

FINALE VERSLAG

**Optimale plantmetodes vir olie- en
proteïensaadgewasse in die Wes- en Suidkaap**

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BESTUURSOPSOMMING

Optimal planting methods for selected oilseed and legume crops in the Western Cape. In the Western Cape Province of South Africa, canola (*Brassica napus*) and lupins (*Lupinus angustifolius*) are grown as winter crops due to the Mediterranean type climate. Planting often take place in poorly prepared and fairly dry seedbeds in order to lengthen the growth period. Under these conditions efficient planting methods are needed to prevent uneven germination and patchy crop stands which may hampered yield potential. Due to the high cost of machinery it is however important that planting equipment can be used for all crops produced. In this study the establishment, growth and yield of row-seeded and broadcasted canola, lupins and wheat (*Triticum aestivum* L.) were compared during a four year period on two localities. Due to higher seed placement accuracy and better seed to soil contact, row-seeded crops planted with a planter fitted with presswheels, on average showed higher plantpopulations, biomass production and yield compared to broadcasted crops where a tine-harrow or fieldcultivator and soilpacker were used. Responses of different crops to planting methods however, varied between years and localities, illustrating the importance of seedbed characteristics as affected by climatic conditions and soil properties. Although no planting method therefore proved to be superior under all conditions, higher averages obtained with the presswheelplanter indicated that this planting method may help to reduce the risks of suboptimal seedbed conditions.

Optimale plantmetodes vir olie- en proteïensaadgewasse in die Weskaap. In die Weskaap Provinsie van Suid Afrika word canola (*Brassica napus*) en lupiene (*Lupinus angustifolius*) saam met koring (*Triticum aestivum* L.) onder Mediterreëse klimaatstoestande as winter gewasse verbou. Ten einde die groeiperiode te verleng vind saadbedvoorbereiding en saai van gewasse dikwels plaas voordat dit voldoende gereën het en dus in grond met 'n suboptimale voginhoud. Onder sodanige toestande word effektiewe plantmetodes vereis om onegalige ontkieming en gewasstande wat opbrengs kan beperk, te voorkom. In hierdie studie is die vestiging, groei en opbrengs van ry-gesaaide en breedwerpig-gesaaide koring, canola en lupiene oor 'n vier jaar periode op twee lokaliteite vergelyk. Reaksies teenoor die verskillende plantmetodes het vir al drie gewasse oor lokaliteite en jare gewissel. Geen enkel behandeling het dus konstant die beste gevaar. Dit toon dat saadbedtoestande meer belangrik is as die plantmetode. Nogtans het die ry-gesaaide gewasse wat met 'n drukwielplanter gevestig is, gemiddeld oor jare en lokaliteite beter resultate gelever as breedwerpig-gesaaide gewasse wat met 'n eg of tandskoffel in kombinasie met 'n kluitroller toegemaak is. Meer akkurate plasing van saad en goeie kontak tussen grond en saad veroorsaak dus dat eersgenoemde plantmetode ongunstige saadbedtoestande beter kan hanteer.