord for the years 2017, 2018 and 2019. The title of the columns states whether the data are from a descending (Dsc) or ascending (Asc) overpass, the RO number, the overpass time in UTC and centre incidence angle to the study area. The shaded areas indicate the standard deviation calculated across all parcels. Spatially averaged soil moisture data (m) from the Coevorden municipality and cumulative precipitation (n) from Hoogeveen weather station. Vertical green lines indicate crop sowing and harvesting periods.



**Figure S3.** Averaged backscatter profiles of VV (a–c), VH (d–f) and VH/VV (g–i) for potato parcels in Vechtstromen-Noord (left), Scheldestromen (middle) and Flevopolder (right) for the years 2017, 2018 and 2019. The title of the columns states the number of potato parcels in each area. The shaded areas indicate the standard deviation calculated across all parcels. Spatially averaged soil moisture (j–l) from Coevorden, Goes and Zeewolde municipalities and cumulative precipitation (m–o) from Hoogeveen, Vlissingen and Lelystad weather stations, respectively, for each area. Vertical green lines indicate crop sowing and harvesting periods.



**Figure S4.** Averaged backscatter profiles of VV (a–c), VH (d–f) and VH/VV (g–i) for sugar beet parcels in Vechtstromen-Noord (left), Scheldestromen (middle) and Flevopolder (right) for the years 2017, 2018 and 2019. The title of the columns states the number of sugar beet parcels in each area. The shaded areas indicate the standard deviation calculated across all parcels. Spatially averaged soil moisture (j–l) from Coevorden, Goes and Zeewolde municipalities and cumulative precipitation (m–o) from Hoogeveen, Vlissingen and Lelystad weather stations, respectively, for each area. Vertical green lines indicate crop sowing and harvesting periods.