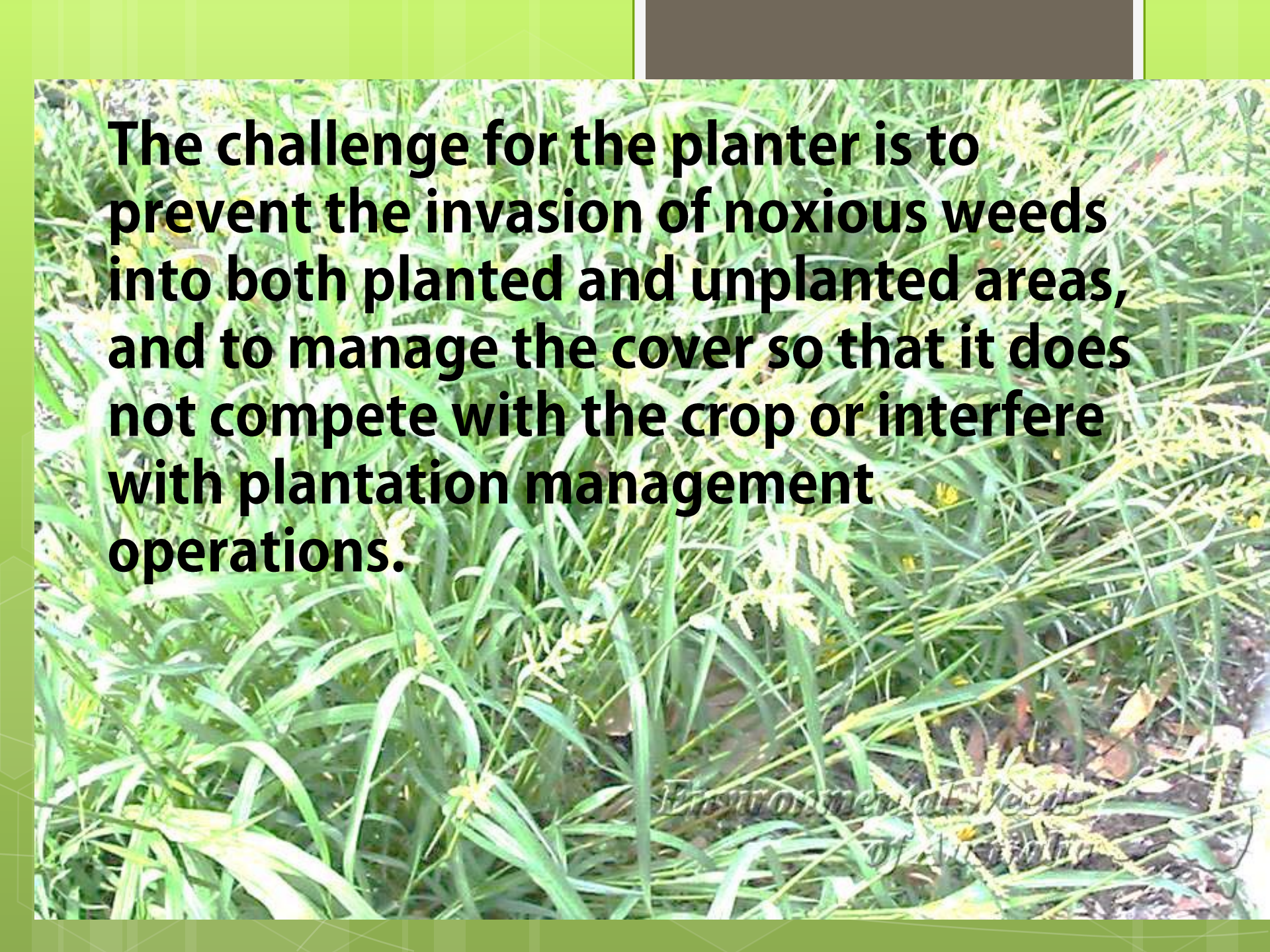




# Strategies in weed management

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**The challenge for the planter is to prevent the invasion of noxious weeds into both planted and unplanted areas, and to manage the cover so that it does not compete with the crop or interfere with plantation management operations.**

*Environmental Needs  
of Australia*

Think Ecology, Efficacy,  
Efficiency



Keep the soft grasses, get rid of noxious weeds out of the palm circles.



Keep weeds at the drains side and stacking rows



Use non-chemical weed control to the fullest



Cattle grazing

Use non-chemical weed control to the fullest



Parasitic plant- eg. *Cassytha filiformis* (tali putri) for controlling *Mikania* sp

## Mulches –eg. *Mucuna* sp. & EFB





## ● Paraquat

### contact action

- Target photosynthesis affected
- Short rainfast
- Volatile

## ○ Diuron

### systemic action

- Low water solubility
- Low volatility, photodecomposition
- Root uptake
- Foliage uptake with adjuvants
- Target photosynthesis affected

- 2,4-D; Triclopyr,  
Fluroxypyr

systemic through  
foliage and roots

- Synthetic growth factor
- Highly effective against broadleaf weeds
- Drift and vapour may damage susceptible non-target species
- Target growth affected

## ○ Metsulfuron

### Systemic

- inhibit acetolactate synthase (enzyme)
- Very low use rate (2-75g a.i./ha)
- Very low mammalian toxicity
- Use for pre- and post-emergences to control broadleaves weeds and some grasses.
- Target growth affected

## ○ Glyphosate

## Systemic and most mobile

- inhibit aromatic amino acid biosynthesis
- Penetrates foliage relatively slow (6 hours)
- Very low mammalian toxicity
- Target growth affected (especially meristems)

## ○ Glufosinate

### Limited systemic

- inhibit synthesis of glutamine
- Low mammalian toxicity
- Target growth affected

# Selective weeding gangs for tough weeds



*Asystasia intrusa* 65



*Echinochloa crus-galli*



*Imperata cylindrica*



*Borreria latifolia* 118



*Melastoma malabathricum* 103



## Avoid slashing and other manual weeding

- Costly
- Fast regeneration





## Use adjuvant in rainy season

- Reduce wastage and improves rainfastness

# Spray in the correct timing



- Before flowering of weeds,
- Weeding rounds on time to control weed succession.

# Make use of high-tech in nozzles and low-volume sprayers such as CDAs

- Work rate and efficacy could be improved by reducing carrier volume from 450 down to 50-150L/ha.
- Reduce the losses caused by mists drift, reduce water dependency

# Use correct calibration to optimize the result

- [Solution to make (L) / Carrier volume of the equipment (L/ha)] \* Dosage recommended (L/ha)

# To plan and forecast the chemicals to be used

- actual target area will be determined first.
- Example:

Density of planting = 145/ ha,

Radius of the target circle = 1m

Then,

Actual area of spraying target in a hectare =  $145 * \pi(1)^2 \text{ m}^2$

$$= 455.3\text{m}^2$$

Recommended dosage by manufacturer is 3L/bha for immature area,

Therefore, actual volume of chemical needed is

$$[455\text{m}^2/10000\text{m}^2] \times 3\text{L/ha} \\ = 0.136 \text{ L /ha}$$

**That's all,  
Thank you !!**

