



PDALA N&S
Listed Activity – Sub-division

Consultation Workshop

Feb – March 2026

ARC/DoA Expert Panel
(presented – T Newby)

**“Upon this handful of soil our survival depends.
Husband it and it will grow our food, our fuel, and
our shelter, and surround us with beauty.
Abuse it and soil will collapse and die, taking
humanity with it.”**

Vedas Sanskrit (1500BC)



Background

- **PDALA mandates preservation of agricultural land**
 - Protected Agricultural Areas, and
 - Focus on agro-ecosystems - basis for decisions
 - Productivity, Resilience, Viability, Stability, Equability
 - Listed Activities require an **Agroecosystem Authorisation**
 - N&S for subdivision, land use changes & other listed activities - **RELIES ON SCIENTIFIC INPUT**

Background

- **What is a norm for subdivision of Agricultural Land?**
 - 111 agroecosystems, (Irrigated, Dryland, H/M/L Potential, 3 Farmer types.
- Aim:
 - A sustainable viable farm size for each Agroecosystem
- Logic: “Model” a typical farm for each agroecosystem,
 - based on a **typical commodity mix or monoculture** per agroecosystem
 - requiring reliable, conservative standards per commodity
 - Commodity standards exist for all major enterprises
 - Viable = **Net Income** per annum that ensures sustainability (Environmental /economic / social)



Subdivision of Agricultural Land

How big is a Productive, Viable, Sustainable & Resilient Farm.

- **Depends on the Agroecosystem, the NR potential, the farming system and the socio-economic factors.**
- **The *Agroecosystem* = Natural Resources, Climate, Socio Economics, Markets and Agricultural-Processing-Transport Infrastructure & services.**

Subdivision of Agricultural Land

- Principals:

- Farm size must be viable for the primary Ecosystem
 - Commodity mix is **common**, assuming best practice choices
- Farm size reflects only **Productive land** (excludes roads, infrastructure, wasteland).
- Aim is to ensure a farm is big enough to be viable under **variable best practice production systems** suitable to the agroecosystem considering markets, infrastructure and support systems.

Subdivision of Agricultural Land

- The approach:
 - Step 1. Establish a viable financial threshold for each socioeconomic farm class
 - Step 2. Establish the net income per Ha for each commodity
 - Step 3. Simulate a “typical farm” in each agroecosystem (commodity mix for risk and soil fertility etc.)
 - Step 4. Calculate the size of a productive, viable, sustainable & resilient farm for each farming system and soci-economic class.



Viable thresholds

(SEM = Socio economic Measure)

Commercial Farm : R850 000

Small Holder : R325 000

Livelihood : R75 000

**UPDATED AT DETERMINED
INTERVALS**

Viability thresholds

Commercial Farm: R850 000

Source	Year	Net Income (R)	Limitation
Ruth Hall (51% of commercial farms in 2002 earned <R300,000)	2002	R888 608 (adjusted)	Outdated context
Average SA public service salary x 2 adults	2024	R757 404 (adjusted)	A viable comparison to wage employment but excludes risk
StatsSA Census (net income per farm)	2017	R807,069 (Adjusted)	Most recent reliable official data.

Viabile thresholds

Small Holder : R325 00

A study by Zantsi et al. (2021) based on 833 commercial oriented smallholder farmers in the former homelands of Limpopo, Eastern Cape and KwaZulu Natal established that aspired income by commercial oriented smallholders varied greatly with the mode aspiring to earn around R200 000 to R300 000, Confirmed by the SEM supergroup 4 income level of around R324 000 per annum. (*SEM = Socio economic Measure*)

Viability thresholds

Livelihood R75 000

Based on equivalent social income grants of two senior citizen pension grants (R2 315 each per month) two child support grants (R560 per child per month) and one unemployed social relief grant (R452) which represents a typical rural household structure of elderly persons living with their grandchildren (Makiwane et al. 2017),

Commodity standards

PRIMARY AGRO-ECOSYSTEM	COMMODITY	LAND POTENTIAL	MINIMUM NO./AREA (ha)	ANNUAL OFFTAKE (t/ha)	PRICE/UNIT (R/t)	FIXED COSTS (%)	VARIABLE COSTS (%)	REVENUE	CALCULATED NET INCOME PER SINGLE COMMODITY (per ha)
1. Summer field crops	1.1 Maize	1.1.1 Low	1	4.00	R4,455.00	0.150	0.640	R17,820.00	R3,742.20
		1.1.2 Medium	1	6.00	R4,455.00	0.150	0.660	R26,730.00	R5,078.70
		1.1.3 High	1	7.00	R4,455.00	0.150	0.680	R31,185.00	R5,301.45
	1.2 Sunflower	1.2.1 Low	1	1.50	R10,125.00	0.150	0.650	R15,187.50	R3,037.50
		1.2.2 Medium	1	2.00	R10,125.00	0.150	0.680	R20,250.00	R3,442.50
		1.2.3 High	1	2.50	R10,125.00	0.150	0.690	R25,312.50	R4,050.00
	1.3 Soybeans	1.3.1 Low	1	1.80	R7,400.00	0.120	0.700	R13,320.00	R2,397.60
		1.3.2 Medium	1	2.50	R7,400.00	0.120	0.720	R18,500.00	R2,960.00
		1.3.3 High	1	3.20	R7,400.00	0.120	0.740	R23,680.00	R3,315.20
	1.4 Groundnuts	1.4.1 Low	1	1.10	R16,000.00	0.100	0.620	R17,600.00	R4,928.00
		1.4.2 Medium	1	1.50	R16,000.00	0.100	0.640	R24,000.00	R6,240.00
		1.4.3 High	1	2.00	R16,000.00	0.100	0.660	R32,000.00	R7,680.00
	1.5 Sorghum	1.5.1 Low	1	2.50	R3,800.00	0.100	0.550	R9,500.00	R3,325.00
		1.5.2 Medium	1	3.00	R3,800.00	0.100	0.600	R11,400.00	R3,420.00
		1.5.3 High	1	4.00	R3,800.00	0.100	0.620	R15,200.00	R4,256.00

Local Market Commodity standards used

Calculation

Agro-ecosystem = Summer grain, dryland medium potential commercial Farm

PRIMARY AGRO-ECOSYSTEM	COMMODITY	RATIO	NET INCOME PER SINGLE COMMODITY (high potential land) (per ha)	SINGLE COMMODITY CONTRIBUTION (ZAR)	CALCULATED NET INCOME PER COMMODITY MIX (high potential land) (per ha)	NET INCOME PER SINGLE COMMODITY (medium potential land) (per ha)	SINGLE COMMODITY CONTRIBUTION (ZAR)	CALCULATED NET INCOME PER COMMODITY MIX (medium potential land) (per ha)	NET INCOME PER SINGLE COMMODITY (low potential land) (per ha)	SINGLE COMMODITY CONTRIBUTION (ZAR)	CALCULATED NET INCOME PER COMMODITY MIX (low potential land) (per ha)
1. Summer field crops	1.1 Maize	0.62	R5,301.45	R3,270.46	R4,663.66	R5,078.70	R3,133.05	R4,342.07	R3,742.20	R2,308.56	R3,328.25
	1.2 Sunflower	0.14	R4,050.00	R575.51		R3,442.50	R489.18		R3,037.50	R431.63	
	1.3 Soybeans	0.21	R3,315.20	R695.53		R2,960.00	R621.01		R2,397.60	R503.02	
	1.4 Groundnuts	0.01	R7,680.00	R74.50		R6,240.00	R60.53		R4,928.00	R47.80	
	1.5 Sorghum	0.01	R4,256.00	R47.67		R3,420.00	R38.30		R3,325.00	R37.24	

Results

PRIMARY AGRO-ECOSYSTEM	SECONDARY AGRO-ECOSYSTEM		TERTIARY AGRO-ECOSYSTEM	FINANCIAL THRESHOLD	CALCULATED NET INCOME PER COMMODITY MIX (per ha)	MINIMUM VIABLE FARM SIZE (ha)
	Water management system	Land potential (land classification)				
1. Summer field crops	1.1 Irrigated	1.1.1 High	1.1.1.1 C	R850,000.00	R9,330.61	91
			1.1.1.2 SH	R325,000.00	R9,330.61	35
			1.1.1.3 Li	R75,000.00	R9,330.61	8
		1.1.2 Medium	1.1.2.1 C	R850,000.00	R8,383.38	101
			1.1.2.2 SH	R325,000.00	R8,383.38	39
			1.1.2.3 Li	R75,000.00	R8,383.38	9
	1.2 Rainfed	1.2.1 High	1.2.1.1 C	R850,000.00	R4,663.66	182
			1.2.1.2 SH	R325,000.00	R4,663.66	70
			1.2.1.3 Li	R75,000.00	R4,663.66	16
		1.2.2 Medium	1.2.2.1 C	R850,000.00	R4,342.07	196
			1.2.2.2 SH	R325,000.00	R4,342.07	75
			1.2.2.3 Li	R75,000.00	R4,342.07	17
		1.2.3 Low	1.2.3.1 C	R850,000.00	R3,328.25	255
			1.2.3.2 SH	R325,000.00	R3,328.25	98
			1.2.3.3 Li	R75,000.00	R3,328.25	23

