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EQUIVALENCE AND ALTERNATIVE CORRESPONDENCE IN THE TRANSLATION OF ENGLISH AGRICULTURAL TERMS INTO UZBEK

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Abstract: The article examines equivalence and alternative correspondence in translating English agricultural terminology into Uzbek. The study treats a term not as an isolated lexical item but as a designation of a specialized concept whose translation must preserve conceptual scope, functional value and accepted usage within the target-language professional community. The analysis combines terminological, comparative-semantic and contextual methods and draws on current terminology standards, multilingual agricultural resources and recent Uzbek scholarship. A pilot sample of English terms from crop production, soil science, irrigation, plant protection, livestock production and agrotechnology is classified according to translation type: established full equivalent, contextual or partial equivalent, descriptive equivalent, calque, borrowing/transliteration and hybrid solution. The findings show that direct equivalence is highly effective for stable traditional concepts, whereas rapidly developing technological terminology often requires descriptive, borrowed or hybrid forms. Particular attention is paid to polysemy, semantic narrowing and broadening, variation among competing Uzbek forms, and the need to distinguish literal similarity from conceptual equivalence. The article proposes a practical decision sequence for translators: identify the concept and subdomain, verify the English term in authoritative terminology resources, search for an established Uzbek equivalent, compare definitions and usage contexts, and only then select a normalized alternative. The results support systematic terminology management and the development of consistent English-Uzbek agricultural glossaries.

Keywords: agricultural terminology, English-Uzbek translation, equivalence, alternative correspondence, partial equivalence, descriptive translation, borrowing, terminology standardization, AGROVOC, specialized translation.

INTRODUCTION

Agricultural communication increasingly operates across languages because agronomy, irrigation, biotechnology, food security, agricultural engineering and digital farming depend on international research, equipment documentation, standards and professional exchange. In this environment, a terminological error may distort a scientific statement, obscure the function of a technology or produce inconsistency across teaching materials and technical documents. The problem is particularly visible in English-Uzbek translation because the two languages differ typologically and because the Uzbek agricultural lexicon combines old Turkic vocabulary, Persian-Arabic layers, Russian-mediated internationalisms and a growing number of direct English borrowings. Modern terminology theory therefore requires translators to work from concept to designation rather than from word to word. ISO

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1087:2019 defines the basic conceptual apparatus of terminology science, while ISO 704:2022 emphasizes relations among objects, concepts, definitions and designations and provides principles for term formation and terminology work. In Uzbek linguistics, Dadaboyev systematizes the lexical-semantic and grammatical features of Uzbek terminology , and recent studies by Isarov and Khayrullaev, Saidova, Samandarova, Rustamova and Khalilova have drawn attention to scientific and agricultural terminology translation, contextual meaning and corpus-based terminology management . The purpose of this article is to determine how equivalence and alternative correspondence function in the translation of English agricultural terms into Uzbek and to formulate practical criteria for choosing between a ready equivalent, a contextual analogue, a descriptive form, a calque or a borrowing.

In specialized translation, equivalence cannot be reduced to formal similarity between source and target words. A terminological equivalent is adequate when it designates the same or a sufficiently corresponding concept in the target professional system and can perform the same communicative function in a given document. This distinction is essential in agriculture, where a common-language word may acquire a narrow scientific meaning. The English term yield, for example, can mean a general result in everyday language, but in crop production it normally refers to the amount of harvested produce per unit area or another defined production measure. Uzbek hosil and hosildorlik are related, yet they are not interchangeable in all contexts: hosil typically names the crop or harvest itself, whereas hosildorlik is preferred for productivity or yield-rate meaning. Likewise, stock may refer to inventory in business, breeding material in horticulture, or livestock in agricultural contexts. Correct translation therefore begins by identifying the relevant concept, not by selecting the first dictionary match. This approach agrees with modern terminology standards, which treat designations as elements of concept systems and stress definitional correspondence . It also explains why bilingual dictionaries alone are insufficient: without context, a translator may choose a linguistically possible form that is conceptually wrong.

Equivalence in English-Uzbek agricultural terminology can be represented as a continuum rather than a binary relation. At one end are established full equivalents such as irrigation – sug‘orish, greenhouse – issiqxona, crop rotation – almashlab ekish, soil fertility – tuproq unumdorligi and drip irrigation – tomchilatib sug‘orish. These target forms are conventional, semantically transparent and widely understandable to specialists. In the middle are partial or contextual equivalents whose semantic boundaries do not completely coincide. Tillage may be rendered as tuproqqa ishlov berish, yerga ishlov berish or, in a narrower operational context, shudgorlash, but the last form cannot represent all types of tillage. Seed treatment may be urug‘ga ishlov berish as a general expression, while urug‘ni dorilash is narrower and normally refers to chemical or protective treatment. At the other end are terms for new technologies or concepts for which Uzbek has no single fully stabilized designation; these may require a descriptive equivalent, a calque or a controlled borrowing. The translator's task is consequently to determine the degree of conceptual overlap and choose a form that is both accurate and norm-compatible.

The analysis uses a qualitative comparative method supported by a pilot set of sixty English agricultural terms selected from six subdomains: crop production, soil science, irrigation and water management, plant protection, livestock production and contemporary agrotechnology. The English concepts were checked against current terminology resources, especially FAO's AGROVOC

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multilingual thesaurus, which organizes agricultural concepts, preferred terms, variants and semantic relations, and against the conceptual principles contained in ISO terminology standards. Uzbek candidate equivalents were compared with usage documented in recent Uzbek research on agricultural and scientific terminology and with established patterns of Uzbek term formation described by Dadaboyev. The sample was then classified by dominant translation solution. Twenty-eight items (46.7%) had stable full equivalents; fourteen items (23.3%) required contextual or partial equivalence; nine items (15.0%) were most naturally expressed through a descriptive or explanatory form; and nine items (15.0%) were represented by a borrowing, calque or hybrid solution. These figures are not intended as a statistical description of the entire agricultural lexicon; they show the practical distribution of translation strategies in a controlled sample and indicate that more than half of the examined items required some degree of semantic or formal adjustment rather than mechanical substitution.

Table 1. Representative English agricultural terms and recommended Uzbek correspondences

English term	Uzbek correspondence	Type	Translation note
crop rotation	almashlab ekish	Full established equivalent	Conceptual boundaries largely coincide.
drip irrigation	tomchilatib sug‘orish	Full established equivalent	Stable technical designation.
soil fertility	tuproq unumdorligi	Full established equivalent	Direct conceptual correspondence.
tillage	tuproqqa (yerga) ishlov berish	Partial/contextual equivalent	Broader than shudgorlash.
yield	hosil / hosildorlik	Contextual alternative	Choice depends on output vs. productivity.
seed treatment	urug‘ga ishlov berish / urug‘ni dorilash	Partial equivalent	Second form is narrower.
cover crop	qoplovchi ekin	Calque / emerging equivalent	Meaning should be checked in agronomic context.

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English term	Uzbek correspondence	Type	Translation note
precision agriculture	aniq dehqonchilik (precision qishloq xo‘jaligi)	Alternative / hybrid	Uzbek usage is still variable.
fertigation	fertigatsiya / o‘g‘itni sug‘orish suvi orqali berish	Borrowing + description	Explanation is useful on first occurrence.
integrated pest management	zararkunandalarga qarshi integratsiyalashgan kurash	Descriptive established equivalent	Multiword form preserves the full concept.
no-till farming	tuproqqa ishlov bermasdan ekish (nol ishlovli dehqonchilik)	Descriptive / alternative	Literal borrowing alone may be opaque.
agroforestry	agroo‘rmonchilik / qishloq xo‘jaligi va o‘rmonchilikni uyg‘unlashtirish	Borrowing + description	Use depends on target readership.

3. Full, partial and contextual equivalence

The most reliable translations are those supported by terminological convention and conceptual identity. Such terms should not be unnecessarily replaced with fashionable borrowings. For example, greenhouse should remain issiqxona rather than a transliterated form; irrigation corresponds to sug‘orish; livestock breeding in many contexts is naturally expressed through chorvachilik or chorva mollarini ko‘paytirish depending on the precise concept. Stable native or long-established Uzbek equivalents improve readability and preserve the internal resources of the target language. However, formal one-to-one correspondence should not be assumed when English compresses several conceptual distinctions into one lexical unit or when Uzbek distributes them across multiple words. The yield example demonstrates this clearly. The translator must ask whether the source text denotes total harvested output, yield per hectare, biological yield, marketable yield or another measure. A technical phrase such as grain yield per hectare is appropriately translated as gektar hisobiga don hosildorligi rather than simply don hosili, because the measurement relation is part of the concept. Similar contextual differentiation applies to breeding, culture, nursery, stock, treatment and management, all of which can designate different processes or entities in agricultural subdomains.

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Partial equivalence is especially common when an English term has a wider or narrower semantic scope than its most obvious Uzbek counterpart. Tillage covers a set of soil-working operations; shudgorlash denotes ploughing and is therefore only one possible tillage operation. Weed control can be begona o‘tlarga qarshi kurash, but in a document focused on herbicide application the procedure may require a more specific formulation. Animal husbandry is broadly chorvachilik, whereas livestock management can include feeding, housing, welfare, health monitoring and production organization and may require chorva mollarini parvarishlash va boshqarish. Such cases are better described as contextual equivalence: the translator selects an Uzbek designation only after identifying which semantic feature is activated by the source context. Recent Uzbek studies emphasize the importance of semantic, morphological and contextual analysis in agricultural terminology, and this is precisely where professional translation differs from lexical replacement.

Alternative correspondence becomes necessary when the target language lacks a universally accepted single term or when a new concept enters agricultural discourse faster than terminological normalization can occur. Descriptive translation is the safest strategy when conceptual transparency is more important than brevity. No-till farming, for instance, can be explained as tuproqqa ishlov bermasdan ekish, while a shorter form such as nol ishlovli dehqonchilik may be used after the concept has been introduced. Integrated pest management is successfully represented by a multiword Uzbek equivalent because its conceptual components—integrated strategy, pest target and control/management—must all remain visible. Descriptive forms are particularly valuable in educational materials, extension manuals and documents intended for mixed audiences, where an unexplained internationalism may reduce comprehension. Their disadvantage is length, so once a standardized concise equivalent is established, terminological consistency should take priority.

Calquing and borrowing are appropriate when they correspond to productive Uzbek word-formation models or when the international form is already embedded in professional usage. Mulching is commonly adapted as mulchalash, silage as silos, and a range of agrochemical or biotechnological terms enter Uzbek through international roots. Newer items such as fertigation illustrate a transitional state: the borrowed fertigatsiya is concise and internationally recognizable, but a first-use explanation—o‘g‘itni sug‘orish suvi orqali berish—makes the concept accessible and prevents misunderstanding. Precision agriculture also shows variation. Aniq dehqonchilik is semantically transparent and increasingly useful as an Uzbek equivalent, while precision qishloq xo‘jaligi or the English-based precision farming may appear in professional discourse. A translator should not multiply variants within one document. The preferred procedure is to select one normalized Uzbek form, give the international term in parentheses at first mention if needed, and then use the chosen term consistently. Terminology consistency is a measurable quality parameter in translated corpora, and uncontrolled variation can impair information retrieval and professional comprehension. Digital terminology management, parallel corpora and concept-oriented databases therefore play a direct role in translation quality, as shown in recent work on corpus-based English-Uzbek agricultural lexicography and in studies of translation technology and terminology management.

Several recurring factors produce false or weak equivalents. The first is polysemy: field may mean a cultivated area, a branch of science or a data field; culture may refer to a crop, microbial culture or cultivation; resistance may denote plant resistance to disease, pest resistance to pesticides or

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mechanical resistance in engineering. The second is hidden conceptual asymmetry. The English crop can denote a cultivated plant, the harvested product or a season's output, whereas Uzbek may require ekin, hosil or another context-specific noun. The third is terminological variation created through competing translation channels. A new technology may simultaneously enter Uzbek through Russian, direct English borrowing and native descriptive translation, producing several forms that look synonymous but differ in professional acceptance. The fourth is abbreviation. Terms such as IPM, GIS, UAV and IoT are frequent in modern agriculture; an English abbreviation should not automatically be transferred without checking whether the Uzbek text needs a full expanded equivalent, an international abbreviation or both. The fifth is collocational restriction. A dictionary may offer a correct noun equivalent, but the full technical phrase may require a conventional Uzbek combination. Soil health, for example, is not always best handled as a literal word-for-word phrase; depending on institutional terminology it may need explanation through tuproqning sog‘lom holati, tuproq sifati or a more specific set of indicators. These problems confirm that the unit of translation in terminology is often the concept plus its phraseological environment rather than the isolated word.

6. A practical model for selecting an Uzbek equivalent

A reliable English-Uzbek agricultural translation can be organized as a six-stage decision process. First, the translator identifies the subject subdomain and the exact source concept from definitions, illustrations, units of measurement and surrounding collocations. Second, the English designation is verified in an authoritative source such as AGROVOC, an international standard, a scientific glossary or a domain-specific corpus, because the same surface form may represent different concepts. Third, possible Uzbek equivalents are collected from normative dictionaries, textbooks, scientific publications and institutional documents rather than from general machine translation output alone. Fourth, the candidate forms are compared by conceptual scope: the translator checks whether the essential characteristics of the source concept are preserved and whether the Uzbek form is broader, narrower or differently structured. Fifth, the solution is evaluated for communicative suitability. A research article may accept a concise internationalism, while a farmer-oriented manual may require an explanatory form. Sixth, the chosen equivalent is recorded in a project glossary together with the English term, definition, context, source and rejected variants. This last step prevents inconsistency across a long document or a series of related translations. Where no stable Uzbek term exists, the recommended first-use pattern is “Uzbek descriptive or normalized form + English term in parentheses,” followed by consistent use of the Uzbek designation. This model combines terminological accuracy with the practical needs of specialized translation and supports future standardization rather than uncontrolled borrowing.

CONCLUSION

The translation of English agricultural terminology into Uzbek is fundamentally a problem of conceptual correspondence. Full equivalence is available for many traditional and well-established agricultural concepts, but contextual, descriptive, borrowed and hybrid solutions remain necessary for semantically asymmetric terms and rapidly developing technologies. The analysis shows that a formally similar word is not automatically an equivalent: the decisive criteria are conceptual scope, subdomain, professional usage, collocational behavior and target-reader needs. Stable Uzbek

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equivalents such as sug‘orish, issiqxona, almashlab ekish and tuproq unumdorligi should be preferred where they fully represent the source concept, while terms such as tillage, yield, seed treatment, precision agriculture, fertigation and no-till farming require context-sensitive choice or controlled alternative correspondence. Effective practice therefore depends on concept-oriented terminology work, consultation of authoritative resources, comparison of definitions, and consistent recording of accepted forms. For English-Uzbek agricultural communication, the most productive future direction is the development of regularly updated bilingual terminological databases and domain corpora in which each term is linked to a definition, subdomain, usage example, preferred Uzbek equivalent and admissible variants. Such resources would reduce synonymic dispersion, improve translation quality and contribute to the normalization of Uzbek scientific and technical terminology.

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