

## **PART E. KEY CHECKS**

- Chapter E1**    **Key checks for productive irrigated soils**
- Chapter E2**    **Management strategies for key checks**
- Chapter E3**    **Case study 3**

# Chapter E1. Key checks for productive irrigated soils

## PURPOSE OF THIS CHAPTER

To provide a simple table of the ‘ideal’ soil, against which you can compare and categorise your soil

## CHAPTER CONTENTS

- table of ‘ideal’ soil characteristics
- soil categorisation flow diagram

## ASSOCIATED CHAPTERS

- A3 ‘Features of soil’
- Part B
- E2 ‘Management strategies for key checks’

## COMPARING YOUR SOIL WITH THE IDEAL

Table E1–1 gives a general outline of desirable soil conditions. These will vary for many situations, but you can use the key checks you make against this table as a standard against which you can judge the condition of your soil.

**Table E1–1. Key checks for productive irrigated soils**

Key check	Ideal
Soil surface	Free from severe crusting and surface compaction.
Soil profile	Well structured (structure score of 1 or better); free from compaction layers (including plough pans).
Slaking score	Loamy topsoils should score < 3. Slaking is not such a problem for swelling clay topsoils of the Murray and Murrumbidgee Valleys.
Dispersion index	Use minimum cultivation for dispersion index > 4. Periodic gypsum use for dispersion index > 8.
Soil pH	Surface pH CaCl <sub>2</sub> between 5.0 and 8.0.
Organic matter	Organic matter levels > 2%
Soil salinity	Soil salinity < 2 dS/m where possible Soils of salinity > 2dS/m may require specific management.
Soil phosphorus	Maintain soil P <sub>(Colwell)</sub> at > 50 ppm for most vegetable crops

**Note:** The Colwell method of phosphorus extraction is the method most commonly used in inland districts.

To use the management table in the next chapter, Chapter E2, you should classify your soil (at least the cultivation layer or the top 15 cm) into one of the following three categories:

1. sand/loam
2. dispersive clay and clay loam
3. non-dispersive clay and clay loam.

Use Figure E1 to do this, then move on to the next chapter.

**Figure E1-1. Soil texture categories**

