QUEENSLAND COTTON

MACQUARIE VALLEY

PLANT TO BALE

PROTOCOLS

A Guide to Cotton Module Building, Cotton Transport and Farm Hygiene

CONTENT

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INTRODUCTION

Over the past five years, the Macquarie Valley has experienced an expansion in the cotton industry, an increase from some 280,000 bales to approximately 400,000 bales.

Within all industry there are usually general guidelines that have to be implemented due to misinformation or neglect. Failure to operate within these guidelines can lead to massive litigation implications, along with negative images and perceptions of the industry from the public.

The module-carting industry has emerged into the "limelight" because of two things:

a) The increased number of trucks on the road
and
b) The amount of cotton litter on the sides of the roads.

This has occurred because, in the main, module building is flat out keeping up with the increasing capacity of bigger and faster cotton pickers. Consequently less time is available to ensure that each module is well constructed before moving onto the next.

Growers should take particular note of the need to arrange a pre-season meeting with their carrier to discuss the issues raised in these protocols

Growers who use contract picking crews have the added responsibility of ensuring the protocols are understood and abided by all people involved in the picking operation.

Of particular concern to ginning companies is the growing incidence of foreign objects in modules. These range from large rocks to machinery parts. All of them can and do cause serious gin fires resulting in lost cotton and many hours of lost production. In addition thousands of dollars in damage to ginning equipment almost always occurs. We urge readers to take particular note of the section, which covers this problem.

The cotton industry has always tried to implement its own set of guidelines, so that all associated bodies within the industry are kept up to speed on requirements and change to regulation.

Here in the Macquarie Valley there have been particular issues of concern. Cotton litter on the roadside; disease and farm hygiene; size, quality and method of the cotton modules being transported are often mentioned.

The Macquarie Valley cotton industry felt it had a responsibility to tackle these issues so a small group of industry representatives consisting of cotton carriers, growers, and

ginners was formed to establish a set of guidelines so that the cotton can get from the plant to the bales with as little drama as possible.

Queensland Cotton have made a great contribution by allowing us to use their publication “Guide to Cotton Module Building and Transport” in our Plant to Bale Guidelines and Protocols.

We particularly want to say a special thank you to the members of the working group who were responsible for ensuring that information in the guide was relevant and resented in the moist user friendly way.

With this in mind it was decided by the working group to provide this guide as part of a kit. It will come with a durable protective cover (so you can carry it in the truck or ute), and a small n umber of stickers which we hope you will place on relevant machinery. These stickers highlight key points from the book.

(stickers not available in online presentation)

Rob McCutcheon – Chairman, Macquarie Cotton Growers Association

Mark Dugan – Working Group.

COTTON MODULE SITE PREPARATION

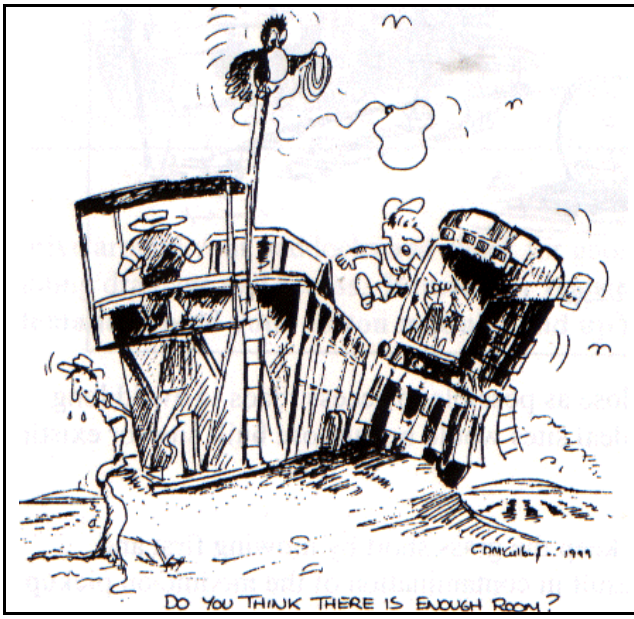
The site on which your module is built will have a significant impact on the quality of your cotton when it arrives at the gin.

Spend some time before you start picking and **choose a suitable site.**

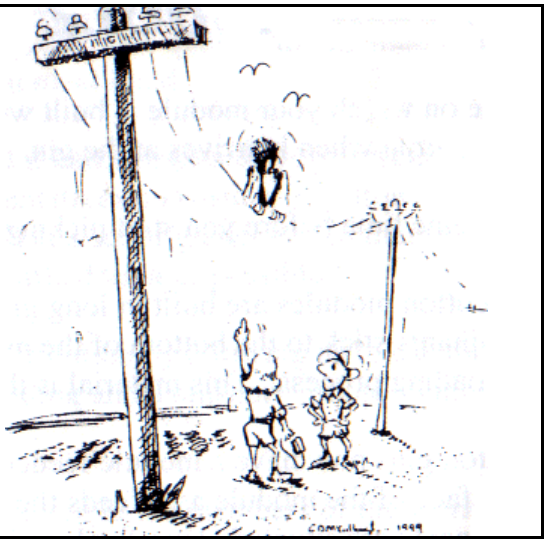
When cotton modules are built in long grass, on top of bushes or in the mud, the contaminants stick to the bottom of the module and are picked up with the module in the loading process. This material is then transported to the gin.

All cotton gins now have a module feeder system that takes a layer of cotton from the end face of the module as it feeds the module into the gin. because the contaminants are situated along the length of the module, by feeding the module with the modular feeder system, contaminants are distributed through all the bales produced from that module.

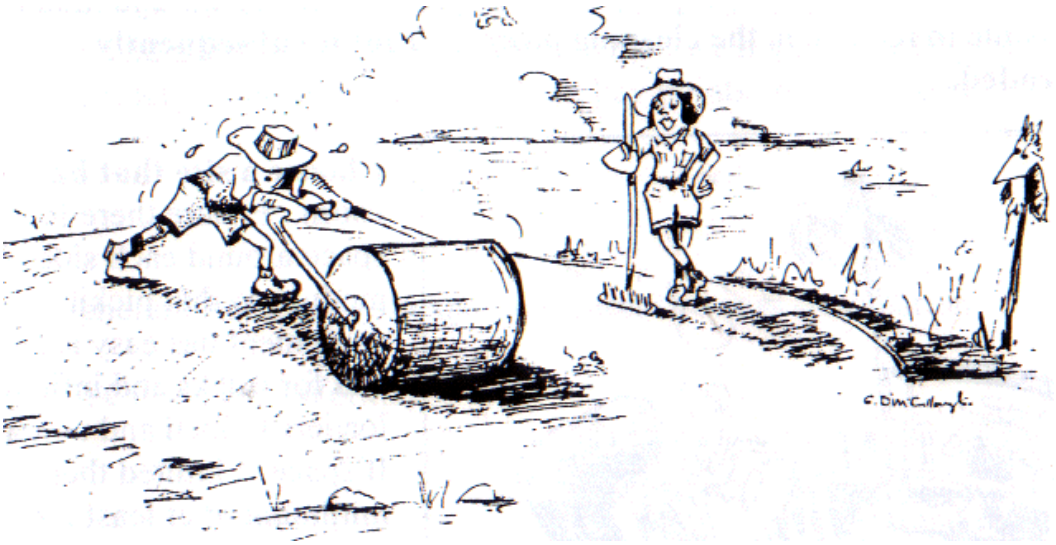
The modular feeder mechanism pulverises the grass, cotton talks and mud making it impossible to remove in the cleaning process. **Lint is subsequently downgraded.**



Choose a site that has enough room. Ensure there is ample space around each side of the module so that picking equipment has easy access, and for trucks and infield loaders to load and unload. If space is limited then a minimum of at least 2 metres is required between the module builder and the nearest object, fence, head ditch, or drain.

Where head ditches have been filled in prior to picking, module builders need to be kept well clear of the ditch area so as to avoid the loader or truck wheels transversing uncompacted soil. **Remember trucks and infield loaders need extra space.** Beware of proximity to channel banks and drains and potentially dangerous situations where machinery operations take place. **Keep a look out at all times for overhead power lines.**	

A dirt pad with a slight camber for drainage is ideal. **Ensure pad is well compacted** using a tractor or road roller. Try to keep machinery off these pads during wet picking conditions as this may create ruts across the pad.

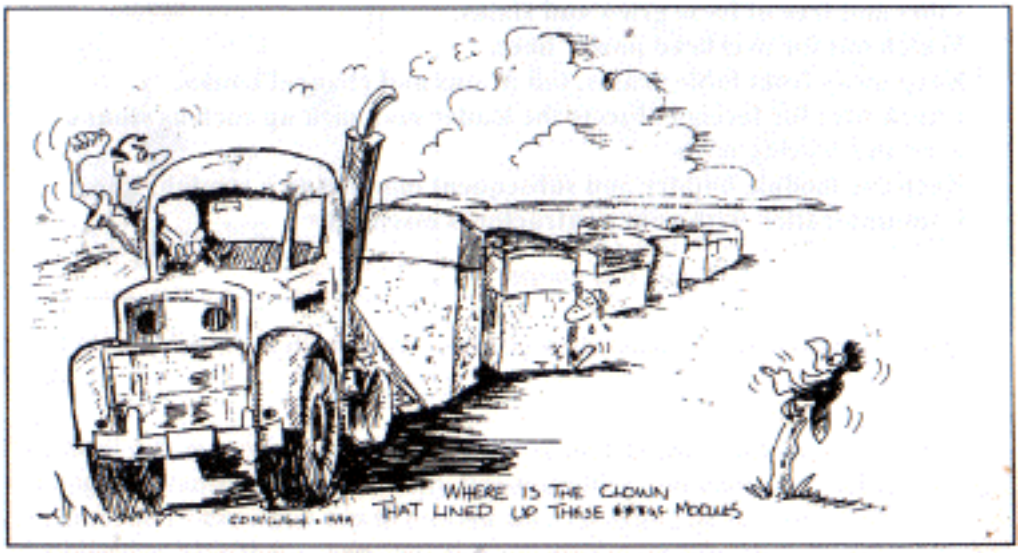


It is an advantage if the site is as close as possible to access roads to avoid long haulage in wet conditions. Some ideal sites would be purpose built sites or existing farm roads with good drainage.

If grassy areas are the only option, keep the grass short by mowing first and remove the dry grass, as this can result in contamination of the module on pickup.

In dryland areas, a slashed area that is raked to remove the bulk of the stalks is the answer.

Avoid sites on furrows, over filled in head ditches or on cultivated fields. Anywhere there may be contamination, particularly coarse gravel roads. Be careful not to build on the edge of roads where modules can develop a lean. Keep modules in a straight line and assist the carrier whereever possible in loading your modules, to avoid breakage and lost cotton.



Drive around your paddocks and check for good sites well in advance of picking noting drainage and access. **Remember transport may not be available on demand should your cotton modules end up in a sticky situation.**

KEY POINTS

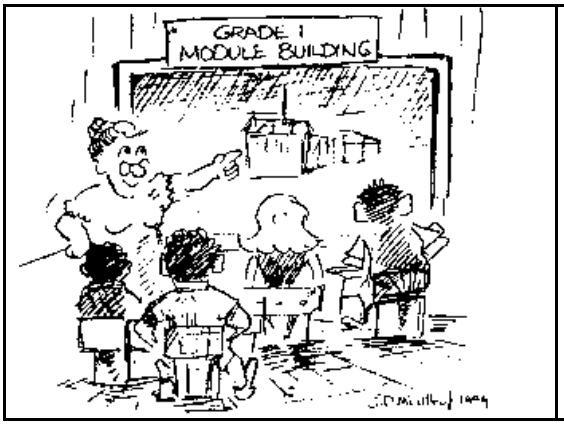
Select your site well before picking starts.

- **Ensure site has plenty of room to manoeuvre pickers, infield loaders and trucks around the module.**
- **Build and roll a dirt pad to provide good runoff.**
- **Look at transport access to avoid long hauls across loose soft cultivated fields.**
- **Keep the site clean and if grassy areas are the only option, keep grass short and free of loose grass and stalks.**
- **Watch out for overhead power lines.**
- **Keep away from table drains, tail drains and channel banks.**
- **Check sites for foreign objects the loader may pick up such as stones, wire and fencing posts.**
- **Keep the module builder and subsequent modules in a straight line.**
- **Communication with your contractor is essential.**

COTTON MODULE CONSTRUCTION

There are no short cuts to building a good solid module.

It takes time to do the job properly and it is preferable to have two module builders for one four-row or six-row picker. As you increase your picking capacity, this should be matched with extra building capacity.

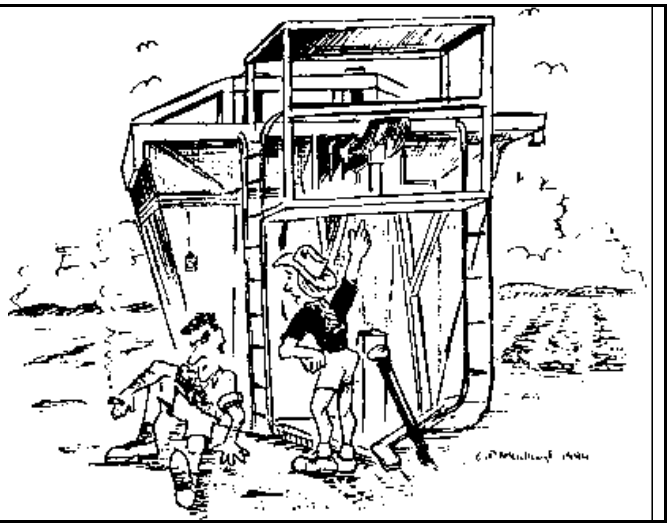


Module construction requires proper staff training. Take time to train new operators in the art of module construction and be sure to point out all other aspects of the job as well. be sure to include site preparation, positioning of the module builder in relation to head ditches and drains, hazardous situations, access for machinery and trucks, contamination, tarping and labelling.

Most module builders if operated correctly will construct a reasonable cotton module.

The ideal cotton module is one that is, **dense and solidly packed**, to withstand loading and transport, has **smoothly finished sides and ends**, to repel water and moisture, and a **crowned top** to prevent water ponding on the tarp.
Modules that have these characteristics and are tarped correctly will be able to better maintain the quality of the seed cotton.

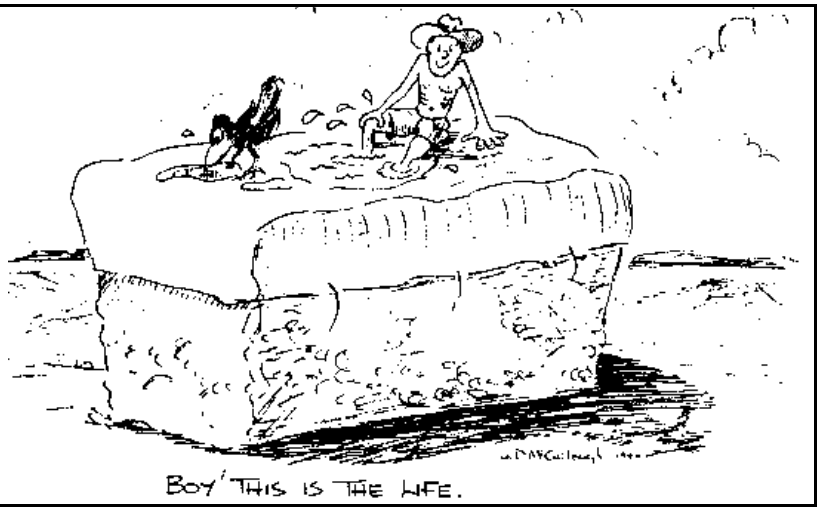
Good module density comes with solid pressing. **Keep the module builder tramper operating at all times** and don't stop because you think the module has had enough pressing between basket loads. A builder fitted with a computer is a good aid. It can be set to continue pressing at a constant rate until another basket of cotton is ready to be tipped in.



You may prefer to two-thirds fill one builder then start on the next builder. This will give you time to finish the first module properly and ensure you have a good solid module.

Spread the cotton evenly along the length of the builder before commencing pressing. This should be done after each basket load. Start pressing your module as soon as there is enough cotton in the bottom of the builder t ensure the bottom of the module is pressed solid.

Using a conventional press, **pay particular attention to filling the ends of the press.** Pack the ends more frequently as they are more often softer and prone to falling apart on loading and unloading. **Hollows and depressions should be filled and pressed to stop water ponding on top of modules after they have been tarped.**

Finish off the module by patting the module backwards and forwards lightly to arrive at a nice curved top. A curved tramper foot will produce the desired rounded top on the module.	

A boll buggy fitted with a chain bed will break down compressed cotton when the load is tipped into the builder. This can also make cotton easier to press.

The operation of a builder fitted with a Speed Roller is similar to a conventional builder.

Low moisture lint will require more pressing. Even though it may appear springy a good solid module can still be built.

Give yourself time to build a good module, every time. This may mean taking the decision to slow the pickers. Cotton breaking away from the modules on loading and transport to the gin yard is costing as much or more than taking a little extra time at picking.

Once built, the modules should be tarped and labelled immediately.

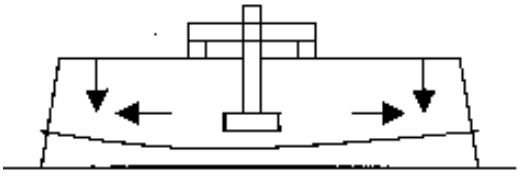
Water will seep through most tarpaulins after extended periods of rain. Check the tops of modules after rain and remove any collected water. Water seeping through tarps forms a column of wet cotton in the module and shows up as a downgrade in odd bales produced from the module.

Use sound common sense when building modules. One module contains approximately 21 bales of lint. This represents a lot of money, time and hard work and as such deserves only the best treatment. Unnecessary haste at picking and building can cost big dollars later.

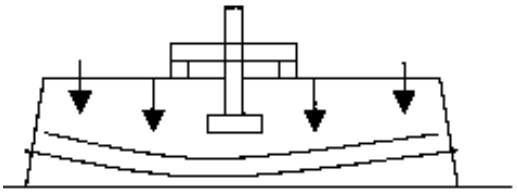
KEY POINTS

- **Train staff properly.**
- **Take the time to build a good solid module.**
- **Increase builder capacity in line with picker capacity.**
- **Pay particular attention to pressing. Keep machine operating.**
- **Pay particular attention to the ends of the module.**
- **Consider fitting a computer to your builder.**
- **Aim for a nice crown shape to the top of every module.**
- **Apply the same basics when using a Speed Roller.**
- **Remember that any water drainage caused by poorly constructed modules will impact through downgraded cotton.**
- **Each module builder to be equipped with a pole or a mark on the module builder to show maximum height level.**
- **Do not throw loose cotton on top of module it will only shake down beside tarps and then blow off during transport.**

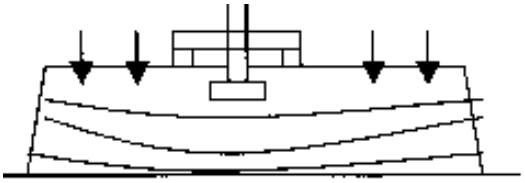
PROCEDURES FOR BUILDING A COTTON MODULE



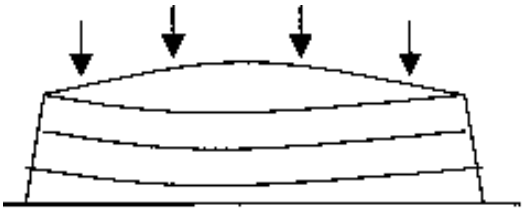
Pull the cotton to the end of the builder as the module is filled. Tramp continuously with extra tramping on the ends.



Continue the process gradually filling in the centres of the module.



Continue as above gradually building up the crown of the module.

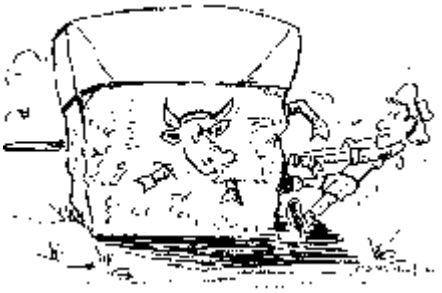


Finally "PAT" the module back and forwards with the tramper to finish off.
DO NOT PRESS.

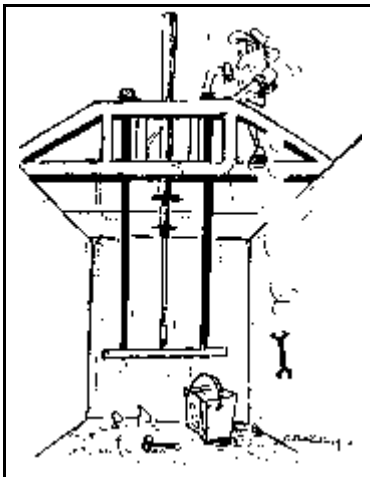
FOREIGN OBJECTS IN COTTON MODULES

Any contamination in cotton modules delivered to the gin will result in downgrading of the lint and possible fires in the gin.

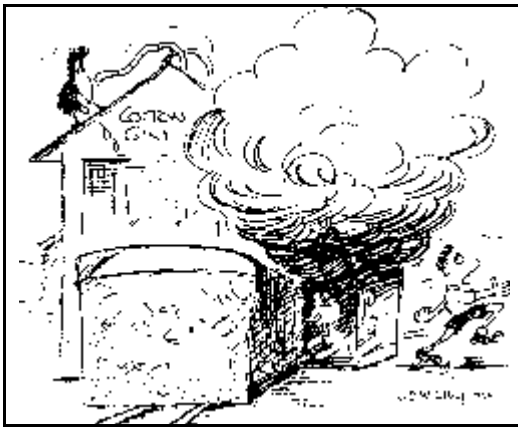
Many foreign objects founding modules are quite large and could easily have been observed by an attentive operator. Objects such as compactor augers, machinery panels, fence posts, steel pegs, rope, baler twine, electric fence tape, clothing, jewellery, plastic bags and large amounts of blue metal gravel are very common.

A considerable amount of the contaminants are introduced into the module through negligence, and in some cases, it seems evident that little attention has been paid to proper procedure and to the site preparation. Cotton spilt around module builders then picked up using fronted buckets and lawn rakes are a common source of contaminants.	

Foreign objects in modules will cause downgrading of cotton lint and will also certainly cause delays in ginning which affects all growers. Clearly mark modules that you suspect may contain objects that will cause damage to ginning equipment and advise the gin weighbridge on delivery.

	Oil leaks can occur in builder hydraulics causing damage to cotton. Any leaks should be repaired immediately, do not wait until the end of the day. **Oil contaminated cotton is heavily discounted as this cotton is not acceptable to the spinning industry.** At the gin, the main concern with foreign objects is the risk of fire and damage to ginning machinery. Feeder disperser rollers coming in contact with metal, rocks and machinery parts causes sparks which ignite the cotton which then quickly spreads throughout the gin.

Fires cause loss of production and product. Fires have resulted in lost production of up to three days. Most fires cause around 6 to 8 hours downtime and result in lost production and ginning machinery damage of around $20,000 to $50,000 at a time.



There has been discussion amongst Ginning Companies about the financial loss they incur each season, from fires and damage to ginning equipment caused by foreign material in modules. It is possible that unless there is significant improvement in this area claims will eventually be made against cotton growers or contractors to recover the costs.

All staff allocated to module building duties should be made aware of the need for keen observation and attention to correct procedures when building modules.

KEY POINTS

- **Any contamination in cotton modules will downgrade your cotton lint.**
- **Constant vigilance and keen observation will reduce the amount of foreign objects in modules.**
- **A clean site is essential.**
- **Be mindful of the safety of gin workers and fires in ginning equipment.**
- **Regular maintenance of machinery will reduce the risks.**
- **Ensure all staff involved in module building are made aware of the need for constant vigilance.**
- **be particularly careful not to introduce foreign objects into modules when entering the builder or making repairs.**

COTTON MODULE TARPING

Covering your modules with tarpaulins is designed to reduce contamination and the risk of water damage.

The quality of the material used in the manufacture of cotton module tarps is generally of a light or medium grade. This material, even when new, will allow water to penetrate through the tarp and into the module when subjected to periods of prolonged wet weather.

a large number of module tarps still in use have long since passed their useful and effective life. Testing each tarp using the light bed technique to determine its water repelling qualities is essential before the start of each season, regardless of whether the tarp was purchased new the previous season.

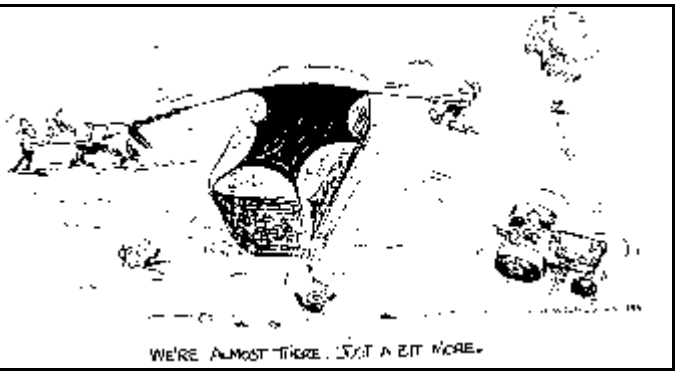
Flapping whilst the module is being transported, general use and exposure to sunlight will all contribute to the deterioration.

tarps come in basically three different styles. 1) fitted, 2) straight, or 3) new fitted ropeless tarp.

Whatever type you choose ensure there is **sufficient length and width** to adequately protect the module from rain and moisture. Ensure the length is sufficient to cover the ends of the module to at least a third or half. Insufficient length contributes to downgrading of around 4 bales or more in every module. A significant number of modules delivered to gin yards each year are inadequately covered on the ends.

Avoid using belly ropes as they break easily causing the tarp to flap on transport and exposing the cotton module to moisture (rain and dew) in the gin yard.

Consider using alternative methods to tie down tarps such as placing cotton ropes in the module whilst it is being built or purchase the new generation tarps where it suits your operation.

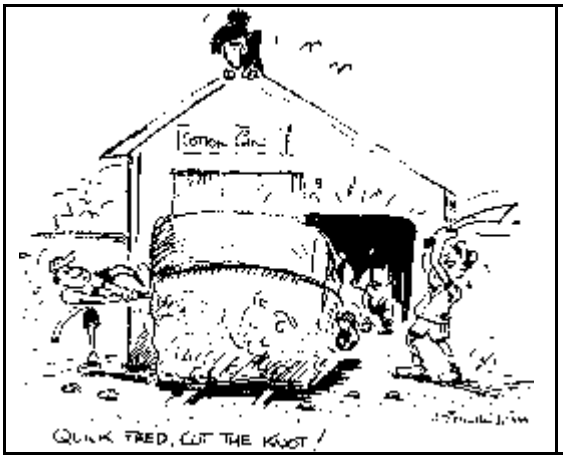
Use only cotton ropes to tie down module tarps. Synthetic ropes are BANNED from use in the cotton industry.	

Cotton modules, tarped immediately after construction and before expansion of the lint has taken place, tend to stay together better during transport, as well they keep their shape in the gin yard.

Knots in cotton rope used to tie down module tarps can become extremely difficult to untie once they become wet and are subjected to excessive force from the stretching of the module during transport.

Use only slipknots and never use granny knots.

It is the ginner's policy to avoid ropes and to remove all ropes from the module before ginning. **Granny knots, multiple knots and ropes tied together inside the module all make it impossible to fulfil this policy.**

	A knot that may seem simple enough in the field can become very difficult to untie at the feeder bay and the rope may need to be cut to remove the tarp. Continually folding tarps "width ways", the traditional method for folding can mean a sharp fold will occur along the length of the seam.

As the majority of tarps are manufactured from light to medium weight material, this action, over time subjects the seam to fatigue.

Evidence of this can be seen when pre-rain picked cotton ginned after rain shows light spot through multiple bales produced from the module.

Folding the tarp “length ways” eliminates fatigue along the seam and confines the damage to a small section across the width of the tarp.

Water damage is then confined to a single bale or two rather than multiple bales.

KEY POINTS

- **Ensure tarp has adequate length and width to protect module.**
- **Check the tarp for deterioration and holes each year.**
- **Avoid using belly ropes.**
- **Use only cotton rope.**
- **Use only slipknots.**
- **Consider new generation tarp design.**
- **Synthetic rope is BANNED.**

SECURING COTTON MODULE TARPS

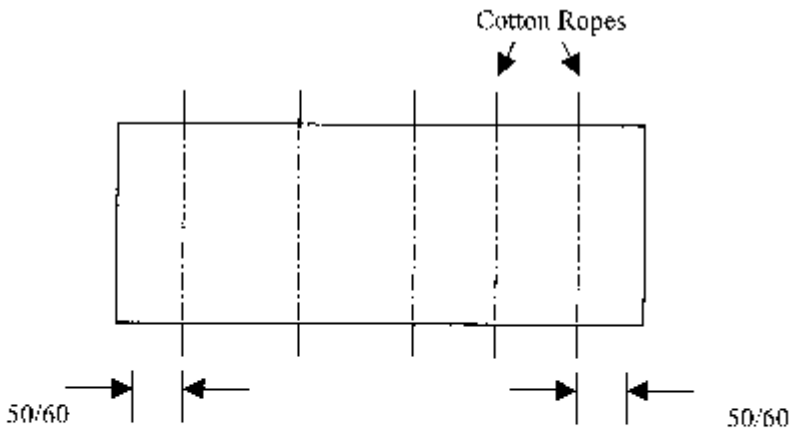
The following is offered as an alternative for securing module tarps for growers accustomed to using a belly rope and down ropes attached to the tarp.

The alternative is to place cotton ropes into the module as it is being built. Growers using the alternative method have had success as well as saving a considerable amount of rope.

Place 5 to 6 ropes (depending on the length of the module) across the width of the module with sufficient length on each side to reach up to the eyes or loops of the tarp. Down ropes attached to tarps are no longer required.

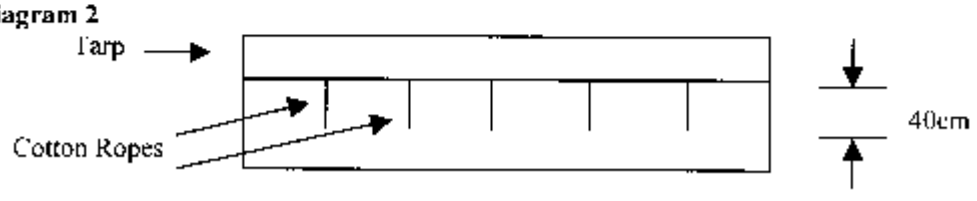
Place the ropes closest to the ends of the module in from the end approx 50 to 60 cm, equispace the remainder of the ropes in the module between these two end ropes. All ropes should be positioned to be approximately in line with the eyes or loops in the tarp. There doesn't have to be a rope for every eye or loop on the tarp particularly where the eyes or loops are spaced closely to each other. Ref. Diagram 1.

Diagram 1



Plan View

Diagram 2

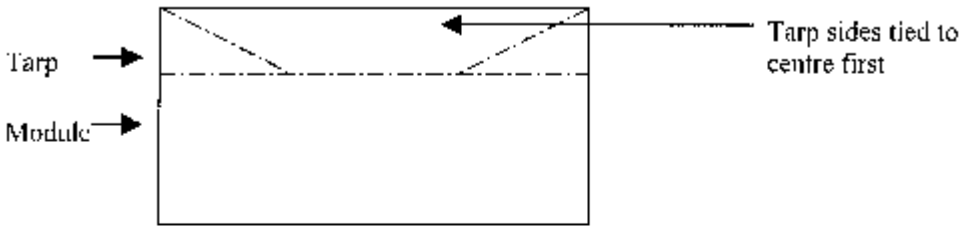


Side View

Place the ropes in the module at a depth that allows for the minimum amount of exposure to the rope between where the rope protrudes from the module and where it ties to the tarp – approx 40 cm should be sufficient. Ref Diagram 2.

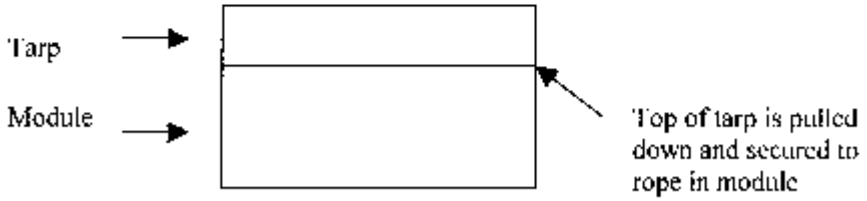
To tie off the ends of the tarp on the module you will need to develop a method that suits the length of your tarp, however where the tarp has sufficient length the same method used on trucks to tie off the end of a cap tarp could be adopted. That is the sides are brought around to the centre of the end of the module and tied together first, while the top of the tarp is pulled down over the ends and then anchored back to the end ropes previously built in the module using two extra pieces of rope.
Where a tarp is short in length relative to the length of the module, then some enervative thinking may be needed to achieve a satisfactory result. Ref. Diagram 3 & 4

Diagram 3



End View

Diagram 4



End View

Marking the inside of the module builder will help in placing the ropes in the correct position in the module, thereby ensuring uniformity with each module as well as saving time.

The above procedure is a guide only and you will need to develop your own style. by persevering you will soon develop a method that you will become comfortable with.

COTTON MODULE CARTAGE

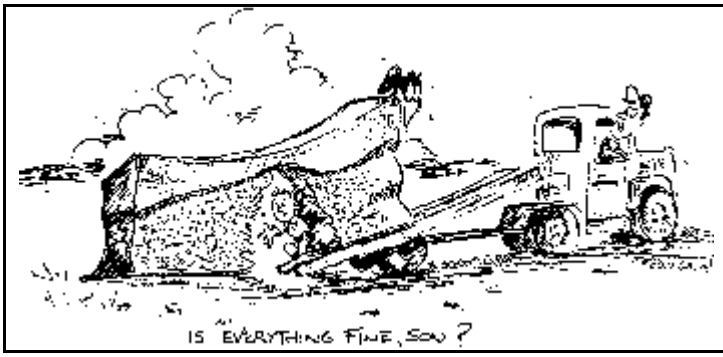
Concerns from the wider community on the amount of cotton spilling and falling onto the road ways during the cotton picking season is of concern and needs to be addressed where ever possible. To reduce the amount of cotton being lost from trucks the following needs to be observed.

Give your carrier or infield loader clear access to your cotton and ensure the site around your modules is clean.

Trailers should be cleaned and swept after each delivery to prevent loose cotton blowing onto the roadway and nets on flat top trailers should be able to cover the middles down to the combing rail so that no portion of the module is exposed.

Ensure your module builder dimensions are less that the inside dimensions of the chainbed and infield loader. The accepted industry standard for a cotton module is a maximum 2.25 meters wide at the bottom, and a maximum1.95 metres wide at the top. Modules expand after pressing and can gain up to half a metre or more in length.

Module builders should not be blocked. A module using blocks is difficult to load and unload once the module has expanded or is on a lean relative to the vehicle. This more often results in the module being broken and the cotton being wasted or downgraded from water damage as it is waiting to be ginned.



Truck and infield loader operators should **ensure modules are not excessively stretched when loading and unloading.**

Do not oversize or overweight your modules. **Road transport regulations stipulate the maximum gross weight and height of vehicles. These Regulations should be referred to at all times.** As a guide, for a tri-axle forty foot chainbed, the maximum weight of the module should not exceed 17 tonnes and the height of all modules should not exceed 9 ft (2.7 metres).

In order to ensure the integrity of the pack for transport the modules must have a minimum density of 125 kilograms per cubic metre. Therefore, the minimum weight of a module 12 metres long, 2.4 metres wide and 2.4 metres high would be 8.6 tonnes. Higher modules, low density (poorly packed) modules and broken modules may require different restraint systems in order to comply with the Regulation restraint requirements.

Loading Requirements

The trailer should be fitted with a braced headboard for loading. A standard gate (loading rack) can be braced with one or two 8mm Transport chains at a height of 1200mm above the loading deck and tied to tie-rail points between 450 and 600mm back from the front gate (see figure) so as not to interfere with unloading.

The use of triangular frame (450mm base, 450mm height) at the front of the load will ensure a more integrated module for unloading (see figure).

The use of removal trailer rear deck extensions is permissible only if the rear overhand (distance from the centre of the rear axle group to the rear of the extension) does not exceed the lesser of 3.7 metres or 60% of the wheelbase, and the overall length of the combination does not exceed 19 metres.

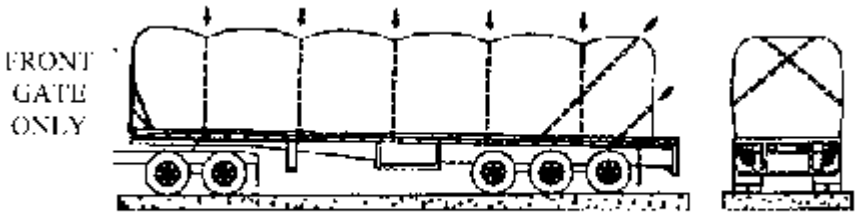


FIGURE (COTTON MODULE)

Restraining the Load

The restraint of a cotton module requires the use of a tarpaulin to fully enclose the load. The tarpaulin should completely cover the module and be attached to ensure that no cotton can become dislodged from the vehicle.

webbing straps each with a minimum 2000kg Lashing Capacity are required over the tarpaulin and module. The straps must be continuous over the module, but may pass through locating pockets in the tarpaulin or may be attached to it.

Five straps are required for modules up to 15 tonnes, six straps for over 15 tonnes and up to 18 tonnes, seven straps for over 18 tonnes and up to 21 tonnes. One additional strap is required for additional weight up to 3 tonnes.

The straps should be pre-tensioned to at least 150 kilograms force, using with hand ratchets and/or truck-mounted winches.

The straps should be re-tensioned when appropriate, to ensure that adequate pre-tension is maintained during a journey.

Ropes should not be used over the tarpaulin. Short ropes (12mm Silver Rope-Lashing capacity 300kg minimum) can be used to manually pretension the webbing straps, which pass over the tarpaulin, provided that the required 150kg pre-tension is achieved. When the rope passes around the pipe tie rail and a smooth metal ring attached to the webbing strap, at least three full loops are required to achieve the correct tension. When "truckies" hitches are used, a triple hitch is required at each strap.

A front gate (loading rack) is required. A rear gate is not necessary, however two tail straps (see figure) are required to stabilise the rear section of the module.

The front gate braced as described in Loading Requirements above is adequate for forward restraint. Alternatively, the use of either one or two 8mm Transport chain supported by, or attached to the gate at a height of 1200mm above the loading deck and tied to tie-rail support points at least 2 metres behind front gate will give a much greater load restraint capacity in the forward direction.

Discuss with your carrier at a pre season meeting the legal requirements for weight and height for his particular truck. Truck configurations can vary affecting maximum loads and dimensions.

Modules are best picked up from the field and delivered in the same sequence as they were built. best ginning results are obtained when a complete line of modules from the same filed, same variety and same merchant are ginned in the same gin run.

Transport operators delivering modules to the gin yard by chainbed trailers need to take particular care when unloading that the modules are kept in a straight line in the module pad. Ensure that the modules are placed leaving no less that 1 metre gap between each one. This is necessary to allow moisture such as rain and dew collected on the ends of the modules to receive sufficient sunshine to dry out.

Modules broken during loading and unloading and delivered to the gin yard should be reported to the weigh bridge officer immediately. action can then be taken to secure the protection of the module.

To enable your modules to be correctly recorded on delivery to the gin, **correct module identification and paperwork should be attached to the module promptly after construction.**

Prompt and correct paperwork should be pre-delivered to the gin at all times.

Most gins require a module to be left on the ground for 48 hours before delivery to the gin.

KEY POINTS

- **Have a good clean access and a clean site.**
- **Clean trailers to prevent loose cotton blowing into roadways.**
- **Build strong well-compacted modules as this will assist transport.**
- **Observe Transport Regulations weight and height dimensions.**
- **Do not stretch modules on loading and unloading.**
- **Ensure all paperwork is done promptly and concisely and accompanies the module to the gin.**
- **Hold a pre season meeting with grower and carrier.**

COTTON MODULE AND PICKER FIRES

Fires in modules, pickers and at the gin are a major concern.

Filed staff and machinery operators need to be instructed on the risks of fire and that a c**omplete smoking ban applies** around the work area and when operating machinery at all times.

To prevent fires **ensure pickers are kept clean and free of lint.** Pickers should be regularly cleaned at least 4 to 5 times a day, especially around the spindle and doffer areas, followed by a wash down at the end of each days picking.

A blocked shute will cause the doffers to spin in the cotton causing friction and the potential to start a fire especially in dry cotton. Do not put cotton that has jammed around doffers back into the picker basket.

Pressure plates incorrectly adjusted and therefore hitting spindle tips are a likely source of many basket fires. Remove all cotton from around moving parts, bearings and hot manifolds.

Truck exhaust pipes incorrectly fitted also cause module fires.

Have a ready supply of water or a water truck on hand at all times, and remember prevention is better than cure. Good housekeeping is essential and vital as many fires start on a picker. A water pumpwith an adjustable nozzle and an attachment such as a length of pipe with holes drilled along the length so that it can be inserted into the module to irrigate internal fires is ideal.

In the event of a fire, establish if the fire has started internally or externally in the module.

If the fire is internal, irrigate the burning area using low pressure water, while removing the burnt cotton by hand as you continue to irrigate the area, Protect your hand with a glove to prevent burning. Monitor the module for at least 24 hours.

When the fire is external, irrigate the burning area using a water pump and fan spray. Do not use pressure as the fire is likely to dislodge and spread to a larger area or other modules. Water the module all over before removing the tarp to prevent the fire from spreading, then carefully remove the tarp while at the same time fanning water over the top of the module. Remove the burnt cotton and monitor for 24 hours.

After this withholding period, mark the module clearly, then notify the gin office and your carrier before delivery. Fire modules need to be kept separate on delivery to the gin yard and continually monitored. Once the module is deemed to be safe it will be ginned in the growers next scheduled gin run.

Bu**rning cotton has a distinctive smell and is your best defence. Do not ignore it.**

If a fire is detected, if possible isolate the suspected module, or if it is in the picker or module machinery move to a safe situation quickly to avoid danger to other modules or equipment.

Periodically leave a bigger gap in the line of modules to allow easy access for fire fighting equipment to negotiate quickly.

KEY POINTS

- **Prevention is better than cure.**
- **Keep all machinery, particularly pickers clean and free of trash.**
- **For all fires irrigate well, remove burnt cotton and monitor for 24 hours.**
- **Keep a good supply of water easily accessible.**
- **If in doubt move suspect module away from others.**
- **Make all cotton picking and module building and handling areas NO SMOKING ZONES.**
- **Notify the gin office and carrier of fire modules.**
- **Mark the fire module clearly.**

FARM HYGIENE GUIDELINES

To reduce the risk of the spread of disease.

MODULE CARRIERS

All cotton

- No deliveries during wet weather or in muddy conditions.
- Confirm delivery of all modules with grower and gin 24 hours prior to carting
.
- No trucks to enter any farms without prior communication with the grower.
- Ideally, cart larger runs from each farm to prevent excessive number of clean downs between farms (don't alternate between farms especially if conditions are even slightly muddy); compressed air could be used to clean chain beds if it is not wet and if there is no mud on the vehicle.
- Clean down chain beds and flat tops when unloaded – sweeping into a secure bag or designated area at the gin (prevent loose cotton blowing away).
- When leaving farm, need to have all mud off machine; loose cotton can be blown off at the gin. Need to satisfy next farm that machine is clean.
- Assume all farms could have Fusarium spores in soil or plant material and keep clean.

Fusarium Affected (and suspected) Cotton

- Delivery of affected modules at the discretion of the gin (this will be confirmed 24 hours prior to the delivery).
- Delivery of affected modules during daylight hours only.
- Notify gin on arrival for module pad allocation.
- Cart larger, predetermined numbers from affected areas (eg: whole field) for ease of clean down and module yard allocation.

MODULE BUILDING – GROWERS AND CARRIERS

All Cotton

- All modules to be built on level ground to prevent breakage when picked up.
- All modules should be placed out of areas that could become wet (ie tail drains and head ditches)
- Do not overload a module and do not use blocks to raise the module builder height. This will assist trucks to eliminate spillage during transport.
- Clean up loose cotton on top of modules before they are to be picked up.
- Do not throw loose cotton on top of module as it will only shake down beside tarps and then blow off during transport.
- Demand ***COME CLEAN, GO CLEAN*** is used by your module carters – be aware of carriers' schedule for truck inspections before entry to your farm.
- Do not allow module carting in wet/muddy conditions.
- Advise gins of all module deliveries (24 hours ahead).
- Do not expect carriers to pick up left over loose cotton after the module has been picked up.

Fusarium Affected Cotton

- Advise gins early of Fusarium Wilt affected areas (as soon as confirmation is received)
- Label all affected modules (tarps – coloured ribbon – and comments on paper tickets as per a trial)
- Give notice of expected delivery time (2 weeks in advance).

MODULE CARRIER CHECK LIST

Pre season communication with each grower/client (covering truck size and maximum module weights and dimensions – heights, length width) ☐

Each truck equipped with a pole, marked to show maximum height level ☐

All drivers instructed on good farm hygiene (especially no carting when wet) before commencing carting and reiterated as conditions arise. ☐

Copy of protocols placed in each truck and read by each driver ☐

Each load properly covered
- top and back gate 'nappy' for chain beds
- fully covered top and sides and front and back for flat tops ☐

No loose cotton picked up and added to module when loading, loads checked after tarping/before leaving the farm for potential spillage ☐

All speed limits adhered to, including school zones ☐

trucks swept or air hosed to remove loose cotton immediately after unloading each module on the module pad ☐

Each truck equipped with a rake for clean downs. ☐

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COME CLEAN

GO CLEAN