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Derivational Features Of Plant Names In Uzbek, Turkish, And Russian Languages

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ABSTRACT

Plant names (phytonyms) constitute a culturally dense and structurally diverse layer of the lexicon, where nomination strategies reflect both everyday experience with flora and the morphological resources of a language. This article explores how derivation participates in creating and expanding plant-name inventories in Uzbek, Turkish, and Russian. Building on a comparative-typological perspective, the study focuses on productive word-formation mechanisms that are especially visible in phytonyms: suffixation, compounding, multiword naming patterns, and hybrid formations where borrowed stems combine with native derivational formatives. The analysis demonstrates that Uzbek and Turkish, as agglutinative Turkic languages, tend to privilege transparent concatenation and regular suffixal models, while Russian, as a fusional Slavic language, shows high diversity of suffixal types and a strong role of evaluative and collective derivation. Across all three languages, semantic motivation (color, form, habitat, use) interacts with derivational formants, shaping stable naming templates that support lexicography, translation, and professional communication. The findings highlight the need to treat phytonyms not as isolated lexical items but as outcomes of patterned derivational choices constrained by typology and strengthened by cultural salience.

Keywords: Phytonyms, word formation, derivation, suffixation, compounding, Uzbek, Turkish, Russian, comparative linguistics.

INTRODUCTION

The vocabulary of plant names occupies a special place in linguistic description because it links language structure to the material world in a direct and observable way. In many speech communities, phytonyms encode not only botanical knowledge but also folk taxonomy, traditional medicine, culinary practices, landscape perception, and symbolic meanings. Precisely because of this functional load, plant names often reveal "ready-made" nomination patterns that speakers apply repeatedly when encountering new species, regional variants, or newly salient plants. These patterns are rarely arbitrary: they are constrained by a language's derivational system and by typological preferences in building complex words.

In comparative linguistics, phytonyms are particularly useful for observing how languages differ in packaging descriptive features into names. Some languages prefer to build compact compounds, others rely on suffixes, and others stabilize multiword constructions that behave like lexical units. Uzbek and Turkish are genetically related Turkic languages with strongly agglutinative morphology, where suffixation is typically transparent and cumulative. Their derivational systems are described in major grammatical and word-formation works, including Hojiyev's account of Uzbek word formation and the comprehensive descriptions of Turkish morphology and derivational suffixes by Göksel & Kerslake and Kornfilt. Russian, by contrast, is a fusional Slavic language with rich derivational morphology and a long tradition of word-formation analysis, represented by foundational works such as Zemskaya's handbook on Russian word formation

and large-scale word-formation dictionaries compiled by Tikhonov.

Despite the availability of strong descriptive traditions for each language separately, cross-language comparison of plant-name derivation remains methodologically non-trivial. The challenge is not only to list suffixes or provide examples, but to explain how derivational choices become conventional naming strategies, and why certain strategies are more salient in one language than another. This article addresses that gap by focusing on derivational features that recur across the three languages and by interpreting them through typology: agglutinative vs. fusional morphology, the relative role of compounding vs. suffixation, and the interaction between derivation and semantic motivation.

The purpose of the study is to describe and compare the dominant derivational mechanisms used in Uzbek, Turkish, and Russian phytonyms, paying special attention to (a) suffixation models that produce plant names or plant-related lexical categories, (b) compounding and its structural variants, (c) lexicalization of multiword naming patterns, and (d) hybrid derivation that integrates borrowed stems into native word-formation systems. The practical value of such comparison is evident for translation studies, terminology work, and lexicographic practice, where accurate segmentation and functional equivalence are needed when plant names circulate between languages.

The study is qualitative and comparative-typological. Examples and generalizations are drawn from authoritative grammatical and word-formation descriptions of Uzbek, Turkish, and Russian, complemented by plant-name-oriented sources where available. For Uzbek, the analysis relies on descriptions of word-formation models and morphemic segmentation practices in Hojiyev's work on Uzbek word formation and Rahmatullayev's grammar-based description of modern literary Uzbek. For Turkish, derivational mechanisms and suffix functions are grounded in comprehensive grammatical descriptions, especially the treatment of nominalizing and evaluative suffixes and the structural properties of compounds. For Russian, the derivational inventory and productivity patterns are interpreted with reference to standard word-formation theory and lexicographic evidence from word-formation dictionaries and manuals.

Analytically, each phytonym (or phytonym-based formation) is approached as a derivational structure consisting of a base and a formant (suffix, compounding boundary, or constructional template). The comparison does not assume one-to-one equivalence of suffixes across languages; instead, it compares derivational functions. For instance, Uzbek -zor and Turkish -lık can be compared not as "the same suffix," but as formants frequently used to derive locality or collective readings from plant bases (orchards, groves, plant-rich areas). Russian often expresses similar functions via suffixes such as -ник/-няк or via lexicalized nouns and toponyms, which motivates functional comparison rather than formal matching.

The scope prioritizes everyday and culturally embedded plant names and their derived variants, rather than Latin binomials of scientific taxonomy. Where scientific naming influences the vernacular, it is considered as a source of borrowed stems or calques that enter the derivational system. The approach is descriptive rather than statistical; the goal is to identify stable derivational tendencies and explain their typological motivation.

A central observation of the comparative analysis is that plant-name derivation is not limited to "naming the plant itself." In all three languages, phytonymic bases actively generate broader lexical families: names of plant-rich locations, names of products and materials derived from plants, adjectives of relation, and occasionally names for people associated with cultivation or collection. The derivational profile of plant names therefore includes both core phytonyms and phytonym-based derivatives, and this broader view is crucial for capturing productivity.

In Uzbek, the agglutinative structure encourages regular suffixal derivation where form and meaning remain relatively transparent. Hojiyev's description of Uzbek word-formation emphasizes systematic suffixation as a dominant mechanism, which is especially visible when plant stems serve as bases for new nouns and adjectives. A productive and culturally salient pattern is the derivation of locality/collective meanings, where plant names develop into nouns denoting groves, orchards, or plant-dominated areas. The suffix -zor is emblematic in this domain: plant stems combine with -zor to produce names of spaces characterized by that plant, reinforcing an ecological and agricultural worldview where landscape is categorized through vegetation. Because -zor operates transparently and can attach to many stems, it supports rapid lexical expansion and regional variation without sacrificing comprehensibility.

Turkish exhibits parallel functional behavior, though

realized through Turkish-specific derivational resources. Turkish derivational morphology includes productive nominalizers such as -lık/-lik, which can form nouns expressing place, collection, or relatedness, and these functions are documented within comprehensive descriptions of Turkish grammar. In the plant-name domain, this supports formations that correspond to "hazelnut orchard," "rose garden," or more generally "a place characterized by X," depending on the lexical base and local convention. The important point for comparison is that Uzbek and Turkish both tend to encode these meanings through regular suffixation attached directly to the plant stem, producing compact lexical items whose structure remains analyzable.

Russian, while also heavily suffixing, differs in two important ways. First, Russian offers a broader inventory of derivational suffixes with fine-grained semantic shades, including evaluative suffixes (often diminutive or expressive) that can lexicalize in plant names. Second, Russian word formation is frequently described in terms of derivational "nests," where many related words cluster around a base, as reflected in Tikhonov's dictionary methodology. In phytonyms, this can manifest as families where a plant name relates to a derived noun indicating a place of growth, a person associated with the plant, or a material/product, but the formal devices are more varied and sometimes less predictable than in agglutinative Turkic systems. Zemskaya's treatment of Russian word formation provides the theoretical frame for understanding these diverse suffixal models and their productivity.

Compounding constitutes a second major area of contrast. Uzbek and Turkish often package descriptive information into compounds that specify color, form, part–whole relations, habitat, or use. In Uzbek, compounding is particularly visible where a descriptive element combines with a plant term, yielding names that simultaneously label and characterize. In Turkish, compounding operates through both tight compounds and more constructional patterns (including izafet-based structures), allowing speakers to create names that behave lexically even when they remain orthographically separated. Comprehensive grammatical descriptions of Turkish emphasize how nominal compounds and modifier–head relations are structurally supported by Turkish morphosyntax, which helps explain the stability of such naming patterns in everyday plant terminology.

Russian also has compounds and compound-like formations in the phytonymic lexicon, but the overall typological tendency is different: Russian often relies on suffixation and lexicalization rather than on highly productive compounding for folk plant names. Where compounding exists, it is frequently historical and lexicalized, sometimes with opaque internal motivation for the modern speaker. This typological contrast matters for translation and lexicography: a descriptive Uzbek or Turkish compound may correspond to a Russian simplex or suffix-derived noun whose internal structure is less transparently "descriptive," even if the meaning matches.

A third recurring result concerns hybrid derivation and borrowing. Plant vocabularies are historically open systems, sensitive to trade, migration, medicine, cuisine, and scientific classification. Uzbek and Turkish have long-standing strata of borrowings from Persian and Arabic, and these borrowed stems are often fully integrated into native derivation, attaching to Turkic suffixes and participating in Turkic compounding patterns. This integration is facilitated by agglutinative morphology, which readily accepts new stems into regular suffixation. Russian likewise integrates borrowed plant terms, but Russian integration often leads to adjective formation and relational derivation, producing forms that fit Russian declensional and derivational norms. The key comparative point is that borrowed phytonyms do not remain peripheral: they become productive bases once they are morphologically nativized.

Finally, the data show that semantic motivation interacts with derivational formants in systematic ways. When the naming focus is on habitat or landscape distribution, Uzbek and Turkish frequently use locality/collective derivation. When the focus is on perceptual features such as size or delicacy, Russian often uses evaluative derivation, and Turkish can do so as well via diminutive suffixes described in Turkish grammar. When the focus is on functional use (medicinal, culinary), all three languages may favor compounds or descriptive multiword units that foreground purpose, but they differ in whether those units tend to lexicalize into one word, remain a stable phrase, or become a dictionary-recognized multiword term.

The comparative results support a typological interpretation: derivational strategies in phytonyms are not random preferences but systemic responses to morphological architecture. Uzbek and Turkish, with concatenative suffixation and relatively stable morpheme boundaries, encourage high transparency in the relation

between plant base and derived meaning. This transparency makes "template-driven" naming especially efficient: speakers can extend a known model to new plants, new varieties, or new local realities (for example, a newly cultivated species that now defines an orchard landscape). Hojiyev's presentation of Uzbek word formation as a system of models helps explain why such expansion remains morphologically coherent.

Russian, in contrast, demonstrates how a rich but less uniform suffix inventory supports nuanced lexicalization. The same general meaning of "place associated with a plant" can be expressed through different suffixes or through historically entrenched nouns that are not synchronically transparent. The derivational "nest" approach in Tikhonov's dictionary highlights that productivity in Russian is often visible in networks of related forms rather than in a single universally applicable suffix. This matters for analyzing phytonyms because Russian plant names often preserve older derivational layers, including expressive or diminutive elements that become part of the lexical norm. In other words, Russian phytonymy shows how derivation can be both productive and historically stratified.

An important applied implication concerns translation equivalence. When an Uzbek or Turkish phytonym is built as a descriptive compound, translators may be tempted to preserve description through a literal calque. Yet Russian may prefer an established simplex or a suffix-derived lexical item that is not compositionally transparent, and forcing a calque can produce unnatural or non-idiomatic results. Conversely, Russian evaluative nuances encoded by diminutive suffixes may lack a direct morphological equivalent in Uzbek or Turkish plant naming, requiring either descriptive compensation or a choice of a more neutral term. Thus, derivational analysis becomes a practical tool: it helps distinguish between meaning that is core to identification and meaning that is expressive, local, or culturally marked.

The findings also support lexicographic recommendations. Plant-name dictionaries and bilingual glossaries benefit from including derivational segmentation and functional commentary, especially for phytonym-based derivatives such as grove/orchard nouns, relational adjectives, and product names. In educational contexts, morphological awareness around plant names can serve as a bridge between general word-formation teaching and professional terminology work, because phytonyms provide a concrete and memorable domain where derivation is visible and semantically motivated.

Finally, the discussion should acknowledge that phytonyms are influenced by more than morphology. Regional ecology, contact history, and scientific standardization affect which names become widespread and which remain local. A notable strand of Russian research, for instance, examines how certain phytonymic nominations undergo lexical reduction and reanalysis over time, indicating that diachrony can reshape derivational transparency. This reinforces the idea that derivational analysis should be both synchronic (how speakers parse the word today) and historically informed (why the form exists as it does).

Derivational features of plant names in Uzbek, Turkish, and Russian reflect a consistent interaction between semantic motivation and morphological typology. Uzbek and Turkish tend to foreground transparent suffixation and productive compounding, allowing plant stems to generate wide lexical families through regular, model-based derivation. Russian also relies heavily on suffixation but displays greater diversity of suffixal semantics and stronger historical stratification, making derivational families visible through networks of related forms rather than a small set of uniformly productive templates. Across all three languages, plant-name derivation supports not only naming of plants but also naming of landscapes, products, and relational categories, which strengthens the applied relevance of the topic for translation, lexicography, and professional communication. Further research would benefit from corpus-based quantification and region-specific phytonymic mapping, but even a qualitative comparison demonstrates that phytonyms are an excellent domain for observing how languages "build" knowledge about nature through derivation.

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