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Foot and mouth disease vaccine information

**Indonesia biosecurity support
program**

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1 Vaccines approved for use in Indonesia

Table 1 summarizes the foot and mouth disease (FMD) vaccines approved for use in Indonesia as of September 2022. The table includes details on primary and booster dosing and other vaccine-specific details. All vaccines require refrigeration. It is important to follow manufacturer's instructions for storage and use. There are no withholding periods for these vaccines. In the US, there is a live-attenuated vaccine that is registered for use with a required withholding period.

The Food and Agriculture Organization (FAO) and the World Organisation for Animal Health (WOAH) have developed post vaccination monitoring guidelines [1]. These can be adapted to countries with varying levels of technical capacity in their laboratories.

Table 1: FMD vaccines approved for use in Indonesia.

Name	Type	Primary dosing (days)	Boosters	Time to full immunity (days)	Early immunity	Covers Ind2001	DIVA	Delivery	Comments
Aftopor (Boehringer Ingelheim)	Inactivated FMD viral antigen (O-3039, O1 Manisa, A22 Iraq) Double oil emulsion	0, 28 [2], [3]	4-7mo [2], [3]	28	FMD exposure at 7d resulted in approx. 80% no clinical signs (CS) [4] FMD exposure at 21d resulted in approx. 100% no CS [4]	Y	Y	IM in neck	Ages: Any Species: Pigs and ruminants Maternal antibody reaction: calves of vaccinated mothers must be vaccinated at 2.5 months old with 2 doses 4-5 weeks apart. Shelf life: 6 months
Aftogen Oleo (Elanco)	Inactivated FMD viral antigen (O1 Campos) Single oil emulsion	0, 21-28[5]	6 mo[5]	30[5]	27 days post vaccination: 86.2-95.4% expected protection percentage (EPP) based on virus neutralisation titres (VNT) [6]	Y	Y	IM in neck	Ages: >6 months old Species: Buffalo, cow, pig, sheep and goats Maternal antibody reaction: No maternal antibody issues Shelf life: 2-years
Aftomune (CEVA)	Inactivated FMD viral antigen (O1 Campos, A24 Cuzeiro)	0, 25 – 28 [7]*	6 mo[7]	28[6]	28dpv: 94% EPP (VNT) [6]	Y	Not labelled	SC/IM in neck	Ages: All ages Species: Cattle and buffalo Maternal antibodies: Not available

	Non-saponified	90 day dose							Shelf life: Not available
Aftrosa (Ourofino)	Inactivated FMD viral antigen (O1 Campos, A24 Cuzeiro) Mineral oil based	0, 25 – 28 [8] *	6 mo[8]	28[6]	28dpv: 94% EPP (VNT) [6]	Y	Not labelled	SC/IM in the middle third of the neck	Ages: All ages Species: Cattle and buffalo Maternal antibodies: Not available Shelf life: Not available
CAVac FMD (China Agricultural Vet.Bio.science and Technology Co Ltd)	Inactivated FMD viral antigen (O/Mya98/XJ/2010, O/GX/09-7)	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available

* Primary dosing differs from label recommendations as per Emergency Use Permit from the Government of Indonesia.

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