

The non-profit organisation, AAMP was established after Paul Dotte's visit to Australia in 1989. Paul and other SIFAM personnel have subsequently conducted further training courses in Australia, and some Australians have attended training courses in France.

The AAMP has developed course material under the Australian Qualification Framework and provides quality assurance guidelines for practitioners and trainers. Through its accredited, independent trainers, the AAMP offers a range of courses, in both "Health care" and "Industrial Loads", from two day short courses/modules to 5-day courses, at Certificate 2, 3 and 4 and Diploma level. In all these courses competencies of knowledge and skills are assessed.

All accredited trainers must re-accredit every 3 years.

AAMP has a website – www.manutention.org.au

THE TRAINING

The AAMP holds the view that manual handling is a skill that can be taught, and that behavioural change is required in order to achieve proficiency and automation in the skill. As children we learn much of our movement patterns by mimicking our role models, our parents and teachers.

Manutention training addresses all the domains of adult learning

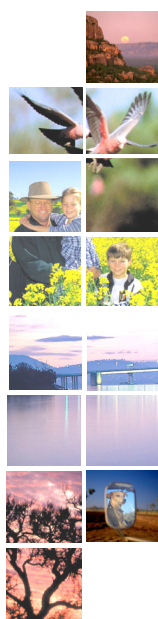
- knowledge
- skills
- attitude.

Manutention is designed to develop "**self protective behaviours**" to decrease the risk of injury, and the cumulative effects of poor posture and poor work practices. A major outcome of a Manutention training program is the improvement of motor skills and biomechanically efficient movement patterns. This enables each individual to take personal responsibility for the control of manual handling risks, which cannot be controlled by any other means.

All the Manutention courses consist of both exercises and application components in a sequential order to allow accumulation of the skills. In Australia all levels of Manutention training combine the exercise and application components with information on the legislative requirements to manage and control manual handling risks.

The exercise component re-educates our bodies in order to develop the behavioural change, to use our large muscles, feet, hands, eyes and our body weight. It is based on normal human movement.

Manual handling is a psychomotor skill, like riding a bike, playing golf and tennis, or driving a car, and for it to be automatically executed in all our activities of daily living it requires lots of practise to become proficient. Some of us just need more practice than others.



Training in Manutention provides skills that enable people to use their body effectively, efficiently and safely when performing all manual handling tasks. The important criteria are **how** we perform the movement.

In this forum and in this time frame it is not possible to teach you the Manutention skills. There is only time to give you an understanding of its concepts and theory, and its application to a few of the varied manual handling tasks that take place on a farm.

Manutention is about:

- body awareness
- co-ordination
- body movement patterns
- flexibility
- using our body as it was designed
- using and strengthening the muscles of the thighs and buttocks, and those muscles that stabilise the Lumbar spine
- establishing.

Like all things it is SIMPLE and EASY when you know how

Bio-mechanics

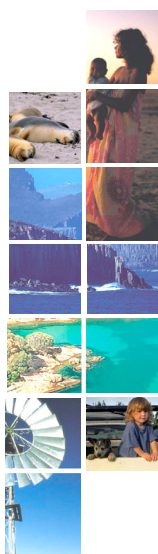
Understanding the mechanics of our body is important to acquiring the Manutention skill. Simple mechanics is one of the first topics we learn in science, and something most men understand.

It is important to understand that our body is a series of mechanical tools.

- fulcrums = joints
- length of lever = bones
- power sources = muscles.

Sensory awareness

Understanding the function of our nervous system also assists to acquire the Manutention skills. The sensory homunculus, the sensory road map in our brain, enables us to understand the importance of utilising eyes, hands, feet and thighs for safe manual handling, and demonstrates our lack of awareness of the stress and strains on our spine.



Fundamental actions and postures

Manutention utilises nine fundamental postures and actions as the basis for its techniques.

(a practical demonstration and all delegates had the opportunity to experience some of these)

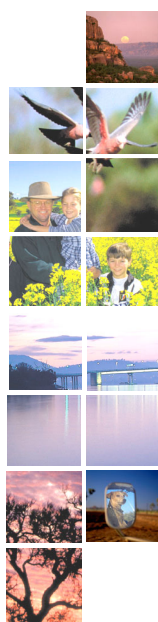
- bench
- weight lifters
- knights position
- oblique lunge
- lateral lunge
- bow
- saddle seat
- cross brace
- counterbalance.

There are also a few minor, **ancillary movements**, which are very useful.

- spring jump
- under and over, to push
- under and over to pull
- brackets and bracing.

I have also added a few names that the rural Australian male can immediately associate:

- hay-bale lift
- pivot
- cricketer-in-the-slips
- golfer (Greg picking up the ball)
- drop the bott out
- spiral
- edges and ledges
- chain saw start.



Principles for safe manual handling

Another very important part of the course is the understanding and application of Richard Chaput's "Principles for Safe Manual Handling."

- principles of physical safety
- principles of economy of effort
- principles regarding the load – the conditions of work.

Agricultural Labourers Injury Data

In "Workplace Safety Week" 2001, Workplace Standards Tasmania released the *Body Strain Prevention Kit*, which included a Body Strain Fact Sheet for workers from farms, forestry, fisheries, horticulture and nurseries. In 1999–2000 the average cost of an injury from this group was \$11250.

The most common manual handling injuries were to the

- back
- shoulder
- upper limbs
- knees.

Agriculture has been identified as one of the "black spot" occupations in which the workers are most at risk of suffering body strain injury. In 2000–2001, it was reported that agricultural labourers sustained 10% of all body strain injuries in Tasmania. However, as the owner-operator tends not to report, nor have time off work, it is reasonable to anticipate that the real figure is much higher than this.

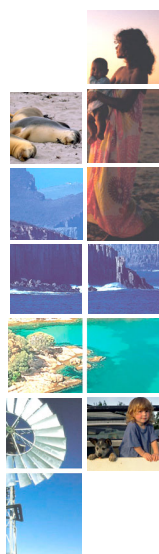
In comparison, nursing and metal trades each accounted for 15% of all reported body injuries.

There is a very real need to train all agricultural workers, be they farmers, working alone or labourers in a team, in safe manual handling techniques and how to care for their back.

TRAINING FARMERS

Winning the Tasmanian Rural Women's Award 2000, has enable me to:

- study and train to become an accredited Manutention Trainer in both the "Industrial Loads" and "Health care" streams
- develop with my co-presenter Andrew White, (*Australia Working Safely*) a 6-hour Farm Safety Management course, for employers, employees, owners and their family members, in which we deliver information on the OH&S legislation, employers and employees' responsibilities, backcare and introduce d skills in safe



manual handling techniques based on Manutention. We have delivered 9 of these courses state-wide for Tasmanian Alkaloids, a poppy growing company, as part of their support for the skills development of their growers

- developed a two-day physically demanding and practical “Manual Handling and Back Care” course for agricultural workers incorporating the Manutention techniques and applying them to many farming tasks
- delivered information to trainee shearers in injury prevention and the importance of “warm-ups” and stretches.

For me, the greatest challenge when delivering manual handling training is, for the training participants to acquire automation and to become familiar with these movement patterns in the shortest possible time. As you know farmers are very busy people, so time is crucial. I have observed that on the whole, farmers have a higher base level of movement pattern performance than do city workers. I attribute this to the multiplicity of tasks they perform.

I have developed a “**Back Attack War Dance**” which enables the participants to experience most of the actions and postures before using them to move an object. The war dance also serves to warm-up the body, stimulate blood flow and is an ideal teaching tool for those who learn through moving, rather than learning by listening or seeing. Ie the **kinaesthetic learners**.

Feedback

Feedback received from farmers, who have attended my courses have included:

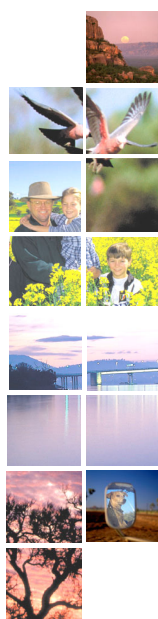
I have just loaded my truck with wool bales. For the first time my truck is groaning but I am not. [commenced farming after retiring from the armed forces]

I now always think “back care” when working on the farm.

I wished I’d been taught this at Ag college.

A written testimonial from a farmer who states the 2-day course produced dramatic reduction and management changes to his back pain, which he had suffered for 15 years, sometimes with periods of acute pain. In these 15 years he had participated in various treatment regimes. He took full responsibility for the family farm at the age of 21, after his father had died.

Within weeks of the course I started sleeping on my sides and stomach and had periods without any back pain or stiffness. I can now sit in an armchair in the evening instead of using a dining chair or lying on the floor. When lifting heavy objects I am now particularly conscious of the appropriate way to lift and can now do so without hurting myself. **Previously I would “bend my knees, tense my stomach muscles” but my technique was different**



“Bad back” survey

Everyone knows that many farmers have a “bad back”. This is a very sweeping statement. To quantify this statement, in the last 2 years, I have surveyed approximately 150 farmers with a “back pain” questionnaire.

The responses indicate that,

- 36%, had their first experience of back pain before they were 20 years of age
- 68% began working as a farmer before 20 years of age
- lifting a heavy object was the most common cause
- 5% had their first occurrence when playing school sport
- for 56% the back pain did not prevent them doing any farming activities
- 53% of the farmers were pain free on most days, but the pain was aggravated by:
 - shovelling
 - lifting and carrying heavy objects
 - crutching sheep
 - driving the tractor and/or farm ute.

Fifty of these farmers also completed the Oswestry back pain questionnaire. But the information gained from the responses to the Oswestry questionnaire was negligible

Surveys/questionnaires have many limitations, including not fully describing the debilitation and limitations created for those farmers who suffer a bad back.

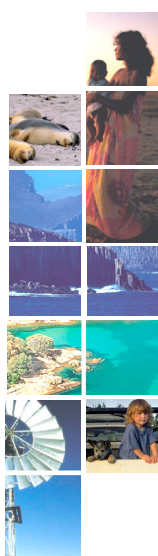
Some of the tasks on our farm, to which Manutention techniques have been applied include:

- moving heavy objects such as rocks, off the ground into the front end loader
- loading a seed drill
- lamb marking
- moving a large pump.

The drill

The drill has 2 parallel boxes, for seed and fertiliser, and a loading platform. Note the farmer’s own engineering modification to this drill, to reduce the risk of injury.

- extension of the loading platform
- safety rail
- ladder and rail.



Bulk handling facilities are available, but sometimes the seed, and lime are supplied only in bags, ranging in weight from 25kg to 50 kg.

For example, in 2001 on our farm we sowed 80 ha of peas, which entailed:

- 800 x 25 kg bags of seed
- 160 x 50 kg bags of lime.

The drill is driven alongside the trailer. Manutention techniques are used to raise the bag and propel it from the storage trailer onto the drill platform extension. The bag is then dragged, using self-protective postures, along the platform to where it is tipped into the seed box.

Lamb marking

On our farm each year we mark about 2500 lambs, doing 500 a day. The lambs weigh between 5 and 15 kg. This lamb catcher, a member of a contract marking team, has not had any training in Manutention skills.

This lamb catcher has.

Pump removal

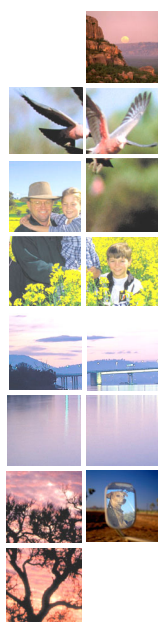
Unfortunately equipment sometimes needs repairs and maintenance, which included this 700kg electric motor pump supplying a Pivot irrigator. The pump was removed by 2 people from the confined space of the pump house and loaded on to the back of the Ute for transport to the nearest town. A 300kg pump temporarily replaced it for the 2 days it was being repaired. The 2 people concerned assessed that the task was well beyond their physical capabilities, and enlisted the assistance of pipes as rollers, flat boards and the front-end loader as well as Manutention techniques (Bench, Counter-balance and Lunge) to protect themselves whilst manoeuvring the pump.

Cauliflower harvesters

This photo was printed in the Tasmanian Country newspaper. I certainly think there could be some issues with the actions and postures that appear to be used. There is certainly more than cauliflowers planted in this paddock. They need to move their feet to reduce the combined twisting and bending of the spine.

Refuelling the auger

This operation occurs many times a day, during the wheat harvest. It is obvious an injury is highly likely to occur whilst performing this task in the manner shown. The farmers commented when I ordered him to ensure a stable platform was available on which to stand, "This is an industry standard and this task is performed in this manner all over Australia"!!! Unfortunately that is no excuse for not making an improvement and to reduce the risk of injury!!



RECOMMENDATIONS

Agricultural workers

There is a very real need to train all agricultural workers, be they farmers, working alone or labourers in a team, in safe manual handling techniques and how to care for their back.

Rehabilitation service providers

For people who are involved in injury prevention, rehabilitation and return to work programs, to retain credibility and respect from their farming clients it is imperative that they understand the industry and have intimate knowledge of the:

- tasks performed
- the skills needed to perform those tasks
- current work practices.

May I suggest an entertaining start would be to read Christina Hindhaugh's books "I Love a Sunburnt Torso" and "For Better, for Worse and for Lunch", and Rachael Treasure's "Jillaroo"

Students

ALL secondary and tertiary students studying agriculture, be it at college, university or as an apprentice, should have Manutention skills training. This will ensure all graduates have the knowledge and automatic human movement patterns to reduce the risk of developing a "bad back" and other musculo-skeletal injuries. **Prevention is better than cure.**

Return to work programs for all workers

All workers on return to work programs should attend and be deemed competent in safe manual handling courses, which address both psychomotor skills training and ergonomics.

