

Korean Agency for Technology and Standards

Standard system of Agri. Machinery

2023. 2.



KATS?



KS System



Agricultural machinery standards



KS Certification



Agricultural machinery certification



International accreditation



Agricultural machinery network

1 KATS (Korean Agency for Technology and Standards)

4 Bureau 20 Division



Standard

Conformity

Safety

**Technical
Regulation**

2 KS system

Korean industrial Standards (KS)

Established by the [Industrial Standardization Act](#)

Article 5, Paragraph(2) Where the Minister Trade, Industry and Energy intends to establish, amend, or abolish [Korean industrial Standards](#), he or she shall [undergo deliberation by the Council](#) after consultation with the head of a relevant administrative agency

Basic(A)

Daily necessity(G)

Ceramic(L)

Service(S)

Machinery(B)

Grocery(H)

Chemical(M)

Logistic(T)

Electricity·
Electronics(C)

Environment(I)

Medical(P)

Shipbuilding(V)

Metal(D)

Biology(J)

Quality
management(Q)

Aerospace(W)

Mining(E)

Fiber(K)

Transport
machine(R)

Data(X)

Construction(F)

3

Agricultural machinery standards (ISO based)

TC/SC	Secretariat	Title	Published ISO standards	Under development	KS Identification	Member status	GD (Korea)
TC 23	AFNOR(FRA)	Tractors and machinery for agriculture and forest	35	3	15	P	16
SC 2	ANSI(USA)	Common tests	37	9	32	P	23
SC 3	DIN(DEU)	Safety and comfort	16	2	7	P	23
SC 4	DIN(DEU)	Tractors	57	4	34	P	23
SC 6	AFNOR(FRA)	Equipment for crop protection	51	11	6	P	16
SC 7	UNI(ITA)	Equipment for harvesting and conservation	26	5	8	P	11
SC 13	ANSI(USA)	Powered lawn and garden equipment	18	4	2	P	8
SC 14	ANSI(USA)	Operator controls, operator symbols and other displays, operator manuals	10	1	7	P	19
SC 15	SFS(FIN)	Machinery for forestry	23	1	12	O	10
SC 17	SIS(SWE)	Manually portable(hand-held) powered lawn and garden equipment and forest machinery	32	6	13	O	8
SC 18	SII(ISR)	Irrigation and drainage equipment and systems	41	3	5	P	6
SC 19	DIN(DEU)	Agricultural electronics	49	17	1	P	34
Total			395	66	142		

3 Agricultural machinery standards (KS)

	Standard classification			
	Terminology standard	(Test) Method standard	Product standard	Total
Tractor	20	35	23	78
Attachment	1	3	6	10
Forestry machinery	13	7	9	29
Power tiller	1	5	7	13
Cultivator		2	1	3
Transplanter	1		1	2
Combine	2	2	2	6
Seeding machine	3		2	5
Etc.	8	25	19	52
Total	49	79	70	198

- ◇ Terminology standard: Terminology, Technology, Unit...
- ◇ Method standard: Test/Analysis/Inspection/M Measurement/Working... method
- ◇ Product standard: Shape/Dimension/Quality ... of Product

3 Agricultural machinery standards (KS)

Unmanned aircraft system standardization work in progress

- ▷ National standards (KS)
 - [Published] KS B 7948 (Unmanned aerial spraying systems – [General requirements](#))
 - [Published] KS B 7949 (Unmanned aerial spraying systems – [Performance test methods for spraying system](#))
 - [Published] KS B 7953 (Unmanned aerial spraying systems – [Procedure for spraying](#))
 - [Under development] Unmanned agricultural aircraft systems – [Photo shooting procedure for crop situation research](#)

- ▷ International standards (KATS proposal)
 - [Under development] ISO/FDIS 23117-1 (Unmanned aerial spraying systems – Part 1: Environmental requirements)
 - [Under development] ISO/CD 23117-2 (Unmanned aerial spraying systems – Part 2: Test methods to assess the horizontal transverse spray deposition)



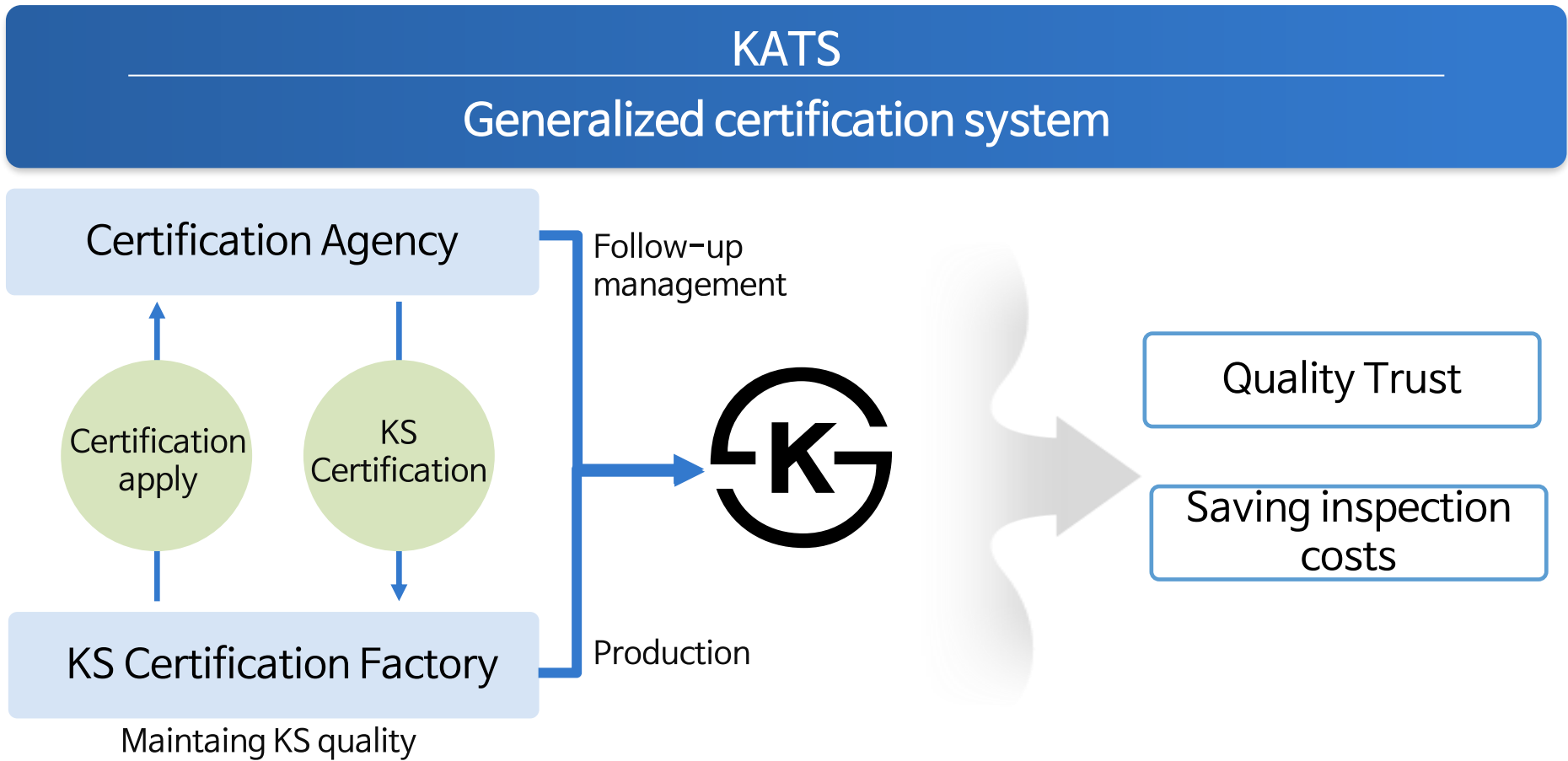
3 Agricultural machinery standards (KS)

Field operating automation standardization

- [Published] KS B 7951 (Levels of field operating automation of agricultural machinery)
 - Based on ISO/SAE PAS 22736, SAE J 3016
 - Classification from Level 0~5
- [Under development] General requirements for remote controlled agricultural machinery for row-crops



4 KS Certification



- Standards → Certification item designation → KS Certification (Not all standards)
- No KS certification item in agricultural machinery

5 Agricultural machinery certification in Korea

Testing agricultural machinery for approval Agricultural Mechanization Promotion Act

- Article 9, Paragraph(1) A manufacturer or an importer of agricultural machinery shall undergo a **test for approval of agricultural machinery** prescribed by Ordinance of the Ministry of Agriculture, Food and Rural Affairs, **such as tractors and combine harvesters** for agriculture that he/she manufactures or imports, from the Minister of Agriculture, Food and Rural Affairs.

Approval skip requirement

Tested by **accredited test institution** in the **same method of Korea**

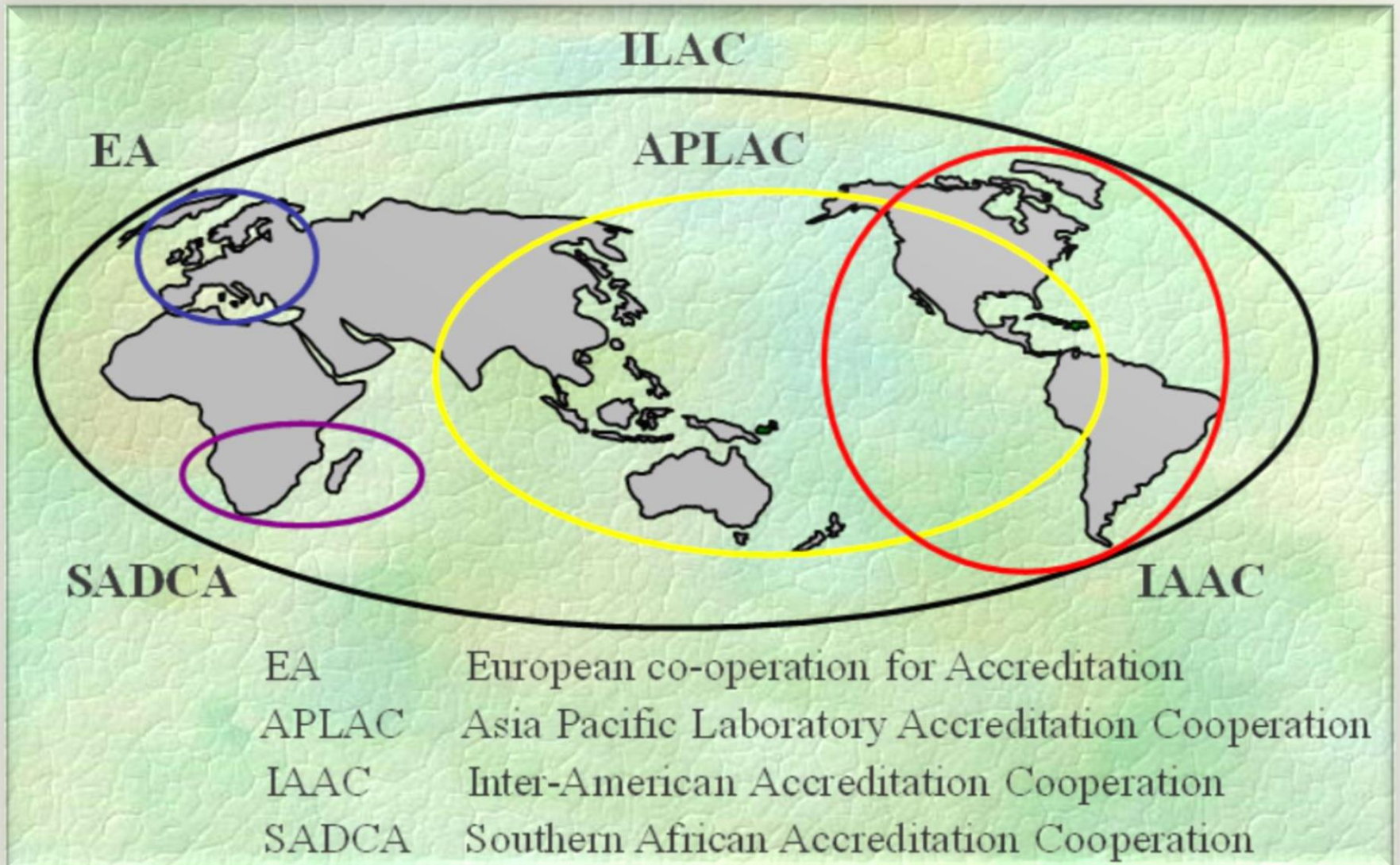
Enforcement rules of Agricultural Mechanization Promotion



Ministry of Agriculture,
Food and Rural Affairs



6 International accreditation



7 Agricultural machinery network



Ministry of Agriculture,
Food and Rural Affairs
Certification



Korean Agency for
Technology and Standards
Standard, ISO/IEC



Rural Development
Administration
R&D, ANTAM, OECD



KAMICO
KOREA AGRICULTURAL
MACHINERY INDUSTRY COOPERATIVE



KQAT
한국농업기술진흥원
Korea Agriculture Technology Promotion Agency
Test, Certification, R&D



Manufacturing

Thank you for listening!