



Accredited Africa Training Institute for Capacity Development

Unit FO409, Hatfield Plaza · 1122 Burnett St, Hatfield 0028 · Pretoria, Gauteng · South Africa

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COURSE BROCHURE

Harvesting And Threshing Sugarcane Stems Training

Agriculture and Nature Conservation / Secondary Agriculture

Unit Standard 114115 · NQF Level 3 · 14 Credits · 11 Days

COURSE OVERVIEW

This course equips learners with the knowledge and skills to safely and efficiently harvest and thresh sugarcane stems in a commercial agricultural setting. It covers best practices for manual and mechanized harvesting, post-harvest handling, and quality control to maximize yield and minimize losses.

Category	Agriculture and Nature Conservation
Subfield	Secondary Agriculture
Unit Standard	114115
Accreditation	SAQA Accredited · NQF Level 3 · 14 Credits
Duration	11 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Apply correct harvesting techniques to cut sugarcane stems at the optimal height and angle.
- Demonstrate safe handling and operation of manual and mechanical harvesting tools and equipment.
- Implement proper threshing methods to separate cane stalks from leaves and tops efficiently.
- Evaluate harvested cane quality by inspecting for damage, ripeness, and contamination.
- Analyze field conditions and adjust harvesting practices to minimize soil compaction and cane deterioration.
- Implement post-harvest procedures to maintain cane freshness and reduce sugar loss.

WHO SHOULD ATTEND

- This training is designed for farm workers, team leaders, and supervisors involved in sugarcane cultivation and harvesting operations in South Africa.

COURSE OUTLINE

Day 1: Introduction to Sugarcane Harvesting and Threshing

- Overview of sugarcane industry in South Africa
- Sugarcane growth stages and maturity indicators
- Factors affecting sugarcane quality: sugar content, fiber, and impurities
- Harvesting windows and seasonal considerations
- Introduction to harvesting and threshing terminology
- Safety orientation for field operations
- Personal protective equipment (PPE) requirements
- Basic record-keeping for harvested cane

Day 2: Pre-Harvest Planning and Field Assessment

- Field inspection techniques: visual and sampling methods
- Assessing cane maturity: Brix reading and refractometer use
- Identifying pest and disease damage affecting harvest
- Field layout and row orientation for mechanical harvesting
- Estimating cane yield and tonnage per hectare
- Environmental regulations: burning vs. green harvesting
- Soil conditions and their impact on harvesting equipment
- Logistics planning: transport and mill scheduling

Day 3: Harvesting Methods: Manual vs. Mechanical

- Manual harvesting: tools, techniques, and ergonomics
- Mechanical harvesters: types and basic components
- Whole-stick vs. billet harvesting systems
- Trash removal and cane cleaning methods
- Field efficiency: labor vs. machine productivity
- Quality considerations: cane damage and extraneous matter
- Cost analysis of manual vs. mechanical harvesting
- Transitioning from manual to mechanical operations

Day 4: Mechanical Harvester Operation and Maintenance

- Harvester components: basecutter, feed rollers, chopper, extractor
- Pre-start checks: fluids, belts, blades, and safety systems
- Operating controls and steering in the field
- Adjusting basecutter height and chopper length
- Managing feed rate and cleaning fan speed
- Routine maintenance: blade sharpening, greasing, filter cleaning
- Common breakdowns and on-field repairs
- Safety procedures during operation and maintenance

Day 5: Threshing Principles and Equipment

- Threshing objectives: separating cane from trash and soil
- Types of threshers: stationary vs. mobile, drum vs. axial flow
- Components: feed chute, threshing drum, concave, sieves
- Setting clearance and drum speed for optimal separation
- Cleaning systems: fans and screens

- Calibration for different cane varieties and moisture levels
- Monitoring threshing loss and damage
- Safety precautions for thresher operation

Day 6: Quality Control in Harvesting and Threshing

- Extraneous matter: types and impact on milling
- Sampling methods for quality assessment
- Measuring dirt, trash, and tops percentage
- Using quality indicators: pol, brix, fiber, and purity
- Mill payment systems based on quality
- Adjusting harvester settings to reduce extraneous matter
- Field quality checks and feedback loops
- Record-keeping for quality data

Day 7: Post-Harvest Handling and Transport

- Cane deterioration: causes (temperature, time, damage)
- Burn-to-crush and cut-to-crush intervals
- Loading methods: grab loaders, continuous loaders
- Transport vehicles: trailers, trucks, and rail
- Cane stacking and compaction during transport
- Mill reception procedures and weighbridge operations
- Cleaning and maintenance of transport equipment
- Record-keeping for transport logistics

Day 8: Health, Safety, and Environmental Management

- Hazard identification: machinery, chemicals, fire, ergonomics
- Safety procedures: lockout/tagout, fire extinguisher use
- PPE requirements and maintenance
- Chemical handling: herbicides and ripening agents
- Environmental impact: soil compaction, erosion, air quality
- Waste management: trash disposal and recycling
- Emergency response plans for field injuries and fires
- Health surveillance and fatigue management

Day 9: Advanced Techniques and Troubleshooting

- Troubleshooting common harvester issues: blockages, poor cut
- Optimizing fuel efficiency and throughput
- Minimizing cane damage and sugar loss
- GPS and precision agriculture in harvesting
- Telematics and data logging for performance monitoring
- Emerging technologies: automated harvesters, drones
- Case studies of problem-solving in field operations
- Continuous improvement and best practice sharing

Day 10: Team Management and Communication

- Roles and responsibilities in a harvesting crew
- Communication protocols: radios, hand signals, logs
- Shift scheduling and task allocation

- Performance monitoring and feedback
- Conflict resolution and teamwork
- Training and mentoring new operators
- Cultural and diversity considerations in the workplace
- Report writing and documentation

Day 11: Integrated Practical Assessment and Course Review

- Practical assessment: pre-harvest planning, operation, quality control
- Simulated field exercise: harvester setup, operation, and threshing
- Quality measurement and reporting
- Troubleshooting scenarios
- Safety and environmental compliance check
- Individual feedback and improvement areas
- Course summary and key takeaways
- Certification requirements and next steps

ASSESSMENT & CERTIFICATION

Delegates are assessed through exercises and a final test. A mark of **50% or above** earns an **AATICD Certificate of Completion**, issued digitally with a unique verification code. This course carries **14 NQF credits** at **NQF Level 3**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 38,400.00	R 38,400.00
1	In-House	R 49,900.00	R 49,900.00
1	On-Campus (Pretoria)	R 57,600.00	R 57,600.00

UPCOMING SESSIONS

Start	End	Method	Venue
10 Aug 2026	24 Aug 2026	On-Campus	Durban, South Africa
10 Aug 2026	24 Aug 2026	On-Campus	Mauritius
11 Aug 2026	25 Aug 2026	On-Campus	Cape Town, South Africa
12 Aug 2026	26 Aug 2026	On-Campus	Dubai, UAE
13 Aug 2026	27 Aug 2026	On-Campus	Pretoria, South Africa
14 Aug 2026	28 Aug 2026	On-Campus	Abu Dhabi, UAE
17 Aug 2026	31 Aug 2026	On-Campus	Shenzhen, China
18 Aug 2026	01 Sep 2026	On-Campus	Dubai, UAE

Contact us if no suitable date is listed — on-demand sessions can be arranged for groups.

HOW TO GET A QUOTE OR APPLY

1. **Get an instant quotation online:** visit www.aaticd.co.za, open the page for this course (Unit Standard 114115) and click **Get A Quote / Apply**. Select your training method and number of delegates – your quotation is generated immediately and emailed to you with the course brochure attached.
2. **Apply by email:** send the course title, your preferred training method (Online, In-House or On-Campus Pretoria), the number of delegates and your preferred dates to apply@aaticd.co.za – our team will reply with a formal quotation.
3. **Apply by phone or WhatsApp:** call +27 12 004 8389 or WhatsApp +27 65 077 6310 and we will prepare your quotation and reserve your seats.
4. **Confirm your booking:** accept the quotation and settle the invoice. As soon as payment is confirmed your delegates are enrolled and receive their AATICD LMS login details by email, along with joining instructions for their chosen training method.

Group discounts apply automatically – the more delegates you enrol, the lower the price per delegate. No payment is required to request a quotation.

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