An evaluation of cotton genotypes on tolerance and resistance to aphids infestation

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ABSTRACT
Cotton (*Gossypium hisutum*) is commercial crop grown both for its export and industrial uses. It has also become a source of livelihood for most small-scale peasant farmers of the rural community by bringing income after sales. These farmers, however, face a lot of challenges not only in trying to control pests such as aphids (*Aphys gossypii*), but also lack of proper knowledge of the proper mixing and spraying expertise has led to the undertaking of this study. By assessing and coming up with those cotton varieties that would require minimum use of chemicals to control the cotton aphid, not only do farmers benefit by reducing production cost, but also the ecosystem. This is because minimum use of chemicals would mean minimum environmental damage. This would also allow beneficial insects not only for aphids, but also for other pests like bollworms, to continue surviving and assist the farmer in his pest management battle, at zero cost of course. Although most of the genotypes have proved to be tolerant to the aphid attack, they need to be crossed with the more susceptible ones so as to come with stronger varieties with regards aphids attack. Most of the varieties were tolerant and resistant to aphid attack and only two namely SZ 9314 and QM 301 were the susceptible ones. Attacks were most noticed during the first three weeks from that week when data started to be collected and declined later with the crop growth. The highest populations were observed during the hot-dry days which imply that more needs to be done with regards crossing susceptible varieties and lines with those resistant and tolerant.