



EDUCATION WORKSHOP
ORGANIZED BY
NIGERIAN SOCIETY OF CHEMICAL ENGINEERS

WED. SEPT 29 ,2010

AT UNIVERSITY OF LAGOS

THEME:

ACHIEVING THE NECESSARY PROFESSIONAL
STANDARDS IN CHEMICAL ENGINEERING TRAINING IN
NIGERIAN UNIVERSITIES

FOSTERING INDUSTRY/ACADEMIA RELATIONS

BY

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OVERVIEW

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- INDUSTRY: ISSUES
- UNIVERSITY: ISSUES
- CHANNELS FOR COLLABORATION
- SPECIFIC EXAMPLE OF COLLABORATION
- PROCESS FOLLOWED
- KEY SUCCESS FACTORS
- POSSIBLE WAY FORWARD

PERSONAL BACKGROUND

- ❑ **SIM MISSION SECONDARY SCHOOL**
(TITCOMBE COLLEGE, EGBE, KWS)
 - DR KRAKAVIK (NASA SCIENTIST)
- ❑ **INDUSTRIAL ATTACHMENTS (UNIFE/OAU)**
 - JEBBA PAPER MILLS
 - PETROLEUM REFINERY, ELEME, PH
 - NIGERIAN BOTTLING COMPANY, APAPA/IKEJA
- ❑ **UNIVERSITY TRAINING**
 - PROF B W BROOKS (EX-UNILEVER, UK)
{LUT, LOGHBOROUGH, UK}
 - PROF TOKS OSINOWO (UNIFE/OAU)

PERSONAL BACKGROUND

❑ **INDUSTRIAL WORK LIFE**

- CHAMPIONING INDUSTRIAL TRAINING FOR UNDERGRADUATES
- CONTRACT RESEARCH
- ARRANGED SABBATICAL YEAR IN INDUSTRY
- INTERNATIONAL PATENT ON SORGHUM PROCESSING

❑ **GIVING BACK**

- RUCHIM LTD
- CALEB UNIVERSITY, IMOTA, LAGOS

INDUSTRIES: ISSUES

❑ **MULTINATIONAL COMPANIES**

- 'HOME' RESEARCH
- AFRICA REGIONAL RESEARCH CENTERS (SOUTH AFRICA/KENYA/EGYPT)

❑ **SME LITTLE OR NO R&D**

- TIME
- MONEY
- PERSONNEL

INDUSTRIES: ISSUES

❑ **DESIRE FOR ACCESS:**

- **WORLD CLASS RESEARCHERS**
- **RESEARCH FACILITIES**

❑ **MOTIVATION**

- **PROFIT MOTIVATION**
- **FIRST TO MARKET**
- **UNIQUENESS**

INDUSTRIES: ISSUES

❑ INNOVATION: R&D + MARKET

➤ TECHNOLOGICAL INNOVATION

➤ MARKETING INNOVATION

➤ PRODUCT INNOVATION

❑ INTELLECTUAL PROPERTY ISSUES

❑ ESTEEM/RECOGNITION/CSR

UNIVERSITY: ISSUES

❑ **ACADEMIC FREEDOM:**

➤ PUBLICATIONS

➤ CONFERENCE PRESENTATIONS

➤ PROMOTIONS

❑ **DISTRACTION FROM CORE ACADEMIC PURSUITS**

❑ **ACCESS TO:**

➤ FUNDING

➤ INDUSTRIAL KNOWLEDGE

➤ INDUSTRY CONTACTS

UNIVERSITY: ISSUES

❑ **WORKING TO AGREED TIMELINES**

➤ **BUSINESS LIKE APPROACH TO CONTRACTS AND COMMITMENTS**

❑ **IP ISSUES:**

➤ **OWNERSHIP**

➤ **USE**

CHANNELS OF INDUSTRY- UNIVERSITY COLLABORATIONS

❑ **JOINT RESEARCH CENTERS**

- **MEMBERSHIP OF INDUSTRY ASSOCIATION AND GROUPS**
- **TECHNOLOGY CONSULTING**
- **JOINT PROJECTS TO SOLVE SPECIFIC ISSUES**
- **TRAINING AND DEVELOPMENT CENTERS**
- **INDUSTRY/INDUSTRY GROUPS PROVIDE FUNDS FOR DIRECT/INDIRECT/MANAGEMENT SUPPORT**
- **INTERDISCIPLINARY NETWORK**

CHANNELS OF INDUSTRY- UNIVERSITY COLLABORATIONS

❑ **CONTRACT RESEARCH (SPONSORED PROJECTS)**

➤ SOURCE:

✓ GOVERNMENT

✓ PUBLIC SECTOR ORGANISATIONS

✓ PRIVATE COMPANY/ COMPANY ASSOCIATIONS

➤ REPORT MADE TO THE CONTRACTOR

➤ RESEARCH RESULT BELONGS TO THE UNIVERSITY

➤ CONTRACTOR MAY LICENCE FINDINGS BY AGREEMENT

CHANNELS OF INDUSTRY- UNIVERSITY COLLABORATIONS

❑ **VENTURE START UPS**

- *UNIVERSITY PROVIDES INCUBATION FACILITIES*
- ✓ **LOANS**
- ✓ **GRANTS**
- ✓ **EQUITY PARTICIPATION**
- *GIVES CENTRAL SUPPORT FOR SUCCESS*
- ✓ **INFRASTRUCTURE**
- ✓ **ADMINISTRATION**
- ✓ **MARKETING**
- ✓ **SKILLED PERSONNEL**

CHANNELS OF INDUSTRY- UNIVERSITY COLLABORATIONS: OTHERS

- ❑ **VISITING RESEARCHERS IN INDUSTRY**
- ❑ **VISITING RESEARCHERS IN UNIVERSITY**
- ❑ **INDUSTRY USE OF UNIVERSITY LABS**
- ❑ **GIFTS AND ENDOWMENTS FOR UNIVERSITY**
- ❑ **TECHNOLOGY LICENCING**
- ❑ **INDUSTRY MENTORS FOR PhD STUDENTS**

SPECIFIC EXAMPLE OF COLLABORATION

□ BACK GROUND:

IN THE EARLY 80's THERE WAS A GREAT ECONOMIC DOWN TURN. IMPORT OF MALTED BARLEY WAS A HUGE DRAIN ON NATIONS RESOURCES AND RESTRICTED IMPORT LICENCES REDUCED PERFORMANCE OF COMPANIES. MALTED SORGHUM WAS SEEN AS A GOOD REPLACEMENT OF MALTED BARLEY BUT SORGHUM, THOUGH HIGHLY PRODUCED WAS NOT AN INDUSTRIAL CROP. CADBURY NIGERIA TOOK THE BOLD STEP TO DEVELOP SORGHUM AS AN INDUSTRIAL CROP THROUGH COLLABORATION WITH INSTITUTE OF AGRICULTURAL RESEARCH, ABU, ZARIA

PROCESS FOLLOWED

- INITIAL CULTIVAR SAMPLES FROM IAR
- LAB TESTS IN CADBURY
- AGREEMENT SIGNED FOR ON FIELD TRIALS
- ON FIELD TRIALS FOR AGRONOMY PERFORMANCES AND LARGER SAMPLES FOR FUTHER TESTS

PROCESS FOLLOWED

- SCREENING OF CULTIVARS AND CHOICE OF SK5912
- SEED PRODUCTIONS AND MULTIPLICATION
- AGREEMENT ON FARM STEAD TRIALS
- RETAINERSHIP ON FARM EXTENSION SERVICES
- WIN – WIN SITUATION

KEY SUCCESS FACTORS

- ✓ CHAMPIONS { DR BOLUJOKO+PROF OBILANA}
- ✓ COMMITMENT
- ✓ COMMUNICATION
- ✓ CHEMISTRY {PROF OBILANA + CADBURY TOP MANAGEMENT}
- ✓ CHECKS AND BALANCES {TRANSPARENT ACCOUNTING}
- ✓ COMPLETE GOAL ALIGNMENT

POSSIBLE WAY FORWARD

- ❖ ESTABLISHING ANNUAL ROUNDTABLE OF ALL STAKEHOLDERS
- ❖ TRAINING FOR TECHNOLOGY TRANSFER TEAM IN EACH UNIVERSITY
- ❖ DEVELOPING POLICY FRAMEWORK FOR UNIVERSITY- INDUSTRY INTERACTION