

ARBORICULTURAL TRAINING IN BRITAIN¹

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Abstract. An insight into arboricultural training techniques and standards as practiced in Britain is described. A particular training plan is described with recognized associate level qualifications. Justifications for entering into training exercises are outlined.

Professional training within any industry is a time-consuming and expensive operation. Arboriculture is no exception. It is therefore important to identify a definite need for training before entering into such an exercise. Identifying the need for training is not difficult. All arboriculturists require training to gain, improve and refine professional skills. Some may argue that training is an expensive luxury and that the best training is achieved simply through industrial experience. Whilst I cannot disagree that industrial experience is invaluable in developing skills, I would, however, argue that there is no substitute for a sound basic training.

The need for arboricultural training can be explained, and indeed justified under five basic headings:

Safety

To comply with legislation

To increase the standard of tree care

To boost staff morale

To instill confidence in the public.

Safety. We work in an industry that is not without danger. Safety is therefore obviously of paramount importance. In Britain, we not only have a legal obligation to protect ourselves, our colleagues and the general public whilst we are at work but we must also consider the moral obligations. In Britain, the Health and Safety at Work Act states that we must ensure, and I quote, "the provision of such information, instruction, training and supervision as is necessary to ensure, so far as is reasonably practicable, the health and safety at work of employees".

To Comply with Current Legislation. In addition to providing training to comply with the Health and Safety at Work Act there are other areas of legislation which govern other activities in which an ar-

boriculturist may be involved. For example, when carrying out spraying operations in Britain, the operator must hold the relevant certificate of competence, as specified under the Food and Environment Protection Act 1986. I shall discuss the implications of this later.

To Increase the Standard of Tree Care. The standard of tree care in Britain has steadily increased as technology and science have progressed. One instinctively thinks of the improved pruning techniques adopted since the publication of Dr Alex Shigo's works. However, it is the task of the arboricultural manager to ensure that modern developments and techniques within the industry are successfully transmitted to their staff.

To Boost Staff Morale. Operators, who fully understand the tasks they are performing and who are familiar with the machinery and equipment they are expected to use, will not only show increased productivity but will adopt a more confident approach to work and achieve a greater degree of satisfaction on completion of the task.

To Instill Confidence in the General Public. It is the duty of every arboriculturist to promote the industry wherever possible. Often the simplest and most effective way to do this is by adopting a professional attitude whilst at work. I am sure that everyone here today would agree that there is more to arboriculture than a chainsaw and a head for heights. Well trained staff who carry out their duties with a high degree of professionalism are the best possible ambassadors our industry could wish for.

Levels of Training

I have hopefully identified the need for training. What I will now discuss is the various levels of training that currently exist in Britain and indicate their associate qualifications.

Obviously it is unnecessary and indeed undesirable to expect everyone within the industry to train to the same level. An ideal training programme should cater for people at all levels

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within the industry from operator through to manager. The training should be progressive. That is, it should facilitate the advancement of skill and understanding in a progressive manner. This prevents unnecessary repetition during training yet permits an operator to progress from one skill level to the next until the operator achieves to the peak of their ability—or achieves a level at which he or she would prefer to remain.

There are four distinct levels within technical arboriculture which can be identified. These are, operator, craft status, supervisor and manager. In Britain, there are several associate qualifications which can be gained which will guarantee recognition to a particular level. It is beyond the scope of this paper to discuss all the arboricultural qualifications available in Britain. However, I would like to illustrate how one particular training plan provides the opportunity to gain recognized associate qualifications for each level. We can do this by considering each of the levels in turn:

Operator. Although this is often regarded as the lowest level, it is arguably the most important level for training considerations. Our industry is inherently a practical one and the operators carry out the majority of the practical work. Their training should therefore recognize this. Operators should undergo training in all the important practical aspects of arboriculture that they are likely to encounter. This will obviously vary slightly depending on the particular branch of arboriculture in which they are employed, i.e. amenity, private sector or commercial. At this level the training should be documented in the form of certificates of training. Certain operations such as those which possess a higher degree of danger, for example, aerial chainsaw use, should only be carried out by operators who hold certificates of competence as distinct from certificates of training. Certificates of competence are issued only after a candidate has performed to an agreed standard under independent examination. The word 'examination' automatically instills fear in some people. However, it is important that positive feedback is achieved to assess the success of training sessions and in some cases this can only be realized in the form of examinations. At operator level it is obviously important that the practical skills are examined—that is, the operator's ability

to do the job safely and efficiently.

Craft Status. A natural progression from operator level is to craft status. This would normally indicate academic qualification to certificate level and include duties which require a greater degree of responsibility. Persons at craft level often carry the responsibility for items of machinery and equipment and may control a small arboricultural team, usually two to three people. The Certificate in Arboriculture is awarded by the Royal Forestry Society but the examinations leading to the award are actually administered by the National Proficiency Test Council. This certificate comprises both theory and practical examinations with priority being placed on an understanding of, and ability to perform a wide range of practices. The examination also has a degree of inbuilt flexibility to enable candidates from different sections of the industry to show the skills which are relevant to them. Obviously all these subjects must be fully covered but a candidate may select areas of questioning which relate to his or her background. This is perhaps explained by the following example. An arborist working in an urban environment would seldom, if ever, practice root extraction during tree removal operations. It is far more likely that the stump would be removed using a stump grinder. It is therefore sensible to examine this arborist on stump grinding machinery as opposed to root extraction equipment. Conversely, an arborist working in an arboretum would probably prefer to be examined on stump extraction equipment as this is the preferred method for dealing with such a problem in this situation. This flexibility combined with the practical nature of the examinations have earned the qualification much respect in British arboriculture.

Supervisor. Training to supervisor level must include some form of management instruction. Supervisors, being first line managers, are in a key position to control the company or organization's major resource, that is, its labor force. The successful control and utilization of labor as a resource demands skills additional to a proven technical ability. The old adage of a person being promoted to the level of their incompetence rings true and it is all too common for a sound arboricultural technician to be promoted to super-

visor, only to fail in this new position due to inadequate management training.

Where management training is provided, it is often carried out by other managers. The resultant training is provided, it is often carried out by other managers. The resultant training is frequently of an anecdotal nature where one manager simply relates how he or she would, or has, dealt with a given situation. This is a situation which is presently undergoing change in Britain and the advantages of specialist management training are now being recognized. The National Examinations Board of Supervisory Studies is now heavily involved in providing courses of instructions for amenity land managers.

In addition to management training, a supervisor should have a sound technical knowledge and hold qualifications which reflect this. The Technicians Certificate in Arboriculture is generally regarded as an adequate level of qualification. This certificate is administered by the Arboricultural Association and the syllabus includes areas of questioning on both management and technical aspects of arboriculture. Although the examination does examine practical skills, there is little, if any, overlap between this examination and the RFS Certificate in Arboriculture described earlier. The practical section of the Technicians Certificate demands a higher standard and additional areas of questioning include surveying, tendering, estimating and planning.

Manager. The advantages of the system being described become apparent as we reach the management level. In addition to the natural progression from operator through craft status to supervisor the system permits the further progression to senior manager level. The qualification held at this level by an arboricultural manager would normally be the Master of Arboriculture. This is the equivalent level qualification to an ordinary degree from a British University. The qualification is again administered by the Royal Forestry Society. The examinations cover arboricultural theory and management. Arboricultural practices are not covered by this examination. This is obviously sensible since this exam is only open to candidates who have previously proven their practical abilities, normally by passing the aforementioned examinations.

The system I have previously described serves to illustrate an education plan which caters for, and indeed encourages an advancement of one's career to various levels which are recognized in the national field of arboriculture. The beauty of the system lies in the fact that it is possible to achieve a degree level qualification without actually attending a course in full-time continuing education. In practise, however, most people who use this education plan do in fact attend one or more courses in full-time continuing education. This obviously accelerates the learning process, but I would stress that it is not essential as there is no upper time limit on gaining the qualifications. The arboricultural qualifications offered by the various colleges in Britain, in addition to having national recognition in their own right, also tie in with qualifications I have already outlined. This may suggest a complicated educational system. The system, however, does work and caters for a wide range of arboriculturists who wish to achieve career advancement through increased qualification.

To recap so far I have identified the need for training, illustrated an education system which caters for people at all levels within the field of arboriculture and briefly mentioned other forms of arboricultural education which are interactive with the first. I would now like to discuss some of the training techniques which are currently being adopted in Britain.

Participative Training

Participative training is a technique which is now widely used. As the name suggests, the technique involves active participation from the trainees. There is a definite move away from the student-teacher situation, which all too often involves the one-way passage of information, sometimes over the heads of the trainees and straight out the window. Participative training encourages communication in the true sense of the word, a two-way passage of information. This two-way transportation of information is correctly received and understood. This feedback is an absolutely essential element of participative training.

The success of this technique hinges on the instructor's ability to build up a discourse with the trainees. The instructor must obviously control the

discussion but not be seen to dominate it as this would prove off-putting to the rather more reticent trainee. This is facilitated by the implementation of short discussion sessions, often referred to as hum groups or buzz groups. These sessions require organizing in a particular way. To organize a hum group the instructor simply divides the group of trainees into pairs and presents them with a question or task, i.e. list six pre-start checks which must be carried out before using a chainsaw. The various groups then discuss the problem and write down their answers. The resultant 'hum' of activity during the discussions gives the session its name. The instructor then discusses the various answers provided by each group. Normally the session is summarized by the instructor identifying and emphasizing the main points, in this case, the six most important pre-start checks which must be carried out before using a chainsaw. In this way the instructor draws on the experiences of the trainees yet ensures that the main points are highlighted. The only difference between hum groups and buzz groups is their size. A buzz group usually consists of three to four trainees and the resultant noise of their discussions is therefore louder, hence the term buzz as opposed to hum.

These sessions can be run quite successfully by supervisory staff, and indeed the previously mentioned National Examinations Board of Supervisory Studies qualification includes training in instructional and communication techniques. However, it should be noted that certain specific subjects must only be taught by qualified instructors within that particular field or specialism.

An example where training is only permitted by qualified instructors occurs with the Food and Environment Protection Act 1986. It is also interesting to note that qualified instructors are not allowed to examine the candidates whom they have trained, even if they hold examiner status. All examining must be carried out independently.

Instructor: Trainee Ratios. Recommended instructor: trainee ratios vary depending on the particular aspect being taught. For example, tree climbing operations are taught on a one to one basis whereas chainsaw maintenance courses may have a ratio of one to six. There are various guidelines laid down by several bodies in Britain

recommending instructor to trainee ratios and these are generally respected during training operations.

Element Training and Testing. Whilst an outline of the hum group technique describes a particular method of communication used during training sessions, it does little to explain the overall strategy of the training procedure. The procedure currently adopted by several of the larger training organizations is that of element training and testing. This essentially consists of breaking down each subject into relatively clearly defined elements. Each element is then taught using the techniques previously described. Obviously the elements must fall in a logical sequence for this system to work. The use of elements in testing can also prove very useful, particularly where the test involves operations of a dangerous nature. This is perhaps better explained using an example. A candidate who is undergoing examination in basic chainsaw use would be questioned on several distinct elements. The first element would involve the selection and use of protective clothing. The second element would be concerned with pre-start checking of the chainsaw and selecting aid equipment. The third element would involve the correct chainsaw starting procedures. If the candidate could not demonstrate the correct starting procedure then the test would be terminated at that point. Obviously the candidate must be given every opportunity to show his or her ability but it would be foolhardy to permit a candidate to continue with the test and actually use a chainsaw when they could not demonstrate the correct start procedure.

Usually element training and testing eliminates unnecessary repetition. For example, training manuals for advanced chainsaw use will simply refer to the elements covered by the basic chainsaw use course. The material from the basic course would not be repeated during instructional periods. However, the candidate would be expected to show a knowledge of any appropriate elements contained in the basic chainsaw course during examination for advanced chainsaw use.

Documentary Evidence of Training. Evidence of training is important to both employer and employee. The employee gains a feeling of achievement on obtaining the various certificates.

An employee can also gauge his or her advancement in what tends to be a rather fragmented or scattered industry. The employer, on the other hand, is shown to fulfil the obligations of the Health and Safety at Work Act and any other pertinent regulations or guidelines.

There are several schemes in operation which encourage documentary evidence of training. Most of these schemes do however require qualified instructors to operate successfully. I have already mentioned the Food and Environment Protection Act 1986. The essence of the Act is to ensure that all persons involved in the use of pesticides be trained and subsequently examined to ensure their ability to use these materials safely. This can, in many ways, be regarded as a pilot scheme. It was the first time in the history of amenity land management that operators were prevented from doing a job until they could prove their ability to carry out the task safely and without risk to the environment. Since its introduction, several other areas of arboriculture have come under scrutiny and similar schemes are being proposed. It is hoped that documentary evidence of training and competence testing will be a requirement before chainsaws can be used. There is a scheme currently underway in Britain, administered by the Forestry Training Council, which caters for chainsaw training and assessment from beginners level through to advanced chainsaw practices. Although this form of training and assessment is, at present, voluntary, it is hoped that, in the future, all chainsaw operators will be required to hold a certificate of competence. Most professional arboriculturists are in agreement with the scheme and are actively encouraging trainees to come forward for instruction and testing. The scheme initially met with some limited opposition, mainly due to the cost involved. However, the points mentioned in my earlier deliberations can and have been used in most cases to quieten

these arguments.

Standard Setting. Both instruction and examination must be carried out to agreed standards. These standards must obviously be uniform throughout the country. For these reasons it is important that instructors and examiners attend regular standard setting courses. A course in standard setting essentially consists of observing various examinations taking place and subsequently analyzing the results. The main area which is scrutinized is the gray area around the pass and fail mark. The obvious passes and failures are normally easily identified. The mid-range candidates are usually more difficult to grade. Standard setting courses often include the examination of primed candidates. That is, candidates who are purposely aiming for failure. These primed candidates are generally other examiners. If the course has been successful then those in attendance should be able to identify the failures and comment on the reason for failure. Standard setting courses are also an opportunity for examiners to get together and discuss any problems or changes which have occurred and have bearing on training or examining techniques currently used.

Conclusions

Arboricultural training in Britain is advancing with a resultant increase in standards of tree care, safety and professionalism. A greater number of young entrants into the industry are utilizing the available training courses and subsequent qualifications to accelerate their progression within a growing profession in Britain.

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