An Investigation into the Impact of Farm Labour use on Irish Suckler Beef Farms

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Abstract

Farm activity time available to undertake routine farm tasks is and will continue to be limited. Thus the approach taken and the time spent in undertaking farm tasks have major significance in the efficient use of farm labour. Case studies were conducted on 10 Irish suckler (cow calf) farms. The main research objectives were to gain an in-depth investigation into labour use on suckler farms, to identify areas of success with regards to labour efficiency and how the success has come about as well as to identify factors on farm associated with labour use. From the farms studied, it was found that there was a strong reliance on family labour and bigger farm were more likely to hire-in labour. Spring was the most labour demanding season of the year. Many labour saving practices were identified on farms over the busy spring calving period. Labour saving equipment was also identified on many farms. There was large variation in time management across the 10 farms studied. The main challenges faced by respondents included improvement of the work life balance. Farmers placed a high value on labour. This research indicated that agricultural educators need to be proactive on the impact of labour use on Irish suckler farms. There are many ways of educating farmers in effective labour use including: profiling of the issue in newsletters and in the farming media; demonstration of practices and facilities at extension events, as well as the provision of training courses and discussion group.

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Introduction

Irish beef farms are small in size and family farm incomes are low. On larger units, farm income is often insufficient to competitively pay hired labour. National Farm Survey (2000) data shows that circa 60% of beef farms have a second income source and in many cases it is the farmer who earns the income. An examination of the Central Statistics Office (C.S.O.) Agricultural Labour Input data between 1992 and 1998 shows that the labour input on farms is provided increasingly by the farm operator, with declining contributions being made by other family members.

Proportionately more farms in the small-size category have an off-farm income. Commins (2001) identified that one of the long-term structural trends in the agricultural sector is the growing incidence of part-time farming together with an outflow of labour on a full-time basis from the farm sector. The recent Agri-Food 2010 report compiled by the Department of Agriculture, Food and Rural Development estimated that by 2010 Ireland will have a part-time farming population of over 60,000 farmers.

Although employment on farms will continue to decline, off-farm employment will continue to increase in rural areas, as the Irish economy continues to grow, even if lower rates of economic growth prevail than those encountered in 1994-1998 (Frawley, 2000). The role of farm retirement incentives along with increasing expectations for leisure time will also negatively affect farm labour availability. Employment in agriculture declined between 1992 and 1999 by 2.1% annually, while total employment in the economy increased at more than double that rate (Frawley, 2000).

This indicates that farm labour available to undertake routine farm tasks is and will continue to be limited. Thus the approach taken and the time spent in undertaking farm tasks have major significance in the efficient use of farm labour. The identification of obstacles to the more efficient completion of tasks and how farm facilities, layouts, level of management skill and approaches, influence the outcome are all of major importance. More efficient use of labour will free up time and the transfer of these findings to other part-time and full-time farms will generate opportunity for the potential participation in off-farm employment, so that as the labour force declines, its composition and quality will improve. With the constant pull or attractiveness of off-farm employment and declining numbers of new entrants to farming there will be an increasing incidence of one-person operated farms (Commins, 2001).

Purpose and Objectives

The research objectives of this study were to: (1) gain an in-depth investigation into labour use on suckler (cow-calf) farms; (2) identify areas of success with regard to labour efficiency and how this success has come about and (3) identify factors on farms that are associated with labour use. The identification of barriers to the efficient completion of tasks and how farm facilities, layouts, level of management skill and approaches influence labour-use are all of major importance. A more efficient use of labour on farms will release time and transfer of such findings and information to other farms will generate opportunity for greater participation in off-farm employment, or provide an increase in the discretionary leisure time available.
Methods/ Procedures and Data Sources

Case studies were conducted on 10 Irish suckler beef farms in early 2003. The respondents were a representative sample of the 115 farms that participated in a large-scale use survey which had been carried out in 2002 (Leahy et al., 2003). Information was collected over a 2 month period, following completion of the major 12 month recording process. Data were collected using detailed questionnaires and interviews, and analysed under the following headings: farm and household situation, additional farm labour, seasons and activities associated with high labour demand, labour saving devices, time management and future challenges. The characteristics under which the case study farms were to be representative of the majority of farms incorporated into the 12 month labour study are as follows: farming status; cow herd size; contractor involvement; other farm enterprises; farmer's age profile, and geographical location.

A total of 0.80 of the case study farmers farmed full-time, the remaining 0.20 farmers farmed part-time. Farms were divided according to cowherd size, 0.30, 0.30 and 0.40 of farms had less than 40 cows, between 40 and 60 cows, and more than 60 cows in their herds, respectively. All 10 farmers employed the services of a contractor during the farming year, and 0.90 of the sample operated other farm enterprises. The age profile of the case study farmers was as follows: 20% between 20 and 35, 40% between 35 and 50, 30% between 51 and 65, and 10% over 65 years of age. The greatest effort was made to get a fairly even distribution of case study farmers from the east and west of the country as had been incorporated into the major 12 month labour study.

It was hoped to obtain a mix of labour efficient and labour inefficient farms, so that systems and practices could be compared and contrasted, with the aim of learning lessons. Some exceptional farms were also selected where normal routines were abandoned, and the type of farming system or practices operated was not typical of an average Irish suckler farm. Other important selection components included the willingness of the farmer to engage in the case studies, and to provide detailed information.

Results/Findings

Tables 1 and 2 summarise the results from each case study. Table 1 examines each farm characteristic under the following headings: (1) farm situation, farmer’s status i.e. farming full-time or part-time, farm size (measured in hectares (ha.)), number of cows, other enterprises in operation on the farm, farm calving season; (2) additional farm labour, i.e. use of an agricultural contractor, part-time or full-time family and and/or hired labour; (3) most labour demanding season of the year and the main tasks associated with this peak in labour demand; (4) identification of the main labour-saving equipment on the farm; (5) identification of the most labour saving practices in operation on the farm, and; (6) the future challenges facing the farm.

Table 2 examines time management and labour performance in detail under the following headings: (1) Time management results for each farm studied as measured in hours/farm/day, hours/person/day, hours/livestock unit (L.U.)/year, Annual Work Units† (A.W.U.’s)/farm, and Standard Man Days†† (S.M.D.’s)/farm, and; (2) comments on why case study farms vary from Teagasc* standards.
Table 1: Table of farm characteristics summarising case studies

<table>
<thead>
<tr>
<th>Farm Characteristics</th>
<th>Case 1 William Leahy</th>
<th>Case 2 Pat and Charlotte Stafford</th>
<th>Case 3 Jim Morgan</th>
<th>Case 4 Brendan Moore</th>
<th>Case 5 Joan Pasche</th>
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<tbody>
<tr>
<td>1. Farm situation</td>
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<tr>
<td>- Status and size</td>
<td>Full-time; 158 ha.; 75 cows; 350 cattle over winter; 500 ewes; spring calving.</td>
<td>Full-time; 138 ha.; 180 cows; spring and autumn calving.</td>
<td>Full-time; 117 ha.; 185 cows; 420 ewes, 12 rams; spring calving.</td>
<td>Full-time; 105 ha.; 115 cows; 24 ha. cereals; spring calving</td>
<td>Full-time; 63 ha.; 42 cows; 70 ewes; 8 ha. roots; 18 ha. barley, wheat; self-catering units; spring calving.</td>
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<td>- Enterprises</td>
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<td>- Calving season</td>
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<tr>
<td>2. Additional labour</td>
<td>Contractor; part-time family labour.</td>
<td>Contractor; 2\textsuperscript{nd} yr. Farm Apprenticeship Board (F.A.B.) student.</td>
<td>Contractor; Teagasc students or Farm Relief Service (F.R.S.)</td>
<td>Contractor; part-time hired, family labour.</td>
<td>Contractor; part-time hired labour</td>
</tr>
<tr>
<td>3. Labour demand</td>
<td>Spring &amp; summer; Calving; silage.</td>
<td>Spring; calving; artificial insemination (A.I.)</td>
<td>Spring; calving; lambing.</td>
<td>Spring; calving.</td>
<td>Spring and winter; calving; lambing; feeding; cleaning.</td>
</tr>
<tr>
<td>- Season &amp; tasks</td>
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<tr>
<td>4. Labour saving equipment</td>
<td>Personal computer; slats; mechanisation.</td>
<td>Cubicle mats; diet-feeder; calving observation camera; personal computer.</td>
<td>Sheep dog; calving observation camera; quad bike.</td>
<td>Tractor loader to aid cleaning and bedding; slats; good lighting; quad bike.</td>
<td>Calving observation camera; feeder wagon.</td>
</tr>
<tr>
<td>5. Labour saving practices</td>
<td>Grouped according to calving date; night feeding; rota; calves registered by e-mail; natural service used; suckler herd close to yard; yard very compact and labour friendly.</td>
<td>Autumn/spring calving; winter housing access to calving unit; grouped according to calving date; night feeding; rota; chinball used on vasectomised bull; modern buildings and handling facilities; cows kept very close to farm yard.</td>
<td>Winter housing unit is close to calving unit; grouped according to calving date; hay fed for easier calving;</td>
<td>Cows grouped according to calving date; night feeding; labour efficient housing system in place; efficient paperwork ethic; set finish time.</td>
<td>Cows grouped according to calving date; night feeding; easy calving bull; modern buildings and facilities; time set aside for management</td>
</tr>
<tr>
<td>6. Future challenges</td>
<td>Improve farm buildings and facilities; seek farm labour.</td>
<td>Increase cows; encourage full-time successor; organise work better.</td>
<td>Build student accommodation; redesign sheep housing.</td>
<td>Dragging or moving calving season completely; use milled peat for bedding.</td>
<td>Expand self-catering units; optimise labour use on farm.</td>
</tr>
</tbody>
</table>
Table 1: Table of farm characteristics summarising case studies continued

<table>
<thead>
<tr>
<th>Farm characteristics</th>
<th>Case 6 Martin McDowell</th>
<th>Case 7 Bartholomew Magill</th>
<th>Case 8 Peter Maye</th>
<th>Case 9 Tom McAllen</th>
<th>Case 10 James &amp; Elizabeth Taylor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Farm situation</td>
<td>Part-time; 60 ha.; 30 cows; 140 ewes; 2 ha. Cereals; 30 horses; spring calving.</td>
<td>Full-time; 36 ha.; 34 cows; 150 ewes; spring and autumn calving.</td>
<td>Full-time; 36 ha.; 44 cows; spring calving.</td>
<td>Part-time; 36 ha.; 41 cows; 90 ewes; spring calving.</td>
<td>Full-time; 36 ha.; 30 cows; 50 ewes; boat hire; spring calving.</td>
</tr>
<tr>
<td>- Status and size</td>
<td></td>
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</tr>
<tr>
<td>- Enterprises</td>
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<tr>
<td>- Calving season</td>
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<tr>
<td>3. Labour demand</td>
<td>Spring; calving; lambing.</td>
<td>Spring; calving; lambing; A.I.</td>
<td>Spring; calving.</td>
<td>Spring; calving.</td>
<td>Spring; calving; cleaning; feeding.</td>
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<tr>
<td>- Season &amp; tasks</td>
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</tr>
<tr>
<td>4. Labour saving equipment</td>
<td>Slats; personal computer; farm diary.</td>
<td>Slats; pen in field where cows can be brought for A.I.</td>
<td>Calving observation camera; slats; farm diary.</td>
<td>Saw chippings; slats; mechanised feed mixing; personal computer; farm diary.</td>
<td>Farm diary.</td>
</tr>
<tr>
<td>5. Labour saving practices</td>
<td>Calve cows outdoors; check cows going to and coming from off-farm employment; uses natural service; simple user-friendly farmyard.</td>
<td>Autumn /spring calving; calving box close to dwelling house and winter housing unit; operates a 20% replacement rate sheep culling policy.</td>
<td>Increased length of calving season; early calving so A.I. administered while cows are housed; night feeding; grouped according to calving date; good fencing; single fragment of land.</td>
<td>Ewes finish lambing before cows begin to calve; easy calving Aberdeen Angus bull - no need to dehorn calves; natural service used; livestock night sales.</td>
<td>Farmyard close to dwelling; farm in single fragment; R.E.P.S; rota; heifers synchronised for A.I.; calving season finishes prior to lambing beginning.</td>
</tr>
<tr>
<td>6. Future challenges</td>
<td>Expand enterprises; maintenance; build roadways.</td>
<td>Improve work planning; improve farm buildings and facilities; maintain cow numbers.</td>
<td>Improve farm buildings and facilities; encourage successor.</td>
<td>Expansion of contracting business; improve work planning and organisation.</td>
<td>Improve farm buildings and facilities; encourage part-time successor</td>
</tr>
</tbody>
</table>

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Table 2: Table of time management and labour performance characteristics summarising case studies.

<table>
<thead>
<tr>
<th>Farm Characteristics</th>
<th>Case 1</th>
<th>Case 2</th>
<th>Case 3</th>
<th>Case 4</th>
<th>Case 5</th>
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<tbody>
<tr>
<td></td>
<td>William Leahy</td>
<td>Pat &amp; Charlotte Stafford</td>
<td>Jim Morgan</td>
<td>Brendan Moore</td>
<td>Joan Pasche</td>
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<tr>
<td>1. Time management</td>
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<td></td>
<td>26.5 hrs./farm/day; 11.1 hrs./person/day; 17.4 hrs./L.U./year; 4.7 A.W.U.'s; 1.9 S.M.D.'s/L.U.</td>
<td>12.4 hrs./farm/day; 7.9 hrs./person/day; 17.9 hrs./L.U./year; 2.3 A.W.U.'s; 1.9 S.M.D.'s/L.U.</td>
<td>14.0 hrs./farm/day; 10.5 hrs./person/day; 16.1 hrs./L.U./year; 2.4 A.W.U.'s; 1.7 S.M.D.'s/L.U.</td>
<td>11.3 hrs./farm/day; 9.5 hrs./person/day; 21.2 hrs./L.U./year; 1.6 A.W.U.'s; 2.3 S.M.D.'s/L.U.</td>
<td>8.2 hrs./farm/day; 6.7 hrs./person/day; 23.4 hrs./L.U./year; 1.4 A.W.U.'s; 2.5 S.M.D.'s/L.U.</td>
</tr>
<tr>
<td>2. Comments</td>
<td>1.9 S.M.D.'s/L.U.</td>
<td>1.9 S.M.D.'s/L.U.</td>
<td>1.7 S.M.D.'s/L.U.</td>
<td>2.3 S.M.D.'s/L.U.</td>
<td>2.5 S.M.D.'s/L.U.</td>
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<td></td>
<td>- low level of labour efficiency, when compared to Teagasc standards for farm planning (2002**). This value reflects a very efficient layout. Intentions are to source new labour, as family labour retires.</td>
<td>- high level of labour efficiency, when compared to Teagasc standards for farm planning (2002**). This value reflects an efficient farm layout.</td>
<td>- high level of labour efficiency, when compared to Teagasc standards for farm planning (2002**). This value reflects an efficient farm layout. Intentions are to redesign sheep housing to improve labour efficiency.</td>
<td>- high level of labour efficiency, when compared to Teagasc standards for farm planning (2002**). This value reflects an efficient farm layout. Intentions are to drag or move the calving season completely to lessen the spring labour peak.</td>
<td>- high level of labour efficiency, when compared to Teagasc standards for farm planning (2002**). This value reflects an efficient farm layout. Intentions are to further optimise labour use on farm, and expand the self-catering units on farm.</td>
</tr>
</tbody>
</table>

** 2.7 S.M.D.'s per annum per L.U. of cattle on a farm with an efficient layout.

4.7 S.M.D.'s required per annum per L.U. of cattle on a farm with an inefficient layout.

*Irish Management Data for Farm Planning, Teagasc 2002 (average value taken)*
Table 2: Table of time management and labour performance characteristics summarising case studies continued.

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<th>Case 10 James and Elizabeth Taylor</th>
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</thead>
<tbody>
<tr>
<td>1. Time management</td>
<td>14.0 hrs./farm/day;</td>
<td>10.2 hrs./farm/day;</td>
<td>5.2 hrs./farm/day;</td>
<td>5.4 hrs./farm/day;</td>
<td>16.7 hrs./farm/day;</td>
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<td>6.0 hrs./person/day;</td>
<td>10.2 hrs./person/day;</td>
<td>5.2 hrs./person/day;</td>
<td>4.8 hrs./person/day;</td>
<td>8.5 hrs/person/day;</td>
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<td>54.8 hrs./L.U./year;</td>
<td>47.9 hrs./L.U./year;</td>
<td>27.3 hrs./L.U./year;</td>
<td>23.3 hrs./L.U./year;</td>
<td>116.1 hrs/L.U./year;</td>
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<td></td>
<td>2.6 A.W.U.'s;</td>
<td>1.8 A.W.U.'s;</td>
<td>0.9 A.W.U.'s;</td>
<td>0.9 A.W.U.'s;</td>
<td>2.9 A.W.U.'s;</td>
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<td></td>
<td>5.9 S.M.D.'s/L.U.</td>
<td>5.1 S.M.D.'s/L.U.</td>
<td>2.9 S.M.D.'s/L.U.</td>
<td>2.5 S.M.D.'s/L.U.</td>
<td>12.4 S.M.D.'s/L.U.</td>
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<td>inefficient farm layout.</td>
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<td>very inefficient layout, and</td>
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</table>

** 2.7 S.M.D.’s required per annum per L.U. of cattle on a farm with an efficient layout.

4.7 S.M.D.’s required per annum per L.U. of cattle on a farm with an inefficient layout.

Irish Management Data for Farm Planning, Teagasc 2002 (average value taken)
In general farmers who were part-time tended to spend a shorter day (per person) working on the farm than did full-time farmers. The larger herds and farms requested more labour for management (Tables 1 and 2). Labour efficiency tended to increase with farm and herd size (Tables 1 and 2). The hours per worker devoted to the suckling enterprise predominantly increased with cattle herd size and farm size (Tables 1 and 2). Half of the participants had a working day in excess of 8 hours per person (Table 2) with no set finishing time.

From the case studies it is clear that all farmers interviewed used agricultural contractors to some degree (Table 1). Contractors were employed to harvest silage, spread slurry and farmyard manure. All farms, regardless of size, used agricultural contractors. Most case study farmers said that the majority of contractors employed were actually farmers themselves.

Family labour was important to suckler farmers and was more readily available over holidays and at weekends. The larger farms tended to hire-in labour directly either in a full-time or a part-time capacity. Most farmers had difficulty in sourcing hired labour, and one farmer was looking at the possibility of bringing foreign labour to the farm. Skills, familiarity along with reliability were the most important factors influencing hired labour-use on farm.

Springtime was identified as the most labour demanding time of year (Table 1). Tasks undertaken in the spring season accounted for 30% of the mean labour input per annum on the 10 farms. Just over 60% of time worked on the farm in spring was devoted to calving, calf care, cleaning and feeding. Grouping cows according to calving date, and having the calving unit close to the winter housing unit and the dwelling house all helped to minimise labour demand at calving time (Table 1). Many of the case study participants had calving observation cameras on the farm and were seen as being extremely useful where the farm dwelling house was a distance away from the calving unit. Night feeding was seen as a worthwhile operation carried out on the farm. This activity increases the number of cows calving in daylight, (however, in order to be effective it must be properly implemented at farm level). Operating a night time observation rota system on farm over the spring calving season so that farm operators take it in turns to check on cows was seen as a useful exercise. This system spreads and decreases the workload on a per person basis.

Calf health was a major concern on the case study farms; one farmer observed that spring time was busy enough without a breakdown in calf health. Some farmers put cows and calves to grass immediately after calving, while others did not begin to calve cows until late spring when cow turnout was complete. This was seen to minimise cleaning tasks and should also increase calf health status. Case study farmer 8 was manually feeding 2 litres of colostrum to all calves within a couple of hours of calving. Dressing calves navel was a practice carried out by the entire case study sample.

Farmers involved in a sheep enterprise, as well as sucklers, were conscious of a high labour requirement peak in spring. Many farmers had moved the lambing season to early spring and delayed the calving season until later in spring, in an effort to reduce the intensity of the labour peak. By delaying the calving season until later in spring cows could be moved out to grass soon after calving. Case study farmer 6 went on annual leave from his off-farm job to cope with the major workload crux in the springtime, while case study farmer 7 said that he would be contracting-in labour to help with lambing and calving in spring 2004.

Although it is a labour demanding strategy, farmers using A.I. said that it was a worthwhile technique (in terms of animal quality), and good handling facilities relieved some of the drudgery.
Some farmers had changed their calving season from exclusively spring calving to spring and autumn calving in order to spread the calving workload, one farmer was even contemplating moving his entire spring calving season to the summer time in an effort to minimise calf health problems. Others have expanded their calving season to 20 weeks or more.

Some farmers had changed their system from suckling to beef to suckling to weaning, or selling cattle off as store animals to reduce the number of cattle on the farm. This minimises time spent over the winter housing period, and may mean that the farmer will qualify for a lower rate of E.U. extensification payments.

**Other labour reduction activities**

Cubicle mats and milled peat for bedding were more labour-efficient methods of bedding than straw (Table 1). Special diet feeders were used for mixing feed, and were credited with reducing labour required over the winter housing period. Crimping cereals for feed also cut down on labour, as well as eliminating the excess dust and noise. Rotational grazing was identified as a time consuming task, while set stocking was more labour-friendly. Slatted sheds were more cleaning-friendly than straw beds. Obsolete farmhouses proved very time consuming to clean. A few farmers had renovated old sheds successfully, making them more labour efficient. Land and herd fragmentation were reported by the majority of case study farmers, as having a negative influence on labour use. Quad bikes were recommended for herding by some of the farmers who had severely fragmented farms.

Farm diaries, work plans and to-do lists were important in managing time spent on the farm. Some farmers used their personal computer (P.C.) to register calves by e-mail thus reducing the associated paperwork.

Good fencing, good handling facilities and farm roadways helped increase labour efficiency on the farm. The Rural Environmental Protection Scheme (R.E.P.S.) was also cited by some farmers as encouraging good fencing, and tidy farmyards, thus improving labour use.

By contracting manual farm tasks, or hiring additional farm labour, farmers have the opportunity to focus on the farm management side of the business. Many farmers identified that a set finishing time meant that they had a clear focus for the day's work. It was also important to assign time to managing the business. One farmer noted that profitability does not equate with hours worked but may be more closely related to the effective use of time and resources that are available on the farm. Tasks should be prioritised and undertaken one at a time. Farmers should also make time available to attend farming events and discussion groups. Time should always be set aside for holidays, breaks and recreation.

It is clear that the majority of the case study farmers believed that labour shortage is a major issue on Irish farms, and farmers who have additional labour available to them valued it immensely. Whether the farm objective is; (1) to increase overall farm size and profit, (2) take up off farm employment, (3) make the farm attractive to a successor, or (4) increase available leisure time, labour-use on the suckler farm will have to be continually improved and developed.

Underemployment occurred on smaller cattle holdings. There was a wide variation in labour efficiency across the 10 farms. The average hours worked varied between 16.1 and 116.1 hours per cattle livestock unit per farm per annum, with an average value of 36.54 hours per cattle livestock unit per farm per annum. Future challenges faced by respondents in the sample of farms included identifying and encouraging a successor on to the farm, further development of farm enterprises and improving the work-life balance.
Conclusions/Implications/Recommendations

An in-depth insight into labour use on suckler farms was obtained. Labour efficient practices were highlighted on each case study farm. The agricultural contractor was an important labour source on all farms. All farmers interviewed used an agricultural contractor on farm at some stage over the course of the farming year, this stresses the growing significance of agricultural contractors on farms (Cherrington, 1981). Ruane and Phelan (2001) in their study of mixed farms in South Tipperary, Republic of Ireland, reported a similar dependence. They found that 96% of the farming participants said that they hired a contractor for farm work.

According to the literature, knowledge of agricultural contractors has not kept pace with their growing importance as an alternative agricultural labour source (Errington and Bennett, 1994). Contractors were most popularly employed for harvesting silage, spreading slurry and farmyard manure. As these tasks require substantial labour and machinery investment it usually proves more economical for the farmer to hire in such a service than to make a substantial capital investment (Ball, 1987a). Contract work was concentrated across all farm sizes (Ball, 1987b). The majority of suckler farms studied regarded agricultural contractors as having an increasingly important role in agriculture. The majority also cited that the bulk of contractors employed were actually farmers themselves. The same relationship was observed in the U.K. by Errington and Gasson (1996).

All farms noted the importance of family labour as is evident from the C.S.O. (2002). The case studies found that family labour tended to be more readily available at the weekends and over school holiday periods. Larger farms tended to employ hired labour.

This research shows that in most cases part-time farmers tended to spend a shorter day (per person) working on the farm than did full-time farmers. The larger the farm and herd size the more labour was required to manage it. Singh (1976), and Dawson (1984) reported similar results in their individual studies. Labour efficiency tended to increase with farm and herd size. Equivalent results were summarised by McKenzie (2000), in an article focused on labour management on the dairy farm and Connolly (2001), in some research carried out on labour use on Irish sheep farms. Structural underemployment was evident on some of the smaller cattle farms, as was similarly found by Edwards (1981). The hours per worker devoted to the suckling enterprise increased with cattle size and farm size (hectares), as was found in a study carried out by researchers from the University of Exeter (Anon, 1994).

Spring was identified as a very busy time on case study farms, and a number of practices were put in place on many farms in an effort to reduce the spring-time peak on labour demand. In spring the most labour efficient farmers tended to group their cows according to calving date, had a calving observation camera, and used mechanical means for cleaning the calving facilities.

Land and herd fragmentation had a detrimental effect on labour use on farms. O'Donovan et al. (2000) and Ruane and Phelan (2001) noted that farm fragmentation had a negative influence on effective labour use.

Half of the case study participants had a working day of more than 8 hours per person (Table 2) with no set finishing time, which indicates, according to Teagasc (2002), that work time on these farms needs to be reorganised. The majority of case study farmers said that their farm buildings and farm facilities could be improved to reduce labour requirements, as was identified on Irish farms by Ruane and Phelan (2001).
Labour shortage was an issue on all case study farms and the farmers studied placed a high value on labour. Whether the future farm goals may be to increase and expand farm enterprises, take up off-farm employment, making the farm attractive to a potential successor, or increasing the discretionary leisure time currently available, labour use on farm will have to be continually improved, developed and become more efficient.

**Educational/Practical Importance**

The research established that there is a wide variation in labour efficiency on suckler farms. The research results indicate that agricultural educators, especially agricultural advisers, trainers and extension workers need to be proactive on the impact of labour use. This will be further emphasised with an increase in part-time farming and a move to multifunctionality. There are a variety of ways of educating farmers in effective labour use including: profiling of the issue in newsletters and in the farming media; demonstration of practices and facilities at extension events, as well as the provision of training courses and discussion groups. The use of detailed data such as that reported on in this study enables teachers and extension agents to appreciate further the detailed attention required to manage labour effectively in farm enterprises. Labour use on farms should be introduced in agricultural curricula programmes or in extension endeavours as a major component of any farm management course. The importance of effective time management is a core issue in these enterprises and must be emphasised to advisers, trainers and extension workers by labour specialists. The way in which the adviser or trainer perceives the role of effective time management exerts great influence in the outcomes of farmers’ actions. There is strong evidence in Ireland already that extension workers believe that considerable gains in labour efficiency can be achieved at farm level (Bogue, 2003).

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† Annual Work Units (A.W.U.) is defined as 1,800 hours or more of labour input per person per annum (C.S.O. 2002).
†† Standard Man Days (S.M.D.’s) is 8 hours of work supplied by a person over 18 years of age (Teagasc National Farm Survey, 2001).

**References**


