

Pesticide Application Management Plans (PAMP's)

PAMP'S are a component of the industries Best Management Practices (BMP) program and a legal requirement if Endosulfan is to be used. The core best management plan for safe & responsible pesticide use is to develop a PAMP (previously called a spray and drift management plan) for pesticide use on your farm.

A pesticide application management plan will help ensure that everyone involved in pesticide application has a clear understanding of their responsibilities. It also helps identify the risks associated with pesticide applications so that controls to minimise those risks can be put in place. The process of completing the PAMP also provides an opportunity for communication between yourself and your neighbours so that risks can be identified regarding both yours and your neighbour's crops. Should you have any questions regarding the PAMP please do not hesitate to contact Cotton Australia Grower Service representative Gus Macrae on 0407 956586 or myself

Seedling diseases

Planting is all but over in most regions and crops are emerging, as is the risk of seedling diseases.

Seedling diseases are caused by various soil borne fungi which include Pythium, Rhizoctonia and Fusarium. Cool and/or wet conditions promote disease development with seedlings most susceptible in early growth stages. Factors that slow down the rate of germination, emergence and development will ultimately increase the chance of seedling mortality. Some of these factors include poor seed beds, incorrect planting depth, herbicide damage, poor fertiliser placement and poor drainage.

A slow developing seedling is more susceptible to seedling diseases because plant roots produce sugary substances called exudates as they develop. Soil pathogens are stimulated by these exudates.

- In a slow developing crop, the exudates will be very concentrated around the root, increasing the chance for the pathogens to colonise the root system.
- In a fast developing crop, the roots move too quickly for pathogen colonisation.

Symptoms of seedling diseases include pre-emergent seed rots, lesions on roots and post-emergent damping-off which shows up as wilted or collapsed seedlings. Other symptoms may include

seedlings with slow early season growth, small cotyledons and reddened hypocotyls. The black root rot fungus, which causes blackening of the roots, will not kill seedlings but weakens these and seedlings become more susceptible to other diseases.

Affected plants are usually found scattered throughout the field or in poorly drained areas. When seedling disease is evident in rows, management practices such as fertiliser placement, planting depth or herbicide damage may have contributed to disease levels.

Assessment of seedling diseases can be done by counting the number of established plants per metre at several locations across the field. The level of seedling mortality is determined by the difference between estimated stand at 6-8 weeks and the number of seed/metre sown. Losses of seedlings can also be due to seedling pests such as wireworms and seed viability.

Economic impacts of seedling diseases include replanting costs and the cost of standard seed treatments. Replanting also leads to delayed maturity and associated yield reductions as well as the cost of late season insect control in conventional cotton crops.

Although the weather plays a main role in determining a 'good' or 'bad' year for seedling diseases, a number of management practices can minimise disease development and ensure acceptable stands. Practices include;

- Select varieties with good seedling vigour
- Use effective fungal seed treatment.
- Delay planting until temperatures and moisture conditions are at an optimum.
- Plant into moist firm beds and avoid fertiliser and herbicide damage.

For more information about diseases of cotton and relevant management practices please refer to the Integrated Disease Management guidelines produced by the Cotton CRC and CRDC.

Coming Events

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| 31/10/07 | Climate Change Forum – Hillston |
| 1/11/07 | Cotton emergence field walk |
| 1/11/07 | Climate Change Forum – Griffith |
| 13/11/07 | Soils Symposium Hillston |