

## Canterbury School Gardening Stocktake: 2016

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### Background

In 2015, the Food Resilience Network (FRN) piloted a survey of all schools in Canterbury, to get an understanding of the extent of school gardening in the region. This was to help the FRN understand where it might best put its resources. It is well understood that gardens in schools can have a multitude of positive effects on children, their families and the wider community.<sup>1</sup> A key partner of the FRN in running this survey (and a cornerstone of the Network itself), was Community & Public Health. They fronted the survey and sent it through their own comprehensive list of Canterbury schools.

The pilot survey had a response rate of approximately 25%. The results of this survey showed that the vast majority of schools in Canterbury now have edible gardens. However, it also showed that they were lacking support and in many cases were struggling.<sup>2</sup> As a response, the FRN organised three successive school gardening hui.



Above: a mini workshop at the first School Gardening Hui (May 2015).

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<sup>1</sup> For UK research, see Rowena Passy, Marion Morris, Frances Reed, 'The Impact of School Gardening on Learning', (Slough, National Foundation for Educational Research, 2010); for local research, see for example: Megan Journee, Grace Manning, Sarah Saxon *et al.*, 'Kids' Edible Gardens: A Fifteen Year Evaluation', <http://www.geog.canterbury.ac.nz/community/309/2013/Kids%20for%20Edible%20Gardens%20Evaluation-GEOG309%20report%202013.pdf>

<sup>2</sup> Azi Akpan, 2015 School Garden Survey Results (Christchurch, Food Resilience Network, 2015)

The first, in May 2015, involved about 50 children from 9 schools, and others who were involved in delivering school gardening programmes. This helped to create links across the school gardening sector and start to identify those schools which may be considered exemplars in this area. A video from this day may be found [here](#). The second hui, in October 2015, was aimed at teachers and principals and was held at Diamond Harbour School (one of those exemplars). Over 20 schools were represented. This focussed on resourcing and creating a business case, and further reinforced linkages. The third hui, in February 2016, was primarily coordinated by Healthy Families and involved teachers from again around 20 schools, community health professionals, community gardeners and also Pam Warhurst of Incredible Edible Todmorden, who provided much inspiration.



Above: teachers, and other members of the school gardening community at the third School Gardening Hui (February 2016). Pam Warhurst far left, front row.

The FRN wanted to validate the results of the pilot survey, and so ran it again in mid 2016 with support from an intern from the University of Canterbury (Tracey Hubbard), and survey design input from Community & Public Health and Healthy Families.

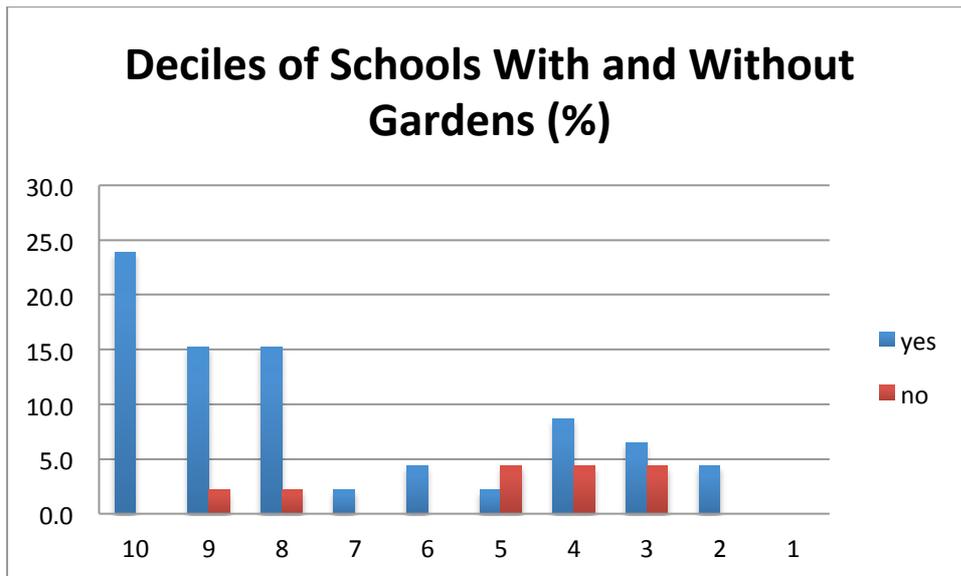
The results of this second survey bear out the results from the first survey very well, even though the respondents were mostly different. Again, the 2016 survey received around a 25% response rate (it was slightly less than in 2015). Additional questions captured information on decile, presence of orchards, where seeds came from and other items of interest.

The results will continue to inform the work programme of the Food Resilience Network.

### **School Deciles**

Of the respondents, 54.3% were in deciles eight, nine or ten (Figure 1). No school gardens were reported for Decile One schools, and it is interesting that no Decile One schools responded to the survey (these “schools are the 10% of schools with the highest proportion of students from low socio-economic communities”)<sup>3</sup>. This question was not asked in 2015, so it may be unwise to draw too many conclusions from this result at this stage. *However, it would seem from this response that schools in poorer areas are the least likely to have committed to a school edible garden.* It could be worth surveying the Decile One schools as a special project to ascertain whether or not this is actually the case, as it does contradict anecdotal data.

<sup>3</sup> <http://www.education.govt.nz/school/running-a-school/resourcing/operational-funding/school-decile-ratings/>. Accessed 13 September 2016



**Figure 1: Deciles of schools with and without gardens (%)**

### Schools with an Edible Garden

In 2015, we reported that 81% of schools in Canterbury had an edible garden. The 2016 survey gave a result of 83%. We regard this as a validation of the 2015 result, and we can therefore say that the vast majority of schools in the region have an edible garden. Clearly, the focus for the FRN should not therefore be on helping to establish new school gardens.

### Are Edible Gardens in Schools used for Teaching?

Of the 83% of respondents who said they had an edible garden at their school, 61% (n=27) reported that this garden was used as a teaching resource. Again, this confirms the 2015 survey response, where 61% also reported they used their garden for teaching. It may be worthwhile exploring this in more detail to understand exactly how these gardens are being used for teaching, and in which kinds of classes.

### Help in Maintaining the Garden

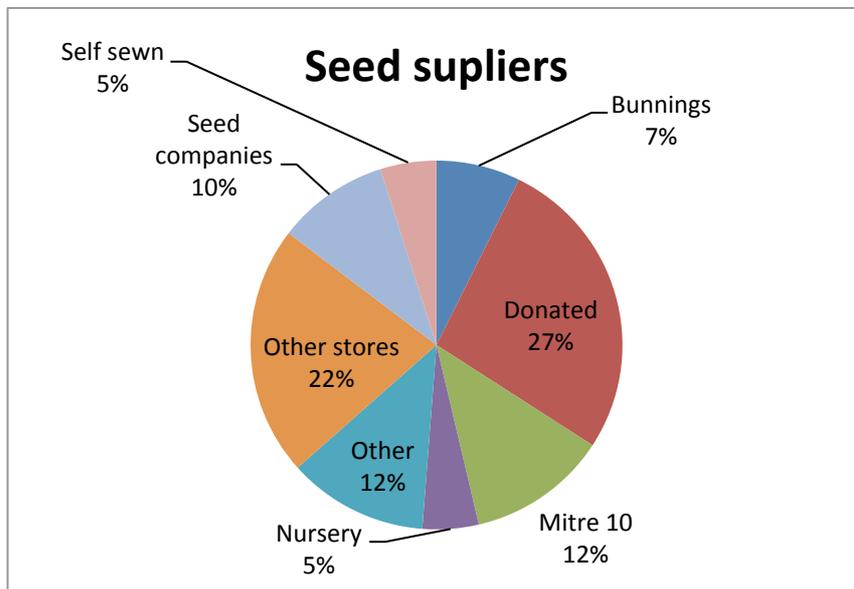
Through our school gardening hui, the FRN has heard how it is often the case that management of the garden often falls on just a few people, or even a single person (sometimes a teacher, sometimes a parent), and that this can create quite a burden and be a struggle to maintain. We wanted to know how common it is for people outside of the school to help manage it.

Here the numbers were slightly different from 2015, but not dissimilar. In 2015, only 31% said they had any outside help in maintaining the garden. In 2016, only 23% said they had this help. This may in fact be read quite positively; anecdotally it does seem as though it was very rare ten years ago for members of the wider community to get involved in a garden on school grounds. However, given the verbal feedback we have heard from the hui, it does seem that this community extension work is important to attend to more fully.

### Sources of Seeds

We were curious to know both the extent of seed-saving activities in schools, and also the kinds of places schools went to for their seeds. 27% of schools had their seeds donated, while only 5% saved

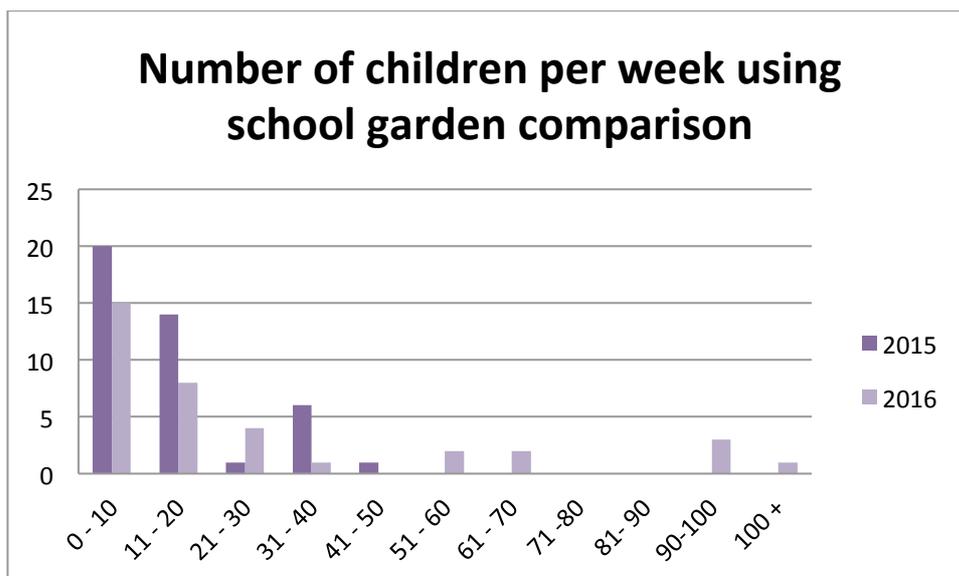
their own seeds. This is probably an area for the FRN to look more closely at, as learning and practising the skill of seed-saving is a core element of food resilience.



#### Number of Children Involved in School Edible Gardening

It is clear from both the 2015 and 2016 surveys that at the aggregate level a large number of children is involved in school gardening each week. This number seems to have increased between the two years, but it is important to remember that both data sets represent around ¼ of all schools in the region. This question asked schools to tell us how many children participate each week. They often gave a range rather than an exact number, so we have grouped the numbers in groups of ten. We have then taken the mid-point of each group to arrive at an estimation. By this process, we can see that in 2015, of the 25% of schools that responded, 590 children per week engaged in edible gardening. In 2016, this number had climbed to 955 children per week. One school reported that 100 children did gardening every week. If this is represented as 40 weeks of school, we could say that from our sample of ¼ of schools, in 2015 there were 23,600 attendances at school gardening sessions across the year, and in 2016 this number was a massive 38,200 children. Therefore, there is a significant aggregated impact of these gardening programmes across the region.<sup>4</sup>

<sup>4</sup> It would be wonderful to have an exact number to report for all the schools (given that the sample was only 25%. Even if we doubled these numbers, there were 47,200 attendances at children’s gardening sessions in 2015, and 76,400 in 2016).



Graph I shows the comparison between the number of children per week using the school garden in 2015 and 2016.

### Professional Development

The FRN was interested to know whether teachers and principals would be interested in professional development around school gardening. In 2015, 82% said they would be interested, while in 2016 this had dropped to 60%. This is still a high number, so offering professional development may be something that the FRN continues to do.

### Creating a New Garden

Seven schools reported that they are planning to or would be interested in establishing a new garden.

### Orchards in Schools

There has been a concerted effort to establish more orchards in schools over the last few years. For example, the Canterbury Horticultural Society has funded their Orchards in Schools programme. In 2014, this team established new orchards in five schools; in 2016 each of these orchards was flourishing and some had expanded.<sup>5</sup> The programme has continued to establish new school orchards in 2015 and 2016.

### Does your school have an orchard, and, if so how is it maintained?

41% of the schools who responded to this question reported that they have an orchard. These orchards were maintained by students and volunteers, parents and children, the Canterbury Horticultural Society, teachers, and the school caretaker. Some reported that their orchards were not maintained at all.

### Hui attendance

Our approach to professional development for teachers and principals around school gardening has been organising hui where best practice examples can be shared across the attendees. We asked how many schools would be interested in attending future hui. 40% said they would, and 49% said

<sup>5</sup> Pers. Comm, Sasha Goburdhone, 6 September 2016

they might – which would depend presumably on the topics for discussion, and availability given the business of the school year. We were pleased to see such a high proportion saying they would like to attend these events, which we understand to mean that they are offering real value to school communities.

### **What they would like from the Hui?**

- Practical activities and information and activities around using native plants for traditional medicine.
- Links to curriculum areas
- Schools reporting about their garden achievements.
- Orchard- advice and networking
- Garden to table philosophy and what to grow for a school garden for different seasons
- Hands on practical sessions, learning and demonstrations.
- Planting guides and suggestions
- Ideas around managing school gardens and season changes
- Garden prep for the new season
- How other schools use their gardens as teaching tool
- Anything that could help us maintain and sustain our garden
- How to grow herbs
- Gather ideas, resources and funding ideas.
- Management and teaching ideas for the garden
- Different ideas for how the food is used and rotating things around the seasons given that our holidays are over a key growing time.
- Sharing of crops grown, where to get good resources
- Ideas for links to the curriculum,
- Advice on seasonal planting and maintenance of plants/soil.
- Suggestions for how to motivate students and community to be involved.

### **Conclusions and Recommendations**

To conclude, therefore, it can be said that the 2016 survey results broadly confirm the key findings of the 2015 survey. The school gardening sector in Canterbury is quite sizable and is clearly having a large collective impact. There appears to be a thirst for knowledge or ideas from this school gardening community to improve gardening practice but also to find new ways to ensure the sustainability of their gardening projects and to share best practice about linking the gardens into the curriculum. This survey has again helped to inform the direction the FRN should take with its engagement with schools.

Some recommendations for the FRN to consider follow:

- What is the true extent of school gardening in Decile One schools?  
There could well be errors in this data given that the result – that no Decile One schools have school gardens – seems to be so counter-intuitive and also different from anecdotal evidence.

*A focussed research project – for example with a university intern – could help answer this question very simply. It is recommended that the FRN engages such a student in Term One 2017 to undertake this research project.*

- If over 80% of schools already have gardens, the FRN's focus should be on improving practice rather than helping new gardens set up.  
*Working with certain key members of the FRN to help deliver professional development on, for example, orchard management, seed-saving and community engagement could provide real benefits to the school gardening community.*
- How are gardens being used in the formal curriculum?  
Schools tell us this is happening, but we do not clearly understand what this means. There is a lot of scope to develop up some best practice case studies on this topic which could be readily shared through the school gardening community locally and nationally.  
*Again, this could be an excellent research project for a university intern.*
- Community extension work – involving the wider community in the school gardens – is something that baffles many but can be a key to sustainability of the projects. As mentioned above, this could be a key topic for a future hui.
- With only 5% of schools saving their own seeds, seed-saving should be a key area of focus for the FRN. This could be in the form of a workshop (as mentioned above), or some other approach.  
*Recommendation: work with the Southern Seed Exchange, or relevant people/organisations to support seed-saving capabilities in schools.*
- There is a lot of interest in professional development. Equally, we have observed how the development of a school gardening community through the hui has had a positive effect.  
*It is recommended that one or two of these hui be offered in 2017.*
- Finally, this survey has been extremely helpful in providing real data with which we can inform and develop programmes.  
*It is recommended that this survey be repeated again in 2017, with support from a university intern.*