AWIC Database Search Operator Reference Guide

This reference guide provides information on how to use different search operators in a variety of databases. The search operator examples below will help you find literature on animal welfare and animal use alternatives.

Animal Welfare Information Center, National Agricultural Library, (https://www.nal.usda.gov/awic/)

	Proximity Operators:	Character/letter combinations that find one search term within a certain number of words from another.
PubMed	You cannot search proximity operators in PubMed	
Web of Science	NEAR/# (words will appear in any order) ated # indicates maximum number of words between first and second terms Ex: **"non*invasive" NEAR/8 "urine collection"** results in "A **noninvasive urine collection** device for female cattle" SAME: Finds two words in one search field. Functions like the Boolean operator, AND. Ex: **"Agricultural Research Service" SAME Beltsville** results in "Dr Douglass R. Miller, ex-**Agricultural Research Service**, U.S. Department of Agriculture, **Beltsville**, Maryland."	
Scopus	PRE/# ('PRE' means 'precedes' which means the first word will appear before the second) Ex: **"Social housing" PRE/5 rats** results in "Go long(-itudinal)! **Social housing** protects working memory in **rats**" W/# (Within) (words appear in any order) Ex: **"Social housing" W/5 rats** results in "50-kHz chirping (laughter?) in response to conditioned and unconditioned tickle-induced reward in **rats**: Effects of **social housing** and genetic variables"	
EBSCO	N# (Near) (words will appear in any order) Ex: **"cage*" N8 rodent*** results in "Variation in bacterial contamination of microisolation **cage** tops according to **rodent** species and housing system" W# (Within) (first word appears before the second) Ex: **"cage*" W8 rodent*** results in "Effect of **cage**-change frequency on **rodent** breeding performance"	
ProQuest	NEAR/# or N/# (words will appear in any order) Ex: **monkey NEAR/5 stud*** results in "Eight-year toxicity **study** in **monkeys** and reproduction **studies** in rats and rabbits treated with probucol." PRE/# or P/# ('PRE' means 'precedes' which means the first word will appear before the second) Ex: **monkey PRE/5 stud*** results in "Monoclonal Antibodies Against Zika Show Promise in **Monkey Study**"	

USDA	**Boolean Operators:** AND, OR, NOT connect search terms. AND returns both terms, OR returns either, NOT excludes terms.	**Truncation/Wildcard Operators:** Characters such as the asterisk (*), question mark (?), and hash/pound sign (#) can be added to the root of a word in order to find variants of that term. In some databases, truncation operators can be used within words.
PubMed/ Medline	AND, OR, NOT Ex: mice **AND** "Three Rs" Ex: housing **OR** cage* Any word after NOT is excluded from results. NOT can help exclude irrelevant results.	Asterisk (*) = zero or more characters. **Note:** Truncation operators can only be used at the end of words/phrases Ex: **enrich*** can result in the terms **enrich**, **enrich<u>ed</u>**, **enrich<u>ing</u>**, and **enrich<u>ment</u>**
Web of Science	AND, OR, NOT Ex: ferret* **AND** influenza Ex: "animal welfare" **OR** "environmental enrichment" Ex: mannequin* **NOT** cloth*	Asterisk (*) = zero or more characters. Question mark (?) = any single character. Ex: **characteri?e** results in **characteri<u>z</u>e** and **characteri<u>s</u>e** Dollar sign ($) = zero or one character(s) Ex: **"animal behavio$r"** results in **animal behavior** and **animal behavio<u>u</u>r**
Scopus	AND, OR, AND NOT Note: Only Scopus uses **AND NOT** instead of **NOT** Ex: pigs **AND NOT** guinea	Asterisk (*) = zero or more characters. Ex: **man*in** results in terms such as **man<u>ik</u>in** and **man<u>nequ</u>in**
EBSCO	AND, OR, NOT Ex: bulls **NOT** (elephant* OR shark* OR frog*)	Asterisk **(*)** = zero or more characters. Ex: **imag*** results in **image**, **imag<u>es</u>**, **imag<u>ing</u>** Pound sign **(#)** stands for zero or one character(s). Ex: **"animal behavio#r"** results in **animal behavior** and **animal behavio<u>u</u>r** Question mark **(?)** = any single (one) character. Ex: **reali?e** results in **reali<u>z</u>e** and **reali<u>s</u>e**
ProQuest	AND, OR, NOT ("animal welfare" **OR** "humane handling") **AND** ("live*stock" **OR** "agricultural animal*") **NOT** horse*	Question mark (?) = any single character Ex: **authori?e** results in **authori<u>z</u>e** and **authori<u>s</u>e** Asterisk (*) = zero or more characters. Ex: **be*t** results in **bet**, **be<u>a</u>t**, **be<u>e</u>t**, **be<u>l</u>t**, **be<u>n</u>t**, **Be<u>r</u>t**, and **be<u>s</u>t**