

The paper titled “method of optical diagnostics of grain seeds infected with fusarium” is dedicated to the method for detecting fusarium infection of grain plants, including wheat, oat and barley. In the introduction part of the paper the authors have good literatures review. The mechanism of the operation for determining the degree of infection is well established at the end and the algorithm for detection device is fully explained.

However, some notes and questions are left which cause the paper to have some ambiguity to understand. I bring these notes in the following. The paper can be accepted for publication after some major revision.

My comment are as follows:

- 1- Some abbreviations which are used in the manuscript text do not introduce anywhere. One example is in the first line of introduction “... Fusarium ssp. ...” Or HSI in line 39.
- 2- In the introduction you do a good literature review but none of them is about detection of fusarium infection by optical method. It is good to add some references about it.
- 3- It is good also to compare your results (for example your sensitivity) with some reported results in measuring the degree of fusarium infection and write about the preferences of your work than others.
- 4- In the second paragraph of section 2 (Materials and methods) line #2 you mentioned the mass of the sample is 2 kg and after that you tell the weight is not less that 25g. How it is possible?

Furthermore, it is good to change the word “weight” here with “mass” because the unit for measuring the weight is not g it is N.

- 5- The citation to reference #24 in text (third paragraph of section 2 line#2) is different with other citation inside the text.
- 6- Fig.1 in the result section is plotted just for oat seed and the results for wheat and barley just mentioned in the text without bringing the curves. I think you should add the wheat and barley curves. The same situation is for Fig.2.
- 7- In Result section (section 3) under the figure 1 line #4 you mentioned “there is a clear shift to the left” where is this shift. I can not see this shift in fig.1.
- 8- In Fig.1 and 2 you compare the uninfected and infected oat seed but the degree of infection in not mentioned anywhere.
- 9- Same as comment number 6, in Fig.3 you bring the result just for barley. In all of your inspection you should bring all your result for all seeds. But I cannot understand why you plot the curves for just one of your seeds and why this seed is changed in different figures.
- 10- The result in Table 1 shows that you analyze the oat seed just for two degrees of infection. Therefore, your result can not be reliable for oats. Whys you did not increase the number of samples with different degree of infection in oat like other seeds?
- 11- The final block diagram which you proposed which is very good diagram is based on the result of barley and wheat and can not be applied for oat. I think it is good to change some part of the paper so that some ambiguity is removed.