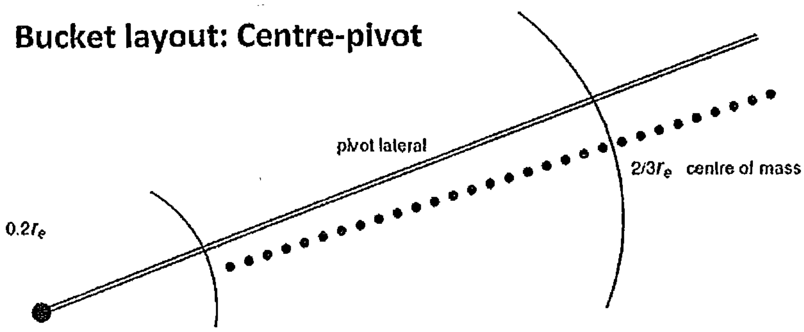
CALCULATING APPLICATION DEPTH & UNIFORMITY - 'THE BUCKET TEST'

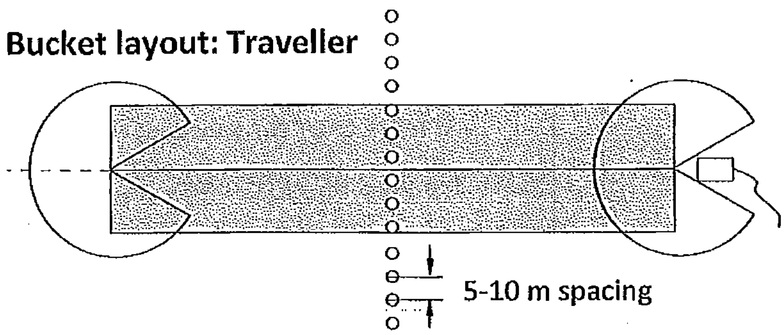
The Basics

1. Spread 20-50 buckets evenly across the irrigated area.
2. Operate the irrigation on that area as per normal procedure.
3. Record how much water is in each bucket at the end of a normal irrigation event.
4. Calculate application depth and uniformity (see below)

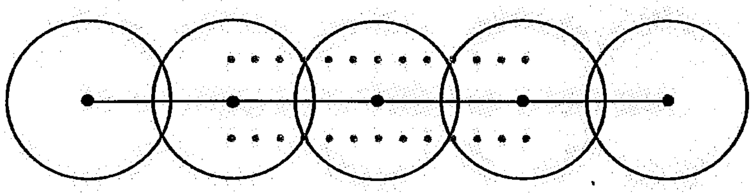
Bucket layout: Centre-pivot



Bucket layout: Traveller



Bucket Layout: K-line



2 – 3 m bucket spacing

Calculations

Number of buckets ÷ 4 (round to a whole number)	D = B / 4		
Total volume of lowest 1/4 buckets (don't count zero readings outside the spray area)	E		mℓ
Average volume, overall	F = C / B		mℓ
Average volume, lowest 1/4	G = E / D		mℓ
Bucket surface area	H = 0.785 * A * A		mm^2
Average application depth	1,000 * F / H		mm
Distribution Uniformity (DU)	G / F		

Measurements

Volume in each bucket (mℓ)

Width across the bucket top

A ______ mm

Number buckets with water

B ______

Total volume of all buckets

C ______

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