

Abstract

Farmers' production practices, incidence, and management of pests and diseases, extension services, and factors limiting cotton production and quality in South Africa

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Abstract: A study was conducted to evaluate farmers' production practices and the incidence and management of pests and diseases, extension services, and factors limiting cotton production and quality in South Africa. One hundred and forty farmers, mainly smallholder farmers, were interviewed during the 2017/18 growing season. Most farmers planted genetically modified cotton on less than 5 ha of cotton, with 96% planting under dryland. The majority of the farmers neither practised conservation agriculture (95%) nor conducted soil analyses (87%). A mean cottonseed yield of 700 kg ha⁻¹ was reported on dryland cotton, and 5 000 kg ha⁻¹ was obtained from irrigated cotton. Most of the farmers (99%) harvested their cotton by handpicking. Farmers' pest knowledge was higher than their knowledge of different diseases. Most of the participants were unaware of nematodes (88%), or disease-resistant cultivars (74%), while 91% were aware of insect-resistant cultivars. Most respondents were only mentored and supported by extension officers (82%). Most farmers (93%) relied on pesticides to control cotton pests, and the rest (7%) used biological control. Climatic conditions (98%), labour costs (88%), and insect infestations (42%) were identified as the main constraints in cotton production. Based on the outcomes, the survey revealed that there is a need to develop pests and diseases resistant cultivars as well as alternative control methods to reduce the use of agrochemicals. Furthermore, farmers' awareness of improved production practices and mentoring are required.

Keywords: Cotton; insect pests; diseases; integrated pest management; farmers' knowledge

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