



RRL JORHAT NEWS



क्षेत्रीय अनुसंधान प्रयोगशाला, जोरहाट, असम
REGIONAL RESEARCH LABORATORY, JORHAT

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NATIONAL SCIENCE DAY OBSERVED



*Prof K A Natarajan delivering the National Science Day Lecture.
On the dais (from left) Dr B D Kulkarni, Dr P G Rao and
Dr P B Kanjilal*



RRL Scientist explaining to the visitors

The National Science Day (NSD) was observed at Regional Research Laboratory, Jorhat along with the rests of the country on 28 February, 2006 amidst much enthusiasm to commemorate the exciting discovery of the Indian genius Prof C V Raman. The meeting held at RRL auditorium for the purpose was graced by invited guests, eminent scientists, entrepreneurs, media persons, students and teachers besides the scientific brethren of RRL. Dr B D Kulkarni, Sr Scientist, National Chemical Laboratory (NCL), Pune and Prof K A Natarajan, Indian Institute of Science, Bangalore attended the function as the Chief Guest and Guest of Honour respectively while Dr P G Rao, Director, RRL-Jorhat presided over the meeting. The function started with welcome address by Dr R K Sharma, Scientist F and brief introduction of speakers by Dr P R Bhattacharyya and Dr R K Akhikary, senior scientists of the laboratory. Delivering the foundation day speech on

his chosen topic 'Chemical Process Designing, Bioreactors, etc.' Dr Kulkarni dwelt at length the designing of various chemical processes and bioreactors to the absorbing attention of the distinguished audience. The speaker Prof. Natarajan gave a lucid presentation on 'Microbes, Minerals and Environment and Beneficiation of Minerals by Microbes'. In this connection, he also explained about the bioleaching phenomenon and biomimetic strategies of mineral processing and biological remediation technologies which have been now a days suitably employed for mineral beneficiation. In the presidential remarks, Dr P G Rao, Director, RRL-Jorhat touched upon the theme of the National Science Day and spoke briefly about the achievements of RRL over the years against the backdrop of CSIR. He also appreciated most the valuable talks delivered by both the distinguished guests and hoped that both these talks will throw new lights into the various on going projects of the laboratory and thereby greatly benefit the scientists. Earlier, the day was declared as 'Open Day' for the visit of students, teachers and other public who thronged the laboratory in the morning hours and went round the various departments to see for themselves the various on going research activities on the spot and interact with the scientists.

RRL ORGANISED ZONAL WORKSHOP ON HAZARDS AT KALIABOR



RRL Dr M M Saikia delivering speech. On the dais (from left) Dr H K Chaliha, Dr D C Goswami, Sri Gunin Hazarika and Sri M J Baruah

As a part of the programme scheduled earlier on 'Hazards - Minimizing the risk, Maximising Awareness', a two-day zonal workshop on the theme was organised by the laboratory in collaboration with the Kaliabor College NSS Unit in the Koliabor College premises during 17-18 February, 2007 with the financial support extended by RVPSP, DST, Govt. of India, New Delhi. The inaugural function was chaired by Dr HK Chaliha, Principal of the Koliabor College and Co-ordinator of the workshop. The workshop included inaugural function, technical session and a valedictory function. Notable among

others who attended the workshop were Dr D C Goswami, Scientist G, RRL-Jorhat and Principal Co-ordinator of the programme, Sri M J Boruah, SDO(C), Koliabor, Dr M M Saikia, Head, Department of Disaster Management, Administrative Staff College, Guwahati, Sri Gunin Hazarika, former Industry Minister, Govt. of Assam, Prof Basistha Kalita, NSS Programme Officer, Sri Nandita Hazarika, State Project Officer, Disaster Waste Management, Govt. of Assam, Sri R K Kurmi, Retired Flight Engineer, Airforce & Principal, Motor Driving Training Institute, Jorhat, Sri C Nath, CO, Koliabor, Dr Saurav Borua & Dr P C Neog, Scientists, RRL-Jorhat, Sri Gautam Sarma, Instructor, Civil Defence, Tezpur, Dr Budheswar Gogoi, M& HO, Bokakhat, Sri P Katakya, BDO and so on and so forth. A total of 70 participants took part in the workshop besides representatives of some local colleges, a few NGOs, tea gardens of Koliabor and others. Speaking on the occasion, Dr D C Goswami gave a brief speech on the importance of organising the workshop the aim of which was basically to create an awareness among the general public about hazards and its mitigation measures and informed the gathering that the idea of organizing a few workshops on hazards came from Dr Indu Puri, Scientist, Rastriya Vigyan Evam Prodyogiki Sanchar Parishad (RVSP), Department of Science & Technology, in an informal discussion. Dr M M Saikia formally declared the workshop open who also acted as the resource person for the technical session. Dr M M Saikia, Sri RK Kurmi, Sri C Nath, Dr Saurav Borua, Sri Gautam Sarma and Dr Budheswar Gogoi were the speakers in the technical session. The participants were greatly benefited by the workshop which had a lasting impact on them. The Principal Dr H K Chaliha profusely thanked everyone for extending full cooperation and help for successful completion of the workshop.

TRAINING-CUM-AWARENESS PROGRAMME ON CULTIVATION OF AROMATIC PLANTS

The laboratory continued to organise Training cum Awareness Programme on cultivation of aromatic plants under DBT sponsored project in various places of NE India. A village-to-village training cum demonstration programme was carried out at villages of Jelkajhar, Bongaigaon, Betbari, Panitanky and Tamulpur of Bodo Territorial Area District (BTAD), Assam during November-December, 2006. Ten growers from each village took part and the total number of participants was 50. Training was imparted on cultivation and processing of citronella, lemongrass and patchouli. Sri Bhupen Rai, Ex-MLA, Assam inaugurated the programme. Planting materials were supplied free of cost for initial plantations. In the programme, two NGOs namely Manav Shakti Jagaran, Nalbari and Prayas, Rangia, Kamrup extended helping hands in motivating the village people to take up the cultivation of aromatic plants for socio-economic development. Dr T C Sarma, the Principal Investigator of the DBT project coordinated the programme. An area of 10 ha was covered under the cultivation of citronella in Bongaigaon area of BTAD.

TRAINING ON MUSHROOM CULTIVATION FOR SELF HELP GROUP

A one-day training programme on cultivation of edible mushroom was organised by RRL Branch, Itanagar, Arunachal Pradesh jointly with Legong Arunachal Farmers Welfare

Society, Mirem village under a DBT sponsored project. Altogether 225 members from 22 women Self-Help Groups (SHGs) from different villages of Bilat and Ruksin circles attended the training which was held at Bilat village of Ruksin circle of Arunachal Pradesh on 12 February, 2007. The participants were demonstrated the production technique of edible mushroom and imparted training. Sri Omak Apang, Local Legislator, AP and former Union Minister graced the occasion who showed keen interest on mushroom cultivation and emphasized on the need for exploring the locally available wild varieties of mushroom. Sri Apang advised and encouraged the women SHGs to take up systematic cultivation of mushroom for socio-economic development and also appealed to diversify the age old activities. He suggested the BDO to lay out a project with RRL Branch for commercial cultivation of edible mushroom. Sri P B Chetri, Branch Manager, Rural Bank, Ruksin assured micro-finance to the SHGs for the same.

TRAINING PROGRAMME FOR ASSISTANTS OF ACCOUNTS CADRE



The participating Trainees along with Faculty Members and Director, RRL Jorhat

At the instance of Human Resources Development Centre, Ghaziabad, a three-day training programme for Assistants of Accounts Cadre of CSIR laboratories was organised in the laboratory during January 22-24, 2007. The participant trainees were taken from the various CSIR laboratories of the eastern zone namely RRL-Bhubaneswar, CGCRI-Kolkata, CMERI-Durgapur, NML-Jamshedpur, CFRI-Dhanbad, IICB-Kolkata, CMRI-Dhanbad and the host laboratory. A total of 29 trainees took part in the programme. The programme was inaugurated by Dr P G Rao, Director, RRL-Jorhat who welcomed the participants and briefly spoke on the occasion while Sri S N Sharma, Consultant, HRDC, Ghaziabad and Sri R L Sharma, Sr DFA, CSIR Hqs gave the initiation and spoke about the programme respectively. The resource persons for the training programme were drawn from CSIR Head quarters, HRDC, Ghaziabad and the host laboratory which included Sri S N Sharma, Sri RL Sharma, Mr A Wahid, Sri Padam Singh and Dr P G Rao, Director, RRL-Jorhat who spoke on the topics such as (i) Role of Finance & Accounts in CSIR, (ii) Different forms of Audit, (iii) Payments relating to works &

procurement, (iv) Bank reconciliation, (v) Understanding & operating IMPACT, (vi) IMPACT : Accounts, (vii) IMPACT : MIS Reporting, (viii) IMPACT : Project Accounting, (ix) Project Costing, (x) Financial Planning and Management - Practices at RRL-Jorhat, (xi) Medical claims + TA, (xii) Pensions and (xiii) Budget + LTC.

Projects undertaken

Consultancy

- Preparation of pre-feasibility study report on manufacture of coke breeze from konya coal of Tuensang district, Nagaland on behalf of Directorate of Geology & Mining, Govt. of Nagaland, Dimapur. Total estimated cost Rs 1.992 lakh

Projects completed

Consultancy

- Geotechnical investigation for new Gas Turbine foundations at Duliajan Power Station.
- Upgradation/beneficiation of iron ore sample. Final Report submitted to M/s Tribeni Metalloys Pvt. Ltd., Motilal Nehru Road, Panbajar, Guwahati.
- Evaluation of six samples of dimensional stones of Nagaland. Final Report submitted to Director of Geology & Mining, Govt. of Nagaland, Dimapur.

Process released



Director Dr P G Rao handing over the Knowhow

Low Dust Chalk Pencil released to Sri Bhaskar Boishya, Gotanagar, Jalukbari Guwahati.

Agreement signed

(i) Agreement signed with the State Medicinal Plants Board, a subsidiary of the National

Medicinal Plants Board for 'Preparation of Road Map in the medicinal and aromatic plant sector of Assam under a collaborative arrangement. (Estimated cost Rs 1.20 lakh)

(ii) Agreement signed with ONGC, Sivasagar for Development of Vegetation in crude oil contaminated drill site at (a) Amguri and (b) Galleki. (Estimated costs of Rs 17.24 lakh and Rs 25.7 lakh respectively)

(iii) Agreement signed for job work with M/s Geotech Consultants (P) Ltd., New Delhi for engaging external agency for conducting soil resistivity test at NRL Refinery site.

SEMINAR/SYMPOSIA/MEETING ATTENDED

Dr P G Rao, Director, RRL Jorhat attended the following meetings and seminars :

(i) Meeting of the Tripura State Council for Science & Technology at Agartala on January 10, 2007.

(ii) Meeting with Director, IICB Kolkata on January 11, 2007.

(iii) Assessment Committee meeting of S&T Management Policy Studies of RAB at IICB, Kolkata on January 12, 2007.

(iv) Meeting with FINER, Guwahati on January 18, 2007.

(v) Delivered a talk on 'Entrepreneurship in Biotechnology : Scope and prospects in North East India' in the national symposium held at IIT, Guwahati on January 21, 2007.

(vi) Meeting with DGM (R&D) at Oil India Ltd, Duliajan on February 02, 2007.

(vii) Inaugurated the Golden Jubilee Meet of Ushapur H E School on February 03, 2007.

(viii) Foundation Day of Indian Association for Productivity, Quality & Reliability at Salt Lake City, Kolkata and delivered the Foundation Day lecture.

- Dr B G Unni, Scientist attended the following meetings and seminars -

(i) 3rd International Symposium on Neuroprotection and Neurodegeneration held at Indian Institute of Chemical Biology, Kolkata during January 08-09, 2007.

(ii) 'Entrepreneurship in Biotechnology - Scope and prospects in North East Region' at Indian Institute of Technology, Guwahati during January 20-21, 2007.

(iii) Participated as a panelist at the interactive session on 'Biotechnology, business and employment at the Senate Hall, IIT Guwahati on January 20, 2007.

(iv) USEFI Foundation Day celebration at Assam Agricultural University on February 03, 2007.

(v) 3rd International conference on Mushroom Biology and Biotechnology organised by the Mushroom Society of India at the National Research Centre for Mushroom (Solan) Himachal Pradesh and acted as a Reporteur for the Technical Session 'Value addition in Mushroom' during February 10-11, 2007.

- Dr H B Singh, Scientist-in-Charge, RRL Substation, Imphal attended the Project Implementation Committee meeting of the State Medicinal Plants Board, Manipur held at State Guest House, Imphal on January 11, 2007.

TALKS DELIVERED

- Dr B G Unni, Scientist delivered a talks on (i) 'Recent development in insect neuropeptides and their molecular and functional properties' in the 3rd International Symposium on Neuro-protection and Neurodegeneration held at Indian Institute of Chemical Biology, Kolkata during January 08-09, 2007.

(ii) 'Mushroom, the nutritive food for human health and the conservation of germplasm in the 3rd International conference on Mushroom Biology and Biotechnology organised by the Mushroom Society of India at the National Research Centre for Mushroom (Solan), Himachal Pradesh held during February 10-11, 2007.

(iii)(a) Application of Biotechnology in Sericulture, (b) Biotechnology - Opportunities in North East India in the conference on 'Entrepreneurship in Biotechnology - Scope and prospects in North East region at Indian Institute of Technology, Guwahati during January 20-21, 2007.

- Dr H B Singh, Scientist-in-Charge, RRL Sub-station, Imphal delivered an invited radio talk on 'Taxus baccata - A wonder drug' which was broadcast by All India Radio, Imphal on December 24, 2006 and January 14, 2007 respectively.

AWARD

CRSI Bronze Medal For RRL Scientist



Dr N C Barua

Dr N C Barua, Scientist F and Head of Natural Products Chemistry division was conferred the Chemical Research Society of India (CSRI) Bronze Medal for the year 2007 for his significant contribution to chemistry. His major contribution was in the area of total synthesis of bioactive natural products. During last few years he synthesised several natural products in the stereoselective manner and published quite a number research papers in reputed international journals.

Ph D AWARDED

Mrs Jyotsna Kumari, SRF, Biotechnology division was awarded the Ph D Degree in Biotechnology by the Gauhati University for her thesis titled 'Biochemical and Molecular studies of Insect immunity in Muga (*Antheraea assama*) and Eri(*Philosamia ricini*) silkworm'. She worked under the supervision and guidance of Dr B G Unni, Scientist, Biotechnology Division of RRL-Jorhat.

Papers published

International

BORAH J C, BORUWA J, BARUA N C: Synthesis of the C-13 side chain of taxol, *Current Organic Synthesis*, 2007, 4, p-477-98.

BORUWA J, GOGOI, N, SAIKIA P P, BARUA N C: Catalytic asymmetric Henry reaction, *Tetrahedron: Asymmetry*, 2006, 17(24), p-3315-26.

MAHANTA J J, CHUTIA M, SARMA T C: Study on weed flora and their influence on patchouli (*Pogostemon cablin* Benth.) oil and patchoulol, *Journal of Plant sciences* (USA), 2007, 2(1), p-96-101.

National

KAYAL J R, AREFIEV S S, BARUAH S, HAZARIKA D, GOGOI N, KUMAR A,

CHOWDHURY S N, KALITA S: Shillong plateau earthquakes in northeast India region: Complex tectonic model, *Current Science*, 2006, 91(1), p-109-114.

SAIKIA S P, JAIN VANITA : Biological nitrogen fixation with non-legumes : an achievable target or a dogma, *Current Science*, 2007, 92(3), p-317-322.

SARMA T C : Uttar Purbanchalot Stevia Khetir Sambhabana, *Bijnan Jeuti* (Assamese), 2006,41, p-29-31.

SAIKIA R C, CHUTIA M, MAHANTA J J, SARMA T C: *In-vivo* study in root biomass production, associated changes in soil environment and oil yield in citronella cultivation, *J Appl Biosci Biotech*, 2006, 2(2), p-49-51.

SARMAA, KAKATI K, BHATTACHARYYA P R, SARMA T C: Inflorescence oil of *Cymbopogon flexuosus* (Steud) Wat: A potential source of insect feeding deterrent compound, *Indian Perfumer*, 2006, 50(3), p-63-66.

Proceedings of Seminar/Conference

GOGOI J, PATHAK N, DOWRAH J, DEKA BORUAH H P : In-situ selection of tree species in environmental restoration of opencast coalmine wasteland, *In-Proc Intl. Seminar on Mineral Processing Tech MPT 2007*, IIT, Mumbai, 22-24th Feb, 2007, p-678-8.1.

KHARE P, BHATTACHARJEE B, BARUAH B P : Meghalaya coals - Trace elements of environmental concern, *In-Proc Intl. Seminar on Mineral Processing Tech MPT 2007*, IIT, Mumbai, 22-24th Feb, 2007, p-701-704.

BHATTACHARJEE B, KHARE P, SENGUPTA P, BARUAH B P : Acid mine drainage (AMD) in Indian coal mines, *In-Proc Intl. Seminar on Mineral Processing Tech MPT 2007*, IIT, Mumbai, 22-24th Feb, 2007, p-697-700.

KHARE P, BARUAH B P : Oxidative desulphurization of Indian coals, *In-Proc Intl. Seminar on Mineral Processing Tech MPT 2007*, IIT, Mumbai, 22-24th Feb, 2007, p-246-49.

DAS P, KHARE P, BARUAH B P, RAO P G: The kinetics of sulphur release during pyrolysis of Northeast (NE) Indian coals, *In-Proc Intl. Seminar on Mineral Processing Tech MPT 2007*, IIT, Mumbai, 22-24th Feb, 2007, p-241-46.

MAHIUDDIN S: Propensity of Carboxylates for the Interface: Solid-Liquid Versus Liquid-Vapour Interface, *In- Procd. National Conference on Disperse Systems*, Assam University, Silchar, November 23-25, 2006, (Paper NO OP 4), p- 25.

MAHIUDDIN S, SENGUPTA P, SAIKIA P C, BORTHAKUR P C: Beneficiation of Iron Ore: Water vs Additive Washing, *In- Procd. National workshop on "Iron Ore Beneficiation*, Tata Steel, Jamshedpur during June 16-17, 2006, p-97.

UNNI B G, ADHIKARY R K, RAO P G : Mushroom, the nutritive food for human health and the conservation of germplasm, *In-Proc. 3rd International conference on Mushroom*

Biology and Biotechnology organized by the Mushroom Society of India at the National Research Centre for Mushroom (Solan) H.P, 2007, p-156-57.

UNNI B G, BORA A, DEVI BARNALI, SINGH RANJIT, WANN S B: Recent developments in insect neuropeptides and their molecular and functional properties, *In-Proc.* 3rd International Symposium on Neuroprotection Neurodegeneration " at Indian Institute of Chemical Biology, Kolkata, 2007, p-17.

Colloquim

Prof Dulal Borthakur, Professor & Graduate Chair, Molecular Biosciences & Bioengineering, University of Hawaii, USA delivered a talk on the topic "Recombinant protein as a vaccine against Mycobacterial Tuberculosis on February 05, 2007.

Prof K A Natarajan, Indian Institute of Science, Bangalore delivered a talk on the topic "Biotechnology for mineral processing" on February 28, 2007.

New S&T Facility GC MS installed

Usage :

- EI mode for identifying unknowns - library search information
- PCI for molecular weight confirmation
- NCI for ultimate sensitivity and selectivity
- Simultaneous full-scan and SIM in a single analysis
- PPINICI - hardware/software option with alternating
- PCI/NCI scans for sample screening.

Features :

- Mass range of 1-1.050 amu
- Scan speed upto 10,000 amu/sec (profile and centroid)
- Curved pre-filter for noise reduction
- Ion Bright source for enhanced robustness and sensitivity
- + 10 KV conversion dynode for better performance
- Wide spectral/quantitative dynamic range
- Removable ion volumes for EI and CI
- Contribution ion volume for automated EI/CI operation
- Powerful Xcalibur data system

Exhibitions

The laboratory participated in the following S&T exhibition and displayed and demonstrated the activities of the laboratory :



RRL exhibition stall at Agartala

(i) Sent exhibition materials for display in the exhibition titled 'Planet Earth' under the banner of CSIR organised by the 94th Indian Science Congress held at Annamalai University, Chandanbaram, Tamilnadu during January 03-07, 2007.

(ii) Sent exhibition materials and poster designs of RRL's Drugs & Pharma-ceutical technologies to CSIR for display in the exhibition titled `Pharma Biotech World Expo-2007' held at Mumbai and organised by ChemTech Foundation during February 06-10, 2007 with a view to showcasing the CSIR technological excellence in the area of pharmaceuticals.

(iii) State level Science Fair organised by Tripura State Council for Science & Technology held at Agartala during January 05-10, 2007. The RRL exhibition stall bagged the 2nd prize for putting up excellent demonstration of the activities.

(iv) S&T exhibition titled `Appropriate Technology for Improving the Quality of Life of the People' organised at Central Library compound by the State Council of Science, Technology & Environment, Meghalaya during February 15-16, 2007.

Farewell

The following members of staff retired from Council's service on attaining the age of superannuation with the effective dates shown against them :

- Sri A K S Baruah, TO GrIII(6) w.e.f. 28.02.2007

- Sri N N Dutta, Tech Gr II(5) w.e.f 28.02.2007

RRL's participation in Flower show & competitions

RRL-Jorhat participated in the various events of Flower Show and Competition organised by Lioness Club of Jorhat on January 21, 2007 and at Flower show and competitions organised by RRL Ladies Club at RRL Staff Club on February 4, 2007. RRL Jorhat bagged the following prizes-



The winning team of Floriculture Section of the laboratory with Director, RRL Jorhat

Event	Lioness Club	Ladies Club
Cut Flower (Dahlia)	Ist, 2nd and 3rd	Ist, 2nd and 3rd
Cut Flower (Marigold)	2nd	2nd and 3rd
Pot Plant (Marigold)	3rd	--
Pot Plant (Flowering)	--	3rd
Pot Plant (Foliage)	--	3rd
Foliage (Pot Plant)	3rd	--
Fresh Arrangement	--	2nd and 3rd

Congrats !

The following members of staff have been promoted to their next higher grades with the effective dates shown against them :

Staff	Promoted	to
Dr P K Choudhury	Gr IV(5)	08.04.2003
Dr Anjan Baruah	Gr IV(5)	01.02.2004
Dr J C Sarma	Gr IV(5)	28.09.2004
Dr Lohit Nath	Gr IV(5)	07.11.2004
Dr Dilip Konwar	Gr IV(5)	01.01.2005

Sri R C Borah	Gr IV(5)	01.02.2005
Dr S D Baruah	Gr IV(5)	17.05.2005
Dr M J Bordoloi	Gr IV(4)	18.12.2004
Dr D K Dutta	Gr IV(3)	10.06.2004
Dr(Mrs) N Saikia	Gr IV(3)	16.06.2004
Dr P K Baruah, MO	Gr III(7)	12.01.2004
Ms Jyoti Dohutia	Gr III(6)	01.10.2002
Sri O P Sahu	Gr III(6)	01.02.2003
Sri T P Saikia	Gr III(6)	01.02.2003
Sri Dipak Bordoloi	Gr III(6)	01.10.2003
Mrs J Hazarika	Gr III(6)	01.02.2004
Sri M G Pathak	Gr III(6)	01.02.2004
Sri G C Borah	Gr III(6)	01.02.2004
Sri Probin Baruah	Gr III(6)	01.02.2004
Sri A K Sarmah	Gr III(6)	01.02.2004
Mrs A P Saikia (Retd.)	Gr III(6)	01.02.2004
Sri N K Neog	Gr III(6)	01.02.2004
Sri Panchanan Baruah	Gr III(6)	01.02.2004
Mrs A Goswami	Gr III(6)	01.02.2004
Ms Dilara Begum	Gr III(6)	01.02.2004
Dr P K Baruah	Gr III(5)	04.06.2002
Mrs Kuin Baruah	Gr III(5)	16.08.2002
Sri K Puzari	Gr III(5)	20.10.2002
Sri C S Bordoloi	Gr III(5)	27.08.2002
Sri Paresh Saikia	Gr III(5)	08.11.2002
Sri K C Lekhok	Gr III(5)	15.01.2003
Sri R K Buragohain	Gr III(5)	01.02.2003
Sri P C Borah	Gr III(5)	01.02.2003
Sri N N Dutta	Gr III(5)	01.02.2003
Dr T Borah, MO	Gr III(5)	07.04.2003
Sri Dilip Mahanta	Gr III(5)	28.04.2003
Sri Ajit Ch Kakoty	Gr III(5)	27.08.2003
Sri Jayanta Bora	Gr III(4)	02.05.2001
Sri B C Baruah	Gr III(4)	12.05.2001
Sri P Sarmah	Gr III(4)	17.09.2001