PREVENTING HAND INJURIES WHILE PRUNING FRUIT TREES

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Trimming
Pruning:
• Leading
• Thinning
Training

About 35% of the Variable Cost in orchard production goes to pruning
Pruning and Training

Involve:
- Hand
- Wrist
- Forearm
- Elbow
- Arm
- Shoulder

Require:
- Repetitive motions
- Awkward postures
- Excessive force
- Long hours
Cumulative injuries and musculoskeletal disorders (MSDs) have become an increasingly recognized issue of concern in agricultural production.

The DHHS and the NIOSH have identified the risk of overexertion and repetitive motion as a goal to reduce the rate of lost time injury and illnesses.
Understanding the Physical Demands

Provide a better view on how to reduce or minimize exposure of workers to the risk of injuries and disorders of the upper limb.
Ergonomics

Human abilities and limitations

Products, Systems, and Environments
Musculoskeletal disorders (MSDs) are injuries or pain in the human musculoskeletal system, including the joints, ligaments, muscles, nerves, tendons, and structures that support limbs, neck and back. MSDs are increasingly recognized as a significant hazard of agricultural occupation.

In agricultural jobs with significant physical labor, MSDs are typically the most frequently reported injury and are among the costliest health care problems facing society today.
The wrist position affects your ability to grip
Shoulder Position

Neutral Posture

Awkward Postures

Shoulder Flexion

Shoulder Extension

Shoulder Abduction

Shoulder Abduction & Extension
Elbow Position

Neutral Posture

Awkward Postures
Elbow Flexion
Elbow Extension
Keep Everything at Easy Reach
Work at Proper Heights

Do most work at elbow height
Keep lifts between hand level and shoulder level. Avoid lifts from the floor or over shoulder level
Minimize Pressure Points

Proper Tool Selection
Reduce Excessive Motions

➢ Repetitive motions
➢ Awkward body positioning
➢ Excessive force
➢ Vibration

➢ Allow *enough time in between for adequate recovery* by having the worker alternate with a low-repetition task.

➢ For example, other tasks that don’t require repetitive hand motions, like *carrying* the finished boxes to the loading area.

➢ Use your *larger muscles*

➢ One of the simplest ways to reduce manual repetitions is to use *power tools* whenever possible.
Minimize Fatigue and Static Load

- Allow enough time in between for adequate recovery
- Sitting down while working reduces the strain on the lower back and legs. Standing causes legs to swell (more than walking does)
- Set time to schedule rest breaks
To be healthy the human body needs to be exercised and stretched.

For a physically demanding job, you may find it helpful to stretch and warm up before any strenuous activity.

The best jobs are ones that allow workers to do different types of work, changing from sitting to standing to walking and back again.
Maintain a Comfortable Environment

Adjust Working Stations

Adapting tasks, workstations, tools, and equipment to fit the worker can help reduce physical stress on a worker’s body and eliminate many potentially serious, disabling work related musculoskeletal disorders.
Best Seller Premium Rat
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Tool Balancer

“TRIM MORE HURT LESS”

MAKES PRUNING TOOLS WEIGHTLESS AND MORE MANEUVERABLE

With this new attachment the operator can trim with a hydraulic gun or saw all day and not have the discomfort or injury to wrists, arm or back caused by the weight of these tool's.

This also gives the operator more reach by keeping his hands back further on the tool, and allows a person to use longer tools without the disadvantage of the weight, this extra reach saves time with less maneuvering of the machine.

The advantage of pruning faster with less discomfort or injury makes this attachment a must on nearly every pruning machine.
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Questions?