

I liked this paper! It is interesting and I could only find minor flaws.

If I can understand Figure 9 and 10 (correlations for the earlier period until 1865) and figure 11, correlations for the later period (1865-1911), climate sensitivity INCREASED. It is possible that this is an effect of the "enclosure" movement in Scania during the first ½ of 19th century.

In my opinion, something of that kind is hinted at on p. 20, where Cluster 3 (peasant-farmers on freehold land) dominated. It is expected from theory that private ownership will generate greater risk-taking (= more sensitivity to weather conditions) than tenant farming. It is quite possible that Cluster 1 and 2 reflect inflexible leaseholds where tenants were encouraged NOT to experiment, but rather deliver a fixed - or as close to fixed as possible - amount of lease to the landowner.

Minor corrections and thoughts (as they occur):

Line 6 & 7: I don't understand why a low share of temperature-sensitive proxy-variable (wheat) is a good thing if you want to study climate variability.

Line 30-31: An admirable ambition to provide an understanding of phenology of historical grain varieties -when this ambition is presented later in the article (p 5), it is rather thin. E.g. the different rye varieties, Larsmässoråg, Svedjeråg etc, is not shown to have different phenology/being of different races. I've always understood these "varieties" as being harvested at Lars mässa or grown on slash-and-burn land.

Line 44: "early study period (1702-1911) and the late study period (1865-1911)".

Ought to be? "early study period (1702-1864) and the late study period (1865-1911)".

Line 45: "conceptualized neither in a simplistic or deterministic"

Should be: "conceptualized neither in a simplistic nor deterministic"

page 3, line 77-86: I get the impression that cold periods in 1740s and 1780s were associated with sand drift etc. But soil erosion was not a problem in the 1694-1698, when it was really cold. I got an impression of inconsistency in argument.

Line 89: the great transformation of agriculture during the period makes it difficult to identify climate signal. True. So why did you choose the period? (=maybe a few lines about sources etc).

Line 158-159: "selection of barley seed a long-term adaptation process".... Hm? Wasn't the most common way that peasants took some of their harvest as seed for next year? Also, seed grain was not so "pure", if I remember correctly Maths Isacson and Tjapp Peterson (both in Dalecarlia) have shown that the grain seed could be so mixed that a farmer THOUGHT he sowed barley but it was so mixed with oats that "the barley turned to oats" (cos of the rainy weather).

Line 181-185: "a flexible farming system", check out Ronny Peterson "Ett reformverk under omprövning" where he discusses the problems with falling production in the late 18th century as a driving force for the "enclosure" movement. (Also, be careful with that concept since the connotation in English is different to Swedish conditions prevailing.)

Line 201: "If such adaptations were took place..." = "If such adaptations took place..."

Line 524: “Practically no /-/ correlation /-/autumn wheat /-/ 0.46)”: this sentence indicate no, or low, correlation for autumn wheat. But on line 521, the same correlation of 0.46 is regarded as a good result. (I agree – it is not bad. But it has to be equally good (or bad).

Line 602: “not only precipitation but rather the combination of precipitation and precipitation during the summer...” I don’t understand.

Line 649-654: I found this rather an ad hoc argument. Why should the “trade deficit” between Scania and Sweden proper result in more northerly grain varieties? As before (and prior to Monsanto™), farmers took part of their harvest and used for seed the next year. I think you might just delete those rows.

Figure 12 & Figure 13 and Table B1, B2, B3 & B4 are really good! Keep at all cost!