

A. Rapid diagnosis of potting production efficiency

The following checklist can be used to carry out a rapid diagnosis of any potting production system. Observe potting production in progress and place a tick in either the YES or NO box for each question.

An answer of YES indicates that:

- potting labour costs are higher than necessary
- potential exists for reducing labour costs
- the nursery should investigate the problem in more detail.

GENERAL ORGANISATION OF POTTING

Layout of the potting area

- | | | | |
|--|---|-----|----|
| 1. Is the potting area too cramped for production to be easily carried out? | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px 10px;">YES</td> <td style="padding: 2px 10px;">NO</td> </tr> </table> | YES | NO |
| YES | NO | | |
| 2. Do other production areas encroach on potting production space? | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px 10px;">YES</td> <td style="padding: 2px 10px;">NO</td> </tr> </table> | YES | NO |
| YES | NO | | |
| 3. Could the potting area be better located in another part of the nursery? | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px 10px;">YES</td> <td style="padding: 2px 10px;">NO</td> </tr> </table> | YES | NO |
| YES | NO | | |
| 4. Could the arrangement of elements within the potting area (potting bench, media hopper, trailers for loading potted plants, stores of materials, etc) be changed to improve potting production? | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px 10px;">YES</td> <td style="padding: 2px 10px;">NO</td> </tr> </table> | YES | NO |
| YES | NO | | |
| 5. Could the distance potting materials are delivered be reduced by relocating the source of inputs and/or the destination of outputs? | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px 10px;">YES</td> <td style="padding: 2px 10px;">NO</td> </tr> </table> | YES | NO |
| YES | NO | | |
| 6. Are staff constantly observed walking to and fro for limited quantities of potting materials? | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px 10px;">YES</td> <td style="padding: 2px 10px;">NO</td> </tr> </table> | YES | NO |
| YES | NO | | |

Suitability of equipment used

- | | | | |
|--|---|-----|----|
| 7. Do production figures make other potting systems more suitable options than the one now used (ie. could hand potting be replaced by machine potting or vice versa?) | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px 10px;">YES</td> <td style="padding: 2px 10px;">NO</td> </tr> </table> | YES | NO |
| YES | NO | | |
| 8. Could the frequency of trips for potting inputs and outputs be reduced if the capacity of trailers, trolleys, etc., was larger? | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px 10px;">YES</td> <td style="padding: 2px 10px;">NO</td> </tr> </table> | YES | NO |
| YES | NO | | |

9. Is the design of trailers, trolleys, etc., unsuitable for the nursery terrain and the manner in which they are used by staff in potting production?

YES	NO
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10. Does the media hopper frequently bridge (require constant attention to dislodge obstructed flow)?

YES	NO
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Allocation of tasks

11. Do some staff appear to be more productively employed than others?

YES	NO
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12. Could tasks be distributed between fewer staff? (this may involve a reduction in the speed of production. eg. slowing down a potting machine to allow less staff to operate)

YES	NO
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13. Do some staff carry out the same tasks all the time (eg. certain staff always pot and certain staff always load pots)

YES	NO
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14. Are tasks carried out in an illogical order? (eg. watering occurs before lifting plants therefore they become much heavier to lift, surface application of fertiliser occurs before watering flushing out large quantities of fertiliser)

YES	NO
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15. Could tasks be carried out at a different stage of potting production to involve less people or reduce some staff waiting to begin their primary task?

YES	NO
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16. Could some tasks be mechanised?

YES	NO
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17. Could some tasks be removed altogether by using new technology or changing the way the nursery has traditionally carried out tasks (eg. consider buying fertiliser and media ready mixed instead of adding fertiliser during potting, watering plants in the field instead of at the potting area)?

YES	NO
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Coordination of tasks

18. Are workers non-productive while waiting for someone else to finish a task?

YES	NO
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Potting technique used

19. Are some potters conspicuously slower than other potters?

YES	NO
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20. Could specific training in potting technique and organisation of work station speed up the production of some potters?

YES	NO
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HEALTH AND SAFETY

Risks posed by equipment

21. Do workers operate noisy machinery without hearing protection?
22. Do workers come into close contact with machinery?
23. Are some potting staff untrained/inexperienced in the operation of machinery?
24. Does potting equipment have high injury risk areas which area unlabelled?

YES	NO
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YES	NO
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YES	NO
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YES	NO
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Risks posed from materials in the potting environment

25. Are herbicides & potting media handled without gloves and mask?
26. Do things such as trays, pots, casual water etc. make movement through the potting area difficult?

YES	NO
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YES	NO
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Risks posed from work practices

27. Does the way in which tasks are carried out seem likely to pose a risk of injury to workers? (constant lifting, turning, awkward posture at the work station etc.)

YES	NO
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WORKER COMFORT

28. Do staff complain of sore feet, backs, etc. from prolonged standing?
29. Could anti-fatigue matting be used to reduce fatigue in standing potters?
30. Could ergonomic tools be used to make potting tasks easier? (eg. pot lifters for loading and unloading pots, ergonomic stools for working at the potting bench)
31. Do tools used make the task difficult to carry out?
32. Are workers exposed to the elements?
33. Does work station design make it difficult for workers to easily carry out their tasks?

YES	NO
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YES	NO
-----	----

YES	NO
-----	----

YES	NO
-----	----

YES	NO
-----	----

YES	NO
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34. Is lighting in the potting area inadequate?

 YES

 NO

WORKER SKILL

35. Do staff constantly seek instruction on how to carry out tasks?

 YES

 NO

36. Is time lost due to problems experienced by staff adjusting the potting machine?

 YES

 NO

37. Does potting production fall when certain key staff are absent?

 YES

 NO

WORKER MOTIVATION

38. Would workers react favourably to an incentive scheme for meeting daily production quotas?

 YES

 NO

39. Are workers easily distracted from their tasks?

 YES

 NO

40. Do some workers appear less interested than others in working productively?

 YES

 NO

41. Do some workers complain about conditions, management decisions, work load, etc?

 YES

 NO

MATERIALS HANDLING

42. Can some steps involved in getting materials into or out of the potting process be eliminated?

 YES

 NO

43. Can the quantities in which materials are handled be increased?

 YES

 NO

44. Could production information given to potting staff be made more thorough to allow more efficient delivery of potting inputs?

 YES

 NO

The quantities in which potting materials are delivered

45. Can the quantity of materials delivered be increased to reduce the number of trips required to bring them into or out of the potting area?

 YES NO**The capacity of equipment used to deliver materials**

46. Can the equipment used to deliver materials be changed or modified to increase carrying capacity

 YES NO**The distance materials are delivered**

47. Can the distance materials are delivered be reduced?

 YES NO