

‘N FINANSIËLE EVALUASIE VAN WISSELBOUSTELS VIR DIE SWARTLAND

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Opsomming

Wisselbou bied 'n moontlike alternatief vir koringmonokultuurverbouing in die Middel Swartland waar boerdery omstandighede sedert 1996 toenemend moeiliker word weens dalende winsmarges. Wisselbou as sulks bied verskeie voordele ten opsigte van verhoogde opbrengste vir veral koring wat in die wisselboustelsel voorkom, sowel as insetbesparings ten opsigte van hoofsaaklik bemesting en spuitprogramme. Wisselbouproewe word tans op Langgewens Proefplaas onderneem om wisselboustelsels waarin kanola en lupien as wisselbougraangewasse en medics en medics/klawer kombinasies as wisselbouweidingsgewasse saam met koring ondersoek word.

Die proef is geskeduleer om oor 'n 20 jaar tydperk uitgevoer te word, maar 'n voortydige finansiële ontleding van die verwagte effek wat wisselbou vir die tipiese plaas kan inhou, kan waardevol wees vir besluitnemers in die betrokke bedryf. Weens 'n tekort aan toepaslike betroubare inligting is van 'n multidissiplinêre span van kundiges gebruik gemaak om inligting ten opsigte van sekere aspekte van wisselbou te genereer. So kan die verwagte winsgewendheid van die geïdentifiseerde wisselboustelsels bepaal word. Ten einde die finansiële implikasies van gewaswisselbou relatief tot koringmonokultuurverbouing op plaasvlak te ondersoek, is van 'n tipiese plaasmodel gebruik gemaak wat met behulp van die paneel kundiges ontwikkel is. 'n Tipiese plaas van 630 ha is gebruik as ontledingsmodel. Die verwagte winsgewendheid en finansiële implikasies van die implementering van elk van agt verskillende wisselboustelsels is beraam deur middel van langtermyn begrotings. Reënval en reënvalverspreiding is geïdentifiseer as die faktore wat die grootste invloed op die opbrengs prestasie van gewasse in die betrokke omgewing uitoefen en is in ag geneem met die beraming van die finansiële prestasie van die stelsels oor die langtermyn. Die berekeningstermyn is gevolglik ingedeel in goeie, gemiddelde en swak reënvaljare ten einde die invloed van reënval op die opbrengste van die verskillende gewasse in ag te neem.

Die IOK (interne opbrengskoers van kapitaal) is gebruik as finansiële maatstaf vir die meet van die winsgewendheid van elke wisselboustelsel, soos geïmplementeer op die

tipiese plaas. Wisselboustelsels met kanola en lupien saam met koring toon goeie finansiële resultate, terwyl stelsels met weidingsgewasse en koring oor die algemeen meer winsgewend vertoon as koringmonokultuur. Na verwagting behoort die stelsel waar koring en medics/klawermengsel afgewissel word, die beste te vaar ten opsigte van winsgewendheid.

Abstract

Crop rotation present a possible alternative to wheat monoculture production in the Middle Swartland region where farming circumstances became increasingly more difficult since 1996 due to decreasing profit margins. Crop rotation as such presents a number of advantages like higher yield for wheat within the system and reduced inputs costs mainly due to cuts in fertilizers, herbicides and pesticides. Crop rotation trials are currently undertaken at the Langgewens experimental farm in which canola and lupines are used in rotation with wheat while medics and medic/clover mixtures are used as pasture crops in rotation with wheat.

The trials is scheduled to run over a period of 20 years, a study of the possible financial effect crop rotation might have on the typical farm can be of some importance to decision makers in the wheat industry. Due to a lack in reliable information the knowledge of a multi disciplinary panel of experts were use to obtain information concerning certain aspects of crop rotation. The expected profitability could thus be determined. To be able to determine the expected financial implications on farm level a typical farm model was developed with the help of the panel of experts. The typical farm of 630 ha was used for the model. The expected profitability and financial implications of the implementation of the eight different crop rotation systems on such a typical farm were estimated making use of long term budgets. The dispersion of rainfall over time was identified as the single most influential factor on the yields of the different crops in the region and was taken into account determining the profitability of the systems over time. The period used for the calculations were thus divided into good, average or poor rainfall years.

The IRR (internal rate of return) was used as financial criteria in calculating the expected profitability of the different systems as incorporated in the typical farm. Crop rotation systems with canola en lupins show good results while systems consisting of wheat and pastures also seem to be more profitable than wheat monoculture. A system consisting of wheat and medic/clover pastures is expected to be the most profitable.