



## Chemical application on roller tables

### 1 Introduction

Uniformity of chemical application on a roller table is always very important.

Three factors over which the operator has some control are:

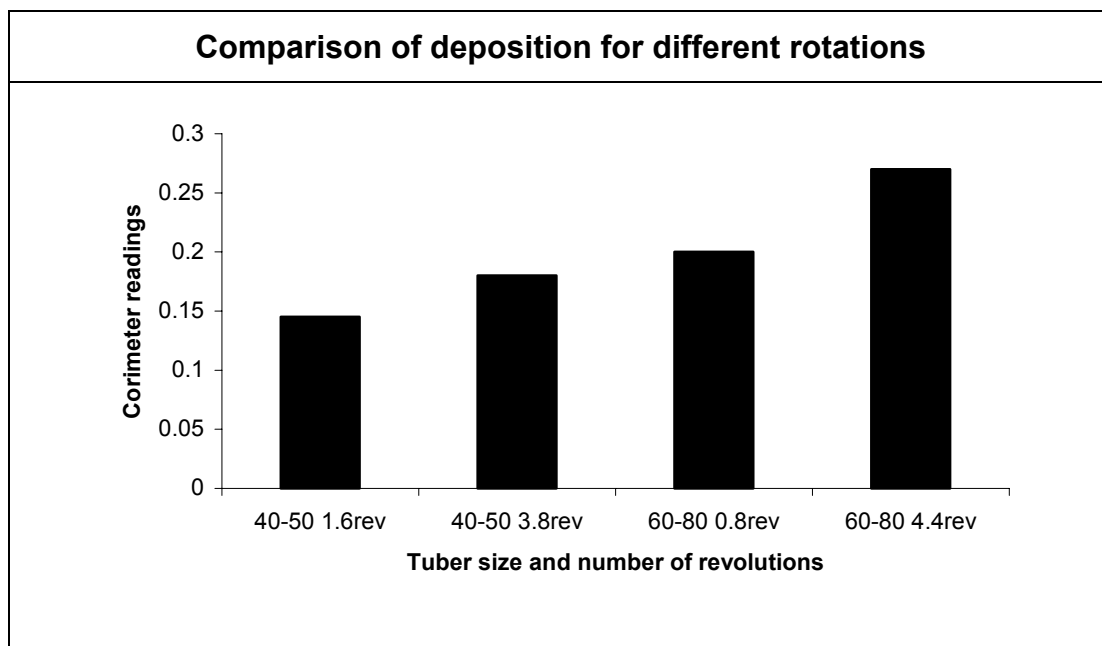
- tuber rotation
- tuber size
- tuber throughput

This Growers' Advice should be read in conjunction with '*The improved targeting of sprays onto potatoes on roller tables*'.

### 2 Tuber rotation

The amount of chemical on a tuber varies not only with the time in the spray zone but also with the number of rotations.

In the example shown below, the throughput and time in the spray zone was kept constant and only the rotational speed and tuber size were altered. There was an increase of 23% in the chemical deposited on each tuber in the 40-50mm size and 37% increase with the 60-80mm tubers. As would be expected there was a higher total chemical deposition for the larger tubers with their greater surface area per tuber even though the total surface area is lower per tonne than with smaller tubers.



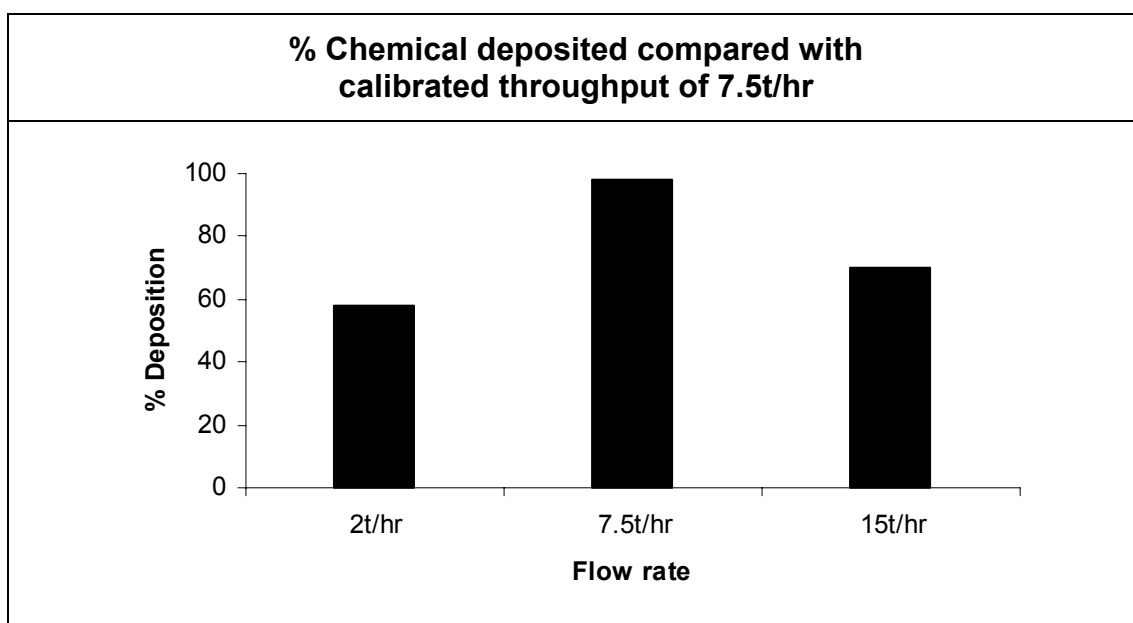
### 3 Tuber Size

If there are differences in tuber size the rotation can vary on the roller table causing uneven deposition. If there are unusually shaped potatoes these can produce a raft effect when the tubers pas under the nozzle without rotating at all. The closer the grading of the potatoes, the more uniform is the flow table coverage and product application rate.

### 4 Throughput

If a roller table is calibrated for a certain throughput it is very important to maintain that rate.

The results summarised below show how the quantity of chemical deposited varies with throughput. At lower and higher flow rates the quantity of chemical is less than the target rate. Even throughput and complete table coverage, as in calibration, is essential.



- Read the label before you buy; use pesticides safely.
- All chemicals and machinery must be used in accordance with manufacturers' recommendations.
- Follow approved Code of Practice, such as COSHH, FEPA and NPTC\*.
- Consult *The Guide to Potato Tuber Treatments in the UK* published by the BCPC. Contact BCPC Publications Sales at £8.50. Tel: 01420 593 200 or Fax: 01420 593 209 to order your copy.

\* COSHH = Control of Substances Hazardous to Health Regulations 1989  
FEPA = Food and Environment Protection Act 1985  
NPTC = National Proficiency Test Council

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