

The question of what we can learn from the past may well be answered at next years Learning Experience, which will be sponsored by Textron Turf Care and Specialty Products. We can all learn from our peers, from retired members of our association and from learned authors. An article, reproduced here, links the present day with the past by including comment on such things as cutting regimes, irrigation and greenkeepers salaries. The remarkable thing is that the article was written as the winning entry for the Greenkeepers Association Essay Competition of 1913 (86 years ago).



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Economy in golf course management

1st Prize and Certificate;
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The word Economy, when applied to golf, opens up a somewhat large field for discussion, as well as being an incentive to thoughts: Discussion as to what constitutes real economy, and thought, as to what means to adopt to secure it.

Economy is of two kinds, the true and the false, the real and the apparent, and it is only by careful thought and keen observation that the one can be distinguished from the other.

The idea of economy with some people seems to be to obtain the best results from the worst material, and to use the smallest quantity at the least possible expenditure. Be it labour or any other necessity of the course, this is false economy, and if followed up, can only lead to one result, that is, inefficiency and disappointment.

Then there are others whose ideas of economy lead to the other extreme; to buy the most expensive materials through the most expensive channels, and to use them without paying due regard as to their cost, or being really necessary on the false supposition that being costly, they must necessarily do good. This is not economy, this is sheer waste.

True economy is the medium between the two extremes and consists in getting the full value for any given expenditure incurred, be it much or little and on many golf courses, particularly the larger ones, this precisely is what is not done.

A large sum, in some cases thousands of pounds, is annually spent on the upkeep of the course, and, so long as everything is kept in good playing order, and no complaints from the members, no one troubles about economy, for the simply reason, there is an ample income, and therefore no pressing need for it.

The shareholders of the average golf club company do not expect the same return from their shares as they would from a like amount invested in any industrial concern, and are satisfied to take their dividend largely in the form of enjoyment which they derive from playing on a well-kept course, and usually expect, and as usually receive, but little monetary return from their capital so invested.

With regard to how far it is possible to run a golf course on economic lines, which must necessarily depend upon whether the course has originally been properly laid out and the work of construction thoroughly done with good material and good work.

Often we find this has not been done, especially on some of the older courses, and to bring the course up to modern form and adapt it to up-

to-date ideas, it becomes often necessary to spend a large sum of money each year to renew this, and alter that (as the case may be), so that to run the place on economic lines, plus efficiency, becomes impossible.

Whilst I think most greenkeepers will agree that the largest waste of money on golf courses lies with the management, and quite out of the power of the greenkeeper, either to question or prevent, yet I think they will also agree that there are many ways a greenkeeper can save the money of his club, without in any way laying himself open to the charge of parsimony, and so I proposed to look at each item separately, in which economy can be viewed from the greenkeepers' standpoint.

One of the principle things on which waste is likely to occur is in the use (or rather the abuse) of artificial manures. There is no doubt much money is wasted under this item every year, or at any rate, its full value is not always obtained.

The economic management of a golf course stands out quite by itself in comparison to other undertakings of a similar nature, especially in respect to the use of manures. The farmer might well be excused for thinking the policy of the golf club more or less a policy of extravagance, in view of the fact that an average golf course of say, 100 acres, situated on poor sandy soil (as many are), there would probably be used during



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the year as much manure as he himself would use on a 500 acre farm.

The loss on artificial manures often happens through buying cheap inferior samples from small local dealers, composed of second-rate materials and crudely mixed by persons with no expert knowledge. A crude, ill-balanced mixture is not cheap, however little money is paid for it. Guano, Superphosphate, Sulphates, or any other chemical manures under standard strength are not economical, however cheaply they may be bought. Always obtain the supply of such important articles from a source to be depended on for purity, and even should the price be a little higher, they will be found to be the most economical in the end. Again, never buy any untried manure in bulk, however well recommended, before first ascertaining by using a small trial lot whether it bids fair to be a suitable manure on your particular soil. The manure has yet to be made that will give equally good results on all soils.

Another cause of loss is in preparing composts for the greens. The aim should be to get this as fine as possible before applying it, the finer it is, the better. It saves the material, saves much in labour when the work of applying it is carried out and provides useful work for the staff during bad weather when they might otherwise be less well employed. When the compost is ready to be carted to the green, it is a good plan to provide a sheet on which to tip it, if tipped on the grass some of it will certainly be lost. Serious loss is sometimes caused through using chemical manures at the wrong time and not frequently, when not really required at all. Economy in the use of manures should be the medium between starvation on the one side and repletion on the other.

Again, the fullest advantage is not always taken of the natural resources of the place in the way of providing composts for the greens and course, which, if properly prepared are of equal value with chemical manures. On many courses during the year a considerable amount of rubbish is collected and thrown away whereas, if the same was put on a heap and rotted down, a useful dressing would be provided for the fairways or (if burnt or charred), for the greens. I should not use the rotted rubbish on the greens on account of weed seed usually contained therein, but the burnt portion, finely sifted, makes an excellent dressing for the greens, costs but little and saves the manure bill.

The manure heaps should be made up on a hard bottom, so that rain cannot wash the strength out of it into the ground and covered with a layer of soil on the top. No doubt, all manures are best kept under cover but there are but few courses where shed room will allow of this being done. Artificial manures must, in all cases, be kept dry and no mixtures prepared until required as the action of one chemical on another often results in serious loss in the essential elements they contain if mixed together several days before being used.

All drainage from clubhouse, stables and other sources should be run into a tank with pump attached. This, when diluted, makes a good stimulant for grass and costs nothing beyond the cost of labour to apply it.

Watering greens is another item where there is considerable waste, both in labour and water. This is not so much in evidence when the supply is from the water company's main. But even then, there is often waste of labour in using it on the greens. On some courses it is the practice of from eight to 10 men to put in three hours watering each evening during the watering time, usually being paid 6d. per hour overtime. Three men, working all night, would water the same number of greens under better conditions for the greens, and at a cost of but little over the ordinary day's pay for the reason that when it is necessary to water, the mowing will be slack and the three men's work during the day could easily be dispensed with, the watering being done with better effect at night. I have known several cases where the staff have, during dry weather, been engaged all the day on work of doubtful value to the club, then in the evening, paid 1/6d each evening for watering, thus cutting the stick at both ends. If a man has done, say, 10 hours conscientious work during the day and perhaps some little distance to walk home, he does not want much overtime in addition, if he is to keep himself fit for a fair day's work the following day.

Waste of water often is caused through using bad sprinklers. There are many weird devices on the market under the name of lawn sprinklers. Many of them might be useful for some purpose, but are certainly no use to water a green with. A sprinkler, to be effective, should give a very fine spray, and even then, if there is the least wind, one side will be soaked and the other side dry. The

system of one man watering three greens at once with sprinklers always leads to waste of water. It is very difficult to regulate the best of sprinklers to give sufficient water in one place without giving too much in another, and the man walking from green to green will find he cannot water the three greens together so well, or so economically as he could by watering each one separately with a fine rosed spray under his direct control. Watering in this way he can regulate the supply according to the requirements of the green and can put it where he wants it to go. Where the water has to be pumped up from local wells or artesian bores, the most expensive way is hand pumping. The average hand-pump would lift say, 200 to 250 gallons per hour and take two men to work it at a cost of 1/- per 250 gallons. The most economical way is by using a portable oil engine; an engine of 1.1/2 to 2 horse power would lift 500 gallons per hour or 5000 gallons in a working day of 10 hours, at a cost of 5/-, including the attendant to look after it and the oil to drive it. Once started they require little attention and, as the wells are generally situated near the greens, the man could weed or do other light work on the green and still keep his eye on the engine if within sight of the exhaust or within hearing of the stroke, he would soon know if anything went wrong and would be there to correct it. If all the greens are watered from one well the cheapest way is to erect a windmill, but in the case, unless there was 18 to 20 thousand gallon storage, an engine would be necessary to ensure a supply.

Hose pipes used in watering the greens should be kept in the shade during hot weather and, in buying hose pipe, the best is the cheapest in the end. The low priced kinds made of inferior material need constant repairs and renewals. Most of us had a good illustration of this during the rubber boom, that is, those greenkeepers who were unlucky enough to have to purchase them at that time.

In using water from a main, too great pressure should not be used, it strains the hose and is harmful to the grass. Generally speaking, it should be impressed on the staff employed that hose pipes cost money and require careful handling, especially in moving them from one green to another. When stored after the season's work, hose should be properly emptied and laid out straight, not coiled up. I once found, on taking charge of a watering plant, most of

the hose coiled up very neatly, but half full of water, which had it not been detected, would have remained till the following summer. Small wonder if, under such circumstances, the pipes soon got worn out and a heavy bill for renewals was the result.

Seeding greens

It is not economical to be sparing of seed in sowing a new green. A liberal sowing will produce a good turf fit for play in much less time than a light one, and with a new green, time is money. Consequent re-sowings, which are usually required after a light crop, cost more than liberal sowing in the first place and I will not go into the question of sowing v. turfing. Each side has its advocates. Local circumstances alone can decide which is best, but seeding is certainly cheapest. The important thing is to get a suitable mixture of seed of good germinative quality. Cheap seed, containing as it usually does a large percentage of useless grasses, is an abomination on a golf green. Many of us know, from bitter experience, the trouble and expense it is to eradicate course grasses from a green. To get rid of the worst weeds is nothing to it, so every care should be taken to procure seeds of the best possible quality, irrespective of cost.

Birds generally cause a considerable loss in spring-sown seeds. In districts where birds are very troublesome, autumn sowing should only be done as the birds seem to do less damage in the autumn when food is more plentiful.

Where a whole green is sown, or any considerable area, it might pay to cover with an old fish net. It can be bought very cheaply. The cost of a few bushels of seed at 35/- per bushel, would buy a lot of net, not to mention the cost of sowing and loss of time.

Where rats or mice are troublesome, a galvanised iron corn bin is a good store place for any stock of seed on hand. It is very important to keep grass seed perfectly dry or its power of germination is quickly lost. The bin will answer the two purposes.

Machines and mowing

The last few years have brought a great change from the old heavy cumbersome machines which were used on golf courses, to the light, clean cutting machines of modern manufacture. In studying economy in mowing, it is necessary to get the best work done with the least labour and at the same time to use a machine of

good wearing qualities, which will not be unduly costly in repairs.

The old-fashioned way of two men to a 16 in machine on a golf green has now given place to the light one-man machine of the present day, with a 12 or 14 in cut which does the work better, does not tire the men too much and costs less in repairs. A word may be said about the care of machines where each man has his machine allotted to him he usually takes sufficient interest in it to keep it clean and in good running order. It is to his own advantage to do so, but any slackness in this detail should at once be attended to by the green-keeper, as he may be sure any machine put away ill cleaned or not cleaned at all will soon cost money on repairs. Wet days should see all machines thoroughly overhauled, and any necessary repairs noticed in addition to cleaning every time after use.

I cannot help thinking that there is a lot of quite unnecessary cutting through the green done on some courses. From a scenic point of view, no doubt, such broad, long lengths of close mown grass looks very beautiful but in the economic sense I fail to see they are necessary, neither in many cases do they make a better test of golf. I have noticed on several courses the fairways were cut right up to the tees on all except the short holes. It seems to me a waste of time and money to cut the grass with the machine which should be carried, say, 80 to 100 yds from the tee, and again, the carry at the second on many of the 2-shot holes. The grass, in this case, might well be left rough mown as a hazard in place of the eternal pot bunker.

The topping once or twice during the season with the scythe would not be nearly so expensive as the constant mowing with the machine. On many courses the fairways are much broader than is necessary for first-class golf, and treated in the same way on either side, as the case might be, would in no way detract from the character of the hole, and be a great saving on the mowing account. Where the fairways are not too hilly, I should say the motor mower would be the most economical. A good pattern 36-in. motor would do as much work in a day as two horse machines, at less than half the cost. The newer patterns by British makers are quite reliable machines, and (with a little tuition), any intelligent man can soon learn to use one.

Where two or three horses have to

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be kept for mowing, rolling and carting, they have to be fed all through the winter, whether there is really profitable work for them to do or not. In the case of the motor mower, it can be put away at the end of the season and costs no more till the following spring. In smaller clubs, where only one horse is kept, it would be less expensive to use the horse machines as it would be necessary for any club to keep one horse all the year round for carting and general work, so the motor would be but little saving.

A light form of reaping machine is a great saving on courses where much rough mowing is to be done, doing the work more quickly and better than the scythe. Narrower fairways with the sides cut once or twice during the season to prevent lost balls, would save in a great measure the heavy expense of short grass mowing, without putting too much strain on the temper of the golfer.

Another matter of no little importance, is the weeding of the greens. Hand weeding with the three-pronged fork is the most effect way of dealing with the deep-rooted weeds and where the weeds are in big patches, the best way is to cut the patch clean out and replace by good turf, a plot of which should always be kept for that purpose.

I noticed last year a good illustration of how want of thought causes loss of money. On a course I visited there were large patches of daisies on some of the greens which had recently been treated with weed killer. They seemed pretty well shrivelled up, which the greenkeeper considered satisfactory, considering it would be necessary to remove the dead patch-

es and repair with new turf. I failed to see any advantage gained, in view of the fact that it would mean as much work to remove the dead patches, as the living daisies, so the expense of the destroyer and the labour of applying it were wasted. Turf weeding is usually done by boys paid about 3d per hour, sometimes providing useful work for the caddies when not engaged.

It is false economy to let a green get weedy. It is impossible to produce a true putting surface on a weedy green and once a green gets into that condition it is an expensive job to get it right again.

Of late years there has been some controversy on the subject of sheep feeding on golf courses. In my opinion sheep are a perfect nuisance on a golf course, and (unless some one owns the grazing rights), should never be tolerated. What little good the sheep do by keeping down the grass is more than discounted by the damage they do in trading down the bunker banks, scalding the greens and generally fouling the course, the manurial value is practically nil, unless fed on hard food. The few pounds received by the club for the grazing is paid out twice over in making good the damage done by them, in addition to giving the course the appearance of a farmyard.

I have purposely avoided quoting figures in respect to both labour and materials. Most of us know how useless and misleading such figures generally are. With the price of much material varying from time to time and the cost of labour differing in different localities, it is next to impossible to give any useful figures unless well acquainted with the local-

ity. Railway rates, distance from station, character of soil and general local knowledge.

My last subject is a rather delicate one. That is the wage question. Whilst on many clubs a fair wage is paid to the greenkeeper and his staff, on others it is not so. The time has passed when any man who could use a scythe and push a lawn mower was considered competent to manage a golf course and many clubs have still a painful recollection of what such men have cost them, men who, doubtless did their best with the limited knowledge they had. That all of us have still much to learn before we are perfect greenkeepers I think most of us will agree, but the false economy of paying low wages for work requiring considerable skills seems hardly to give the encouragement which might be expected from the point of view of the importance of the work.

Without laying down any hard and fast rules as regards wages, it seems to me that if a man is expected to do his best, he should certainly receive fair remuneration for his work and it certainly pays the club best, for a man who works cheap seldom works well. What the amount of wages should be largely depends on the man and the cost of living in the district where the course is situated. What might be a comfortable wage in one place, might be bordering on starvation in another. The best and most economical way in regard to labour, is to pay a good wage and insist on good work. Pay a man good wages and see that he earns them. If the club receive the value for their money and the workmen make a comfortable living, it is to the mutual advantage of both.

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You now have a chance to present your views, enhance the reputation of today's greenkeepers and show what you have learned from your experience by entering the 1999 BIGGA Essay Competition. The Competition will be judged in 3 categories: Head Greenkeepers/Golf Course Managers and deputies; Assistant Greenkeepers and Students aged 25 and over and Assistant Greenkeepers and Students aged under 25.

Entrants have to write an essay of between 1500 and 2000 words long ie. five to seven typewritten pages on the subject of Greenkeeping and Golf Course Management Techniques for the 21st Century. Essays should not confine themselves to 'crystal ball gazing' but should include lessons to be learned from the 20th Century. All entries should be sent to BIGGA House by 29 October, 1999. Essays will be judged on content, accuracy and presentation.

The winners will be announced in the January 2000 edition of Greenkeeper International. Winners of each category will receive £500 with two runners up in each category receiving £100. A brochure containing all of the winning essays will be published in January 2000, together with a number of the essays from 1912 to 1915. Get thinking and get sharpening your pencils ready to submit your entry in the Autumn.