In this work,the authors used 43,943 SNPs and FarmCPU method to perform GWAS of five germination-related traits during seed chilling-generation in maize. They detected 15 significant signals under a Bonferroni multiple-test threshold, among which, they further analyzed 3 loci and 10 candidate genes associated with multiple traits. Overall, this manuscript was well organized, and I favor its acceptance after a few of minor editions.

1. The manuscript would be much improved after professional-English editing. The results section was particularly verbose.
2. Please clearly define the differences among chilling, cold and freezing stress and confirm the correct use of these three words in MS.
3. What were the criteria for selecting seeds (eg. size, weight...)? Also, germination experiments required a normal temperature control. It would be more convincing if some germinating pictures of different types of maize lines were provided.
4. Please provide the evidence that the chilling condition was chosen at 10℃.
5. Most figures weren't at sufficient resolution as the request of Peer J.
6. Lines 136-137: I can't find the LD decay regions with 220K in Conneely & Boehnke (2010). It should be described in Method or cited the relevant published article.
7. Lines 130-133: FarmCPU is a widely used GWAS method with high power and low false positive and false negative. That is well known and not an important point in MS. I suggest to delete this paragraph.
8. Fig. 3: The threshold was nearly 1.3, which was different from GWAS threshold ($P<2.03*10^{-6}$). How to get the threshold?
9. Lines 207-208: "Statistical Analysis System v 9.3" should be abbreviated to "SAS v 9.3". Alternatively, remove it here and describe it in Method instead.
10. Line 211: The name of the candidate genes "*abh4*" should be "*ABH4*".
11. Section 4.2: This part compared the overlaps between present genetic loci of chilling tolerance and previous published data. Readers would be put off by searching for so much genetic information in so many articles. So I suggest making a list of previous studies.
12. Fig. 5: Heat maps shouldn't just have two colors. This title needs to be reconsidered.