

AGRICOLA (Agriculture Online Access Database)

Subject Coverage	<ul style="list-style-type: none"> • Agriculture • Animal Science • Biotechnology • Chemistry • Energy • Entomology • Food Science • Forestry • Genetics 	<ul style="list-style-type: none"> • Home Economics • Life Sciences • Natural Resources • Nutrition • Pesticides • Plant Diseases • Rural Society • Soil Science • Veterinary Medicine
File Type	Bibliographic	
Features	Thesaurus Alerts (SDIs) CAS Registry Number® Identifiers Keep & Share	Controlled Term (/CT) Geographic Term (/GT) Monthly <input type="checkbox"/> Page Images SLART
Record Content	<ul style="list-style-type: none"> • Worldwide coverage of agriculture and related fields • Records contain bibliographic information, geographic terms, controlled terms, and supplementary terms that include GenBank Numbers • Abstracts are available for more than 50% of records 	
File Size	More than 8.2 million records (02/2023)	
Coverage	1970-present	
Updates	Monthly	
Language	English	
Database Producer	National Agricultural Library (NAL) U.S. Department of Agriculture (USDA) 10301 Baltimore Avenue Beltsville, MD 20705 U.S.A.	
Sources	<ul style="list-style-type: none"> • Bibliographies • Serial Articles • Book Chapters • Monographs • Computer Files • Serials • Maps • Audiovisuals • Reports • Catalogs and chemical libraries from suppliers worldwide 	

User Aids

- Online Helps (HELP DIRECTORY lists all help messages available)
 - STNGUIDE
-

Cluster

- AGRICULTURE
- AUTHORS
- ALLBIB
- BIOSCIENCE
- CHEMISTRY
- COMPANIES
- CORPSOURCE
- ENVIRONMENT
- FOOD
- MEETINGS
- NPS
- TOXICOLOGY

STN Database Cluster information:

<https://www.cas.org/support/training/stn/database-clusters>

Search and Display Field Codes

Fields that allow left truncation are indicated by an asterisk (*).

Search Field Name	Search Code	Search Example	Display Codes
Basic Index* (contains single words from the title (TI), CABA and Library of Congress controlled term (CT), supplementary term (ST), abstract (AB), named person (NA), corporate name (CO), note (NTE), geographic term, CABA and other (GT) fields)	None (or /BI)	S FORAGING S NATURAL PEST CONTROL? S STATE (L) COUNCIL# S GENBANK U35001	AB, CO, CT, GT, NA, NTE, ST, TI
Abstract*	/AB	S ORGANIC COMPOUND?/AB	AB
Accession Number	/AN	S 1998:2795/AN	AN
Author	/AU	S LEMASTERS J?/AU	AU
Availability (contains codes for filing and holding locations, NAL and Library of Congress call numbers designations)	/AV	S L1 AND DNAL/AV S MARINE SCIENCES AND DLC/AV S MIU/AV	AV
Classification Code (1)	/CC	S DAIRY/CC S CONSUMER ECONOMICS/CC	CC
Corporate Name (1)	/CO	S RESEARCH CENTER/CO	CO
Controlled Term, CABA and Library of Congress (2)	/CT	S CINCHONA/CT S ACID RAIN+ALL/CT	CT
Controlled Word (contains single words from CABA controlled terms and Library of Congress controlled terms)	/CW	S (AGRICULTUR? (S) WORK#)/CW	CT
Corporate Source (1)	/CS	S DEPARTMENT OF AGRICULTURE/CS S "ROSS LABORATORIES"/CS	CS
Country of Publication (ISO code and text)	/CY	S L1 AND GB/CY	CY
Document Number	/DN	S IND20496956/DN	DN
Document Type (code and text)	/DT (or /TC)	S L5 AND C/DT	DT
Entry Date (3)	/ED	S ED>=JAN 2012	ED
Field Availability	/FA	S AB/FA	FA
File Segment	/FS	S TRANSLATION/FS	FS
Geographic Term, CABA and other (2)	/GT	S EAST ASIA/GT S SHANGHAI+BT/GT	GT
International Standard (Document) Number (contains CODEN, ISSN, and ISBN)	/ISN	S 1000-1298/ISN	ISN, SO
Journal Title (contains full and abbreviated title)	/JT	S JOURNAL OF AGRIBUSINESS/JT S J AGRIBUSINESS/JT	JT, JTA, JTF, SO
Language (ISO code and text)	/LA	S FR/LA	LA
Meeting Title (1)	/MT	S WORLD PARKS/MT	MT, SO
Meeting Location (1)	/ML	S SAN DIEGO/ML	ML, SO
Meeting Year (3)	/MY	S 1995-1996/MY	MY, SO
Named Person	/NA	S OBAMA MICHELLE/NA	NA
Note	/NTE	S NOTEBOOK#/NTE	NTE
Number of Report	/NR	S AEC/NR	NR

Search and Display Field Codes (cont'd)

Search Field Name	Search Code	Search Example	Display Codes
Publication Year (3)	/PY	S 1996/PY	PY, SO
Publisher	/PB	S SPRINGER NEW YORK/PB	PB, SO
Source (contains publication title, collation information (volume, issue, pagination), meeting information, ISBN, ISSN, CODEN, publication date, publication frequency, Library of Congress control number, publication status, publisher, editors, government source, etc.)	/SO	S (CHROMATOGRAPHY AND ELSEVIER)/SO S JCRAEY/SO S VOLUME/SO	SO
Summary Language (code and text)	/SL	S EN/SL	SL
Supplementary Term (includes GenBank Numbers)	/ST	S NEST ABANDONMENT/ST S GENBANK U51451/ST	ST
Title*	/TI	S (RUN OFF OR RUNOFF)/TI	TI
Update Date (3)	/UP	S L4 AND UP>NOV 2012	ED
Word Count, Title (3)	/WC.T	S WC.T<3	WC.T

(1) Search with implied (S) proximity is available in this field.

(2) There is an online thesaurus associated with this field.

(3) Numeric search field that may be searched using numeric operators or ranges.

Property Fields₁₎

In AGRICOLA a numeric search for a specific set of physical properties (/PHP) is available within the abstract and title fields. The numeric values are not displayed as single fields, but highlighted within the hit displays.

Use EXPAND/PHP to search for all available physical properties. A search with the respective field codes will be carried out in the abstract and title fields. The /PHP index contains a complete list of codes and related text for all physical properties available for numeric search.

Field Code	Property	Unit	Search Examples
/AOS	Amount of substance	Mol	S 10/AOS
/BIR	Bit Rate	Bit (Bit)	S 100000-160000/BIR
/BIT	Stored Information	Bit	S BIT > 3 MEGABIT (10A) STORAGE
/CAP	Capacitance	Farad	S 1-10 MF/CAP
/CDN	Current Density	Ampere/Square Meter	S CDN>5 A/M**2
/CMOL	Molarity (Concentration, amount of substance)	mol/l	S MOLYBD?/BI (S) 2/CMOL
/CON	Conductance	S (Siemens)	S 1E-2/CON
/DB	Decibel	Decibel	S DB>50
/DEG	Degree	Degree	S (POLARI? (S) ANGLE)/BI (S) 45/DEG
/DEN	Density (Mass Density)	Kg/m ³	S (METHOD? (S) COMPO?)/AB (S) 5E-3-10E-3/DEN
/DEQ	Dose Equivalent	Sievert	S DEQ>0.5 (S) RADIATION
/DOS	Dosage	Milligram/Kilogram	S DOS>0.8
/DV	Viscosity, dynamic	Pa * s (Pascal * second)	S DV>5000

Property Fields¹⁾ (cont'd)

Field Code	Property	Unit	Search Examples
/ECD /ECH /ECO	Electric Charge Density Electric Charge Electrical Conductivity	m/z Coulomb Siemens/Meter	S 1-20/ECD.EX(XA)ELECTRICAL S 15/ECH S ECO>5000 (XA) GEOTHERMAL EFFECTS
/ELC /ELF /ENE /ERE /FOR /FRE /IU /KV /LEN (or /SIZ) /LUME	Electric Current Electric Field Energy Electrical Resistivity Force Frequency International Unit Viscosity, kinematic Length Luminous	Ampere Volt/Meter J (Joule) Ohm * Meter N (Newton) Hz (Hertz) none m ² /s Meter Lux	S 1-10/ELC S 1-10/ELF S NUTRIENTS AND 100/ENE S ERE>10 S 50 N/FOR S ANALY?/AB (10A) 0-3/FRE S IU>100 (P) INTERFERON S LUBRICANT/BI (S) 10E-5/KV S 1-4/LEN S 10-50/LUME
/LUMF	Emittance/Illuminance Luminous Flux (Luminous Power)	Lumen	S FLUID (P) LUMF>3
/LUMI /M /MCH /MFD (or /MFS)	Luminous Intensity Mass Mass to Charge Ratio Magnetic Flux Density	Candela Kg (Kilogram) none Tesla	S 5<LUMI<15 S ALLOY/BI (30A) 1E-10-1E-5/M S MCH=3 S MFD>0E-3(S)MAGNETIC RESONANCE
/MFR (or /MFL) /MM /MOLS /MVR	Mass Flow Rate Molar Mass Molality of Substance Melt Volume Rate; Melt Flow Rate	Kilogram/Second g/mol mol/kg g/10min	S MFR>1.2 S 2000-3000 G/MOL/MM S 01.-10 mol/kg/MOLS S 5-10/MVR
/NUC /PER	Nutrition Content Percent (Proportionality)	g/100kcal Percent	S NUC<100 (XW) NUTRIENT S (TITAN? (3A) DIOXID?)/AB (S) 53/PER
/PERA /PHV /POW	Permittivity, absolute pH Power	Farad/Meter pH W (Watt)	S 1-10/PERA (S) BUFFER S 7.4-7.6/PHV S (SOLAR? OR PHOTOVOLTAIC?)/BI (10A) 5-10/POW
/PRES (or /P)	Pressure	Pa (Pascal)	S (VACUUM (5A) DISTILL?)/BI (S) 1000-1100/PRES S RAD>100 S VOLTAGE/AB (P) 1-10/RES
/RAD /RES	Radioactivity Electrical	Bq (Becquerel) Ohm	S RAD>100 S VOLTAGE/AB (P) 1-10/RES
/RSP /SAR	Impedance/resistance Rotational Speed Area /Surface Area	Revolution/Minute m ²	S 5000-8000/RSP AND PARAFFIN S (COATING? OR FOIL?)/BI (S) 10-100/SAR
/SOL /STSC /TCO /TEMP (or /T)	Solubility Surface Tension Thermal Conductivity Temperature	Gram/100 gram J/m ² K (Kelvin) K (Kelvin)	S SOL>20 (10W) WATER S 60 J/M**2 /STSC S 2-17/TCO (S) THERM? S (STABILITY (25A) VITAMIN?) (S) 10/TEMP
/TIM /VEL (or /V) /VELA /VLR /VOL /VOLT	Time Velocity Velocity, angular Volumetric Flow Rate Volume Voltage	S (Second) m/s (Metre per Second) rpm Cubic Meter/Second m ³ V (Volt)	S CONDUCT?/AB (10W) 0-1/TIM S EVOL?/BI AND 2E-4-5E-4/VEL S VISCO?/AB (S) VELA<350 S 1-10/VLR (XA) VARIABILITY S ?EFFECT?/BI (15A) 1E-8-2E-8 /VOL S APPLICATION/BI(10A) 5E-3<VOLT<7E-3

(1) Exponential format is recommended for the search of particularly high or low values, e.g. 1.8E+7 or 1.8E7 (for 18000000) or 9.2E-8 (for 0.00000092).

Thesaurus Fields

Thesauri are present for the Controlled Term (/CT) and Geographic Term (/GT) search fields in the AGRICOLA File. The following Relationship Codes may be used with both the SEARCH and EXPAND commands in these fields.

Controlled Term (/CT)

Relationship Code	Content	Example
ALL AUTO (1)	All associated terms (SELF, BT, USE, UF, NT, RT) Narrower Terms (SELF, NT)	E BACTERIAL INSECTICIDES+ALL/CT E ORGANOCHLORINE INSECTICIDES+AUTO/CT
BT HIE	Broader Terms (SELF, BT) Hierarchy terms (all broader and Narrower Terms) (SELF, BT, NT)	E WEED CONTROL+BT/CT E VIRAL INSECTICIDES+HIE/CT
KT NT	Keyword Terms (SELF, KT) Narrower Terms (SELF, NT)	E CONTROL+KT/CT E ECOLOGY+NT/CT
PFT	All Preferred and Forbidden Terms (SELF, USE)	E NATURAL BALANCE+PFT/CT
RT	Related (see also) terms (SELF, RT)	E RAINY SEASON+RT/CT
STD	All Broader, Narrower, and Related Terms (SELF, BT, NT, RT)	E DISEASE CONTROL+STD/CT
UF USE	Used For terms (Forbidden Terms) (SELF, UF) Use terms (Preferred Terms) (SELF, USE)	E DROUGHT RESISTANCE+UF/CT E DROUGHT TOLERANCE+USE/CT

(1) Automatic Relationship Code is SET OFF. If you SET RELATION ON, the result of EXPAND without any relationship code is the same as described for AUTO.

Geographic Term (/GT)

Relationship Code	Content	Example
ALL AUTO (1)	All associated terms (SELF, BT, NOTE, USE, UF, NT, RT) Narrower Terms (SELF, NT)	E UK+ALL/GT S SCOTLAND+AUTO/GT
BT HIE	Broader Terms (SELF, BT) Hierarchy Terms (all Broader and Narrower Terms) (SELF, BT, NT)	E CONNECTICUT+BT/GT E USA+HIE/GT
KT NT	Keyword Terms (SELF, KT) Narrower Terms (SELF, NT)	E AMERICA+KT/GT S ECUADOR+NT/GT
PFT	All Preferred and Forbidden Terms (SELF, USE, UF)	E UNITED STATES OF AMERICA+PFT/GT
RT	Related (see also) Terms (SELF, RT)	E PUERTO RICO+RT/GT
STD	All Broader, Narrower, and Related Terms (SELF, BT, NT, RT)	E CARIBBEAN+STD/GT
UF	Used For terms (Forbidden Terms) (SELF, UF)	E USA+UF/GT
USE	Use terms (Preferred Terms) (SELF, USE)	E BRITAIN+USE/CT

(1) Automatic Relationship Code is SET OFF. If you SET RELATION ON, the result of EXPAND without any relationship code is the same as described for AUTO.

Thesaurus Field Descriptors

Code	Description
SELF (-->)	Thesaurus Term
BT	Broader Term
KT	Keyword Term (Permuted Index)
NOTE	Note
NT	Narrower Term
RT	Related Term
UF	Forbidden Term
USE	Preferred Term

DISPLAY and PRINT Formats

Any combination of formats listed below may be used to display or print answers. Multiple codes must be separated by spaces or commas, e.g., D L1 1-5 TI SO, D L1 1-5 TI,SO. The fields are displayed in the order requested.

Hit-term highlighting is available in all fields. Highlighting must be on during SEARCH in order to use the HIT, KWIC, and OCC formats.

Format	Content	Examples
AB	Abstract	D TI AB
AN	Accession Number	D AN
AU	Author	D AU CS 1-5
AV	Availability	D AV
CC	Classification Code	D 2 4 6 CC
CO	Corporate Name	D CO
CS	Corporate Source	D CS
CT	Controlled Term, CABA and Library of Congress	D CT
CY	Country of Publication	D CY
DN	Document Number	D DN
DT (TC)	Document Type	D DT
FS	File Segment	D FS
GT	Geographic Term, CABA and other	D GT
ISN	International Standard (Document) Number (CODEN, ISBN, ISSN)	D ISN
JT (1)	Journal Title (JTF and JTA)	D JT
JTA (1)	Journal Title, Abbreviated	D JTA
JTF (1)	Journal Title, Full	D JTF
LA	Language	D LA SL
ML (1)	Meeting Location	D ML
MT (1)	Meeting Title	D MT
MY (1)	Meeting Year	D MY
NA	Named Person	D NA
NTE	Note	D NTE
NR	Number of Report	D NR
PB (1)	Publisher	D PB
PY (1)	Publication Year	D JT PY
SL	Summary Language	D LA SL
SO	Source	D SO
ST	Supplementary Term	D CT ST
TI	Title	D TI
WC.T (1)	Word Count, Title	D WC.T

DISPLAY and PRINT Formats (cont'd)

Format	Content	Examples
ABS IABS ALL	AN, AB ABS, with a text label AN, DN, TI, AU, CS, NR, SO, NTE, CY, DT, FS, LA, SL, AV, ED, AB, CC, GT, CT, ST, NA, CO	D ABS D IABS D L3 2 ALL
DALL IALL BIB	ALL, delimited for post-processing ALL, indented with text labels AN, DN, TI, AU, CS, NR, SO, NTE, CY, DT, FS, LA, SL, AV, ED (BIB is the default)	D DALL D L7 6 IALL D 1-
IBIB IND SCAN (2)	BIB, indented with text labels AN, CC, GT, CT, ST, NA, CO TI, CC, GT, CT, ST, NA, CO (random display without answer numbers)	D IBIB D IND D SCAN
TRIAL (TRI, SAM, SAMPLE, FREE)	TI, CC, GT, CT, ST, NA, CO	D SAM 2-4, 10
HIT KWIC OCC	Fields containing hit terms Hit terms plus 50 words on either side (Key-Word-In-Context) Number of occurrences of hit terms and fields in which they occur	D HIT D KWIC D OCC

(1) Custom display only.

(2) SCAN must be specified on the command line, i.e., D SCAN or DISPLAY SCAN.

SELECT, ANALYZE, and SORT Fields

The SELECT command is used to create E-numbers or an L-number containing terms taken from the specified field in an answer set.

The ANALYZE command is used to create an L-number containing terms taken from the specified field in an answer set.

The SORT command is used to rearrange the search results in either alphabetic or numeric order of the specified field(s).

Field Name	Field Code	ANALYZE/ SELECT (1)	SORT
Abstract	AB	Y	N
Accession Number	AN	Y	N
Author	AU	Y	Y
Availability	AV	Y	Y
Citation	CIT	Y (2,3)	N
Classification Code	CC	Y	Y
CODEN	CODEN	N	Y
Controlled Term, CABA and Library of Congress	CT	Y	N
Corporate Name	CO	Y	Y
Corporate Source	CS	Y	Y
Country of Publication	CY	Y	Y
Document Number	DN	Y	Y
Document Type	DT (TC)	Y	Y
File Segment	FS	Y	Y
Geographic Term, CABA and other	GT	Y	Y

SELECT, ANALYZE, and SORT Fields (cont'd)

Field Name	Field Code	ANALYZE/ SELECT (1)	SORT
International Standard Book Number	ISBN	N	Y
International Standard (Document) Number	ISN	Y (4)	N
International Standard Serial Number	ISSN	N	Y
Journal Title	JT	Y	Y
Journal Title, Abbreviated	JTA	Y (5)	Y
Journal Title, Full	JTF	Y (5)	Y
Language	LA	Y	Y
Meeting Location	ML	Y	Y
Meeting Title	MT	Y	Y
Meeting Year	MY	Y	Y
Named Person	NA	Y	Y
Note	NTE	Y	N
Number of Report	NR	Y	Y
Occurrence Count of Hit Terms	OCC	N	Y
Publisher	PB	Y	Y
Publication Year	PY	Y	Y
Source	SO	Y (6)	N
Summary Language	SL	Y	Y
Supplementary Term	ST	Y	N
Title	TI	Y (default)	Y
Word Count, Title	WC.T	Y	Y

- (1) HIT may be used to restrict terms extracted to terms that match the search expression used to create the answer set, e.g., SEL HIT CT.
- (2) SELECT HIT and ANALYZE HIT are not valid with this field.
- (3) Extracts first author, publication year, volume, and first page with a truncation symbol appended and with /RE appended to the terms created by SELECT.
- (4) Selects or analyzes the CODEN, ISBN, and ISSN with /ISN appended to the terms created by SELECT.
- (5) Appends /JT to the terms created by SELECT.
- (6) Selects or analyzes the CODEN, ISBN, and ISSN with /SO appended to the terms created by SELECT.

Sample Records**DISPLAY ALL OF JOURNAL**

AN 2022:564162 AGRICOLA
 DN IND607951225
 TI Wildland fire prevention: the impact of the Modifying Industrial Operations Protocol on the growth of industrial forestry-caused wildland fires in Ontario, Canada
 AU Granville, Kevin; Woolford, Douglas G.; Dean, C. B.; McFayden, Colin B.
 CS Department of Mathematics and Statistics, University of Windsor, Windsor, ON, Canada.; Department of Statistical and Actuarial Sciences, University of Western Ontario, London, ON, Canada.; Department of Statistics and Actuarial Science, University of Waterloo, Waterloo, ON, Canada.; Ontario Ministry of Natural Resources and Forestry, Aviation, Forest Fire and Emergency Services, Dryden, ON, Canada.
 SO International journal of wildland fire, Volume 31, Number 9, pp. 825-834, 10 p.
 ISSN: 1049-8001
 NTE <https://dx.doi.org/10.1071/WF22074>
 DT Journal
 LA English
 ED Entered STN: 5 Oct 2022
 Last updated on STN: 5 Oct 2022
 AB Background Industrial forestry operations in Ontario, Canada, may be restricted to reduce the risk of wildland fires. This is currently done according to the Modifying Industrial Operations Protocol (MIOP), which

AGRICOLA

was implemented in 2008 as a replacement for the Woods Modification Guidelines that had been in place since 1989. One of MIOF's objectives is to limit the negative impact or damage caused by fires ignited by industrial forestry operations. Aims Treating the incremental growth between discovery and final sizes as a measure of suppression effectiveness, we aimed to characterise and contrast growth distributions for three successive time periods using data spanning 1976–2019 on Crown forest areas of Ontario. Methods Stratifying by first responding group (Ontario Ministry vs forestry personnel), we tested for evidence of changes in the growth distribution using the Kruskal-Wallis and Mann-Whitney U tests. Key results We found iterative improvements between successive time periods (Pre-Woods, then Woods Guidelines, then MIOF) in the growth distribution of fires first responded to by forestry personnel. Conclusions MIOF appears to be successfully limiting the negative impact of industrial forestry fires while increasing operational flexibility relative to the Woods Modification Guidelines. Implications MIOF has been implemented in a manner that still encourages safe operations while not contradicting this objective.

GT Ontario
 CT fire prevention; forests; human resources; industrial forestry; risk reduction; wildfires; wildland
 ST empirical cumulative distribution function; fire growth; fire size; forest fire; initial response group; Kruskal-Wallis test; Mann-Whitney U test; regulations; wildfire risk mitigation

DISPLAY BIB OF MONOGRAPHY

AN 2019:21982 AGRICOLA
 DN CAT31396536
 TI Drosophila : methods and protocols
 Uniform Title: Drosophila (Dahmann).
 AU Dahmann, Christian
 SO Second edition. (2016), xii, 355 pages : illustrations ; 27 cm.
 Series Title: Methods in molecular biology (Clifton, N.J.) ; v. 1478.
 ISSN: 1064-3745 Springer protocols (Series) ISSN: 1949-2448
 ISSN: 1064-3745 ISBN: 9781493963690; 1493963694
 Source Note: Pub. Frequency: Annual
 NTE LOC Control No.: 2016948818
 CY United States
 DT (Monography)
 FS Other US
 LA English
 AV DNAL (QL537.D76 D73 2016)
 ED Entered STN: 6 Mar 2019
 Last updated on STN: 6 Mar 2019

In North America

CAS Customer Center
 P.O. Box 3012
 Columbus, Ohio 43210-0012
 U.S.A.
 Phone: 800-753-4227 (North America)
 614-447-3731 (worldwide)
 Email: help@cas.org
 Internet: www.cas.org

In EMEA

CAS Customer Center EMEA
 (represented by FIZ Karlsruhe)
 P.O. Box 2465
 76012 Karlsruhe
 Germany
 Phone: +49-7247-808-555
 E-mail: EMEAhelp@cas.org

In Japan

JAICI (Japan Association for
 International Chemical Information)
 Nakai Building
 6-25-4 Honkomagome, Bunkyo-ku
 Tokyo 113-0021
 Japan
 Phone: +81-3-5978-3601 (Technical Service)
 +81-3-5978-3621 (Customer Service)
 Email: support@jaici.or.jp (Technical Service)
 customer@jaici.or.jp (Customer Service)
 Internet: www.jaici.or.jp