CROP WALKING

AN INTRODUCTION

CALU FACTSHEET
June 2011
Ref: 080301

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Crop walking is one of the most important jobs in vegetable production. Regular walking of the crop means problems are quickly identified and can be appropriately tackled. This factsheet provides a brief introduction to crop walking. Historically, growers would walk their own crops, but with the increasing complexity of plant protection products, and competing pressures of time, many growers now rely on a consultant to walk their crops and provide advice. Even if you use a consultant, supplementing their crop walking with your own should improve the efficiency of your crop management.

PREPARATION PRIOR TO WALKING THE CROP

Although crop walking can be done casually, without taking any notes or keeping any records, a more systematic approach will be beneficial. Keeping records of issues noted during the walk will build up a useful resource for future years. There is no standard form to use for recording what you see when crop walking, but the following things should be noted:

General background information:

- The date you are walking the crop.
- The crop being walked, including variety if possible.
- The date the crop was sown and, if applicable, transplanted.
- The planting spacing.
- The stage of growth hat the crop is at.
- The weather on the day you walk the crop.
- You should also check if and when the crop was last treated with any sprays etc.

HOW TO CROP WALK...

This is a bit of a contentious area! Each person who crop walks will have a different theory, partly based on their training, partly on the crops they work with most often and partly on their experience. There is no right or wrong way to walk a crop, but what you want to do is achieve a good impartial overview of the whole crop. This means not just walking along the edges where crops are easily accessible. It also means not focusing too much attention in particular areas. You need to be systematic, but at the same time avoid bias.

The route that you walk across the crop is known as a transect. Some crop walkers prefer to use the W shape that is used for soil sampling (or several Ws joined into a zig zag). Others prefer an X. From a statistical perspective, a spiral will provide the most robust coverage of the crop, but is impractical in all but the most valuable crops. The choice is yours.

Once you have decided where your transects will run, make a basic sketch of them. This will enable you to number each sample as you go along and remind you whereabouts in the field any problems were noted. It helps to give the transects a number, letter or name; and then the sample points along it are numbered consecutively.

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You are now ready to begin walking the transects. Along each transect you want to inspect at least 10 plants, so, for example if your transect is 80m long, you might stop every 15 paces (depending how big your stride is) and inspect the plant(s) at this point. This is the plant that you will give close inspection to, but you should also keep your eyes open all the time scanning the plants close to you and further away.

The sample plant that you inspect is the one you will write the record for on your sheet. Examine all parts of the plants for disease, damage and insects (remember to look for things like shed skins and droppings, not just the insects that are currently present on the leaf). Examine the surrounding area for weeds. Make notes as far as you are able documenting which pests, diseases or damage you see. Take photos to use when you're back at the office / home to compare with photos in books and on the internet. When possible it is useful to take samples of the plants, or collect pests, in plastic bottles or bags. Make sure that you number each bag or bottle so that you will be able to identify which sample location it came from.

It is also worthwhile to note any beneficial insects you come across during the inspection; for example, lady birds and hoverflies or their larvae, or pollinating insects. These will need to be taken into consideration if and when you consider using chemical plant protection products.

Continue in this way until you have covered the whole of the crop.

BOX 1: Specific observations to record:

- Name of pests / weeds / diseases / damage seen (if possible, if the exact name is not know, make a note that is meaningful to you, and collect a sample. Photographs are also very useful.)
- The total number of pests, or proportion of disease / damage per plant inspected.
- The parts of the plant affected (e.g. stem, leaf, root, flower).
- Name & number of beneficial insects noted. This is worthwhile, and particularly relevant in organic and integrated crop management systems.

Although we tend to refer to "crop" walking, the process is equally important prior to emergence, and is also useful when planning cropping.

Crop walking needs to be repeated frequently to maximise its benefits. The interval between walks depends on the crop, its growth stage (and therefore relative susceptibility to problems), the time of the year, and the incidence of pests or diseases in the locality. There is no rule of thumb.

Crop walking is only the beginning of the process. It is only a tool to help inform the most appropriate course of action to manage and protect the crop. Remember that just because you find a pest or disease, it doesn't mean you need to take any action: no action is always an option. You need to decide what level of infestation or damage you can tolerate. A light infection or low pest numbers may not be economically worth treating. For the best and most up to date advice on this you should consult a BASIS qualified and registered advisor. Be aware that many advisors are not independent. This isn't necessarily a problem, but you need to be aware on what basis you are being provided with information and advice: is it truly impartial, or is it on behalf of a manufacturer or sales agent?

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