ᑲᓇᑕᒥ ᖃᐅᔨᓴᓂᕐᒧᑦ ᐅᖃᐅᔾᔨᒋᐊᓂᕐᒧᑦ ᑎᑎᕋᕐᕕᖓ
ᑯᐸᐃᒃ ᓄᓇᓕᖃᕐᕕᐊᓂ ᖃᐅᔨᓴᖅᑐᓕᕆᓂᕐᒧᑦ ᑭᐅᔾᔪᑎ 2026/028

ᓄᕕᐱᕆ 2026

ᑐᑭᓯᒋᒋᐊᕈᑏᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᓄᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ ᐊᒻᒪ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ

ᐃᓗᓕᖏᑦ

ᑲᓇᑕᒥ, ᕿᓚᓗᒐᐃᑦ ᐊᐅᓚᑕᐅᔪᑦ ᐊᑐᐊᒐᖏᓐᓂ ᓴᖅᑭᖅᑎᑕᐅᔪᓂᑦ ᐃᓱᒪᖅᓲᑕᐅᔪᓂᑦ ᐊᐅᔭᒃᑯᑦ ᑲᑎᖃᑦᑕᕐᓂᖏᓐᓄᑦ, ᐊᑕᐅᓯᒡᒍᑎᓄᑦ ᑕᑯᔅᓴᐅᑎᑦᑎᔪᑦ ᓴᓐᖏᔪᒥᑦ ᐅᑎᖅᑕᖃᑦᑕᕐᓂᖏᓐᓄᑦ (Sergeant 1973, Finley et al. 1982; Richard et al. 1990). ᐱᖓᓲᒡᒍᑕᐅᔪᑦ ᕿᓚᓗᒐᐃᑦ ᐊᐅᔭᒃᑯᑦ ᑲᑎᓐᓂᖃᖃᑦᖅᑕᖅᑐᑦ ᑕᓯᐅᔭᖅᔪᐊᒥᑦ ᐊᒻᒪ ᓯᕿᓂᕐᒥᐅᓂᑦ, ᐊᑐᖅᑕᐅᔪᑦ ᓇᓗᓇᐃᖅᓯᒍᑎᐅᓪᓗᑎ ᐊᐅᓚᑕᐅᓂᖏᓐᓄᑦ ᕿᓚᓗᒐᐃᑦ: ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ (BEL-EHB), ᐱᖓᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ (WHB), ᐊᒻᒪ ᓯᕿᓂᕐᒥᐅᑦ (JAM) ᕿᓚᓗᒐᐃᑦ. WHB (ᐱᖓᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᐊᒻᒪ JAM (ᓯᕿᓂᕐᒥᐅᑦ) ᕿᓚᓗᒐᖏᑦ ᑭᖑᓪᓕᖅᐹᒥ ᒥᔅᓴᐅᓴᑦᑕᐅᓚᐅᖅᑐᑦ 54,500 (DFO 2018) ᐊᒻᒪ 16,000 (DFO 2025) ᕿᓚᓗᒐᐃᑦ, ᑐᖏᓕᕇᓐᓂᖏᑎᒍᑦ, ᐊᒻᒪ ᖃᐅᔨᓴᖅᑕᐅᓯᒪᔪᑦ ᐊᑦᑕᓇᖅᑐᒦᓐᓇᑎ (COSEWIC 2020). ᐊᔾᔨᒌᖏᓐᓂᖏᑦ ᐊᔾᔨᒌᑎᓐᖑᐊᖅᑐᒋᑦ, BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᕿᓚᓗᒐᖏᑦ ᑭᖑᓪᓕᖅᐹᒥ ᒥᔅᓴᐅᓴᑦᑕᐅᓯᒪᔪᑦ 2,200 ᕿᓚᓗᒐᐃᑦ ᐊᒻᒪ ᐊᑎᓪᓕᕙᓪᓕᐊᔪᑦ (DFO 2024). ᑭᖑᓪᓕᖅᐹᒥ COSEWIC ᖃᐅᔨᓴᕐᓂᐅᔪᑦ ᑕᑯᔅᓴᐅᑎᑦᑎᔪᑦ ᓇᓗᓇᐃᖅᑕᐅᓂᖏᑦ BEL (ᓴᓂᑭᓗᐊᖅ) ᐊᒥᓲᓂᖏᑦ ᐊᒻᒪ ᓄᑖᖑᓛᖑᔪᑦ ᕿᓚᓗᒐᖏᑦ ᖃᐅᔨᓴᖅᑕᐅᓂᖏᑦ ᓴᖅᑭᑎᑦᑎᓚᐅᖅᑐᑦ ᐊᑦᑎᓪᓕᒋᐊᖅᑐᑎᑦ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᕿᓚᓗᒐᖏᑦ. EHB (ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᐊᒥᓲᓂᖏᑦ ᖃᐅᔨᓴᖅᑕᐅᑎᓪᓗᒋᑦ ᐊᑦᑕᓇᖅᑐᒦᓕᖅᑐᑎ (COSEWIC 2020).

ᕿᓚᓗᒐᐃᑦ ᓄᓇᕕᒻᒥ ᐊᐅᓚᑕᐅᔪᑦ ᐊᐅᓚᑦᓯᓂᕐᒧᑦ ᐸᕐᓇᐅᑎᒃᑯᑦ ᐅᓪᓗᖁᑎᖏᑦ ᕕᕝᕗᐊᕆ 1, 2021-ᒥᑦ ᔭᓐᓄᐊᕆ 31, 2027-ᒧᑦ. ᒫᓐᓇᐅᔪᒥᑦ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐊᑐᖅᑕᐅᔪᑦᓄᓇᕕᒃᒥᑦ ᐱᖃᓯᐅᔾᔨᔪᑦ ᑲᑎᓗᒋᑦ ᐱᔭᐅᒍᓐᓇᑦᑎᑕᐅᔪᑦ (TAT) ᐅᑯᓇᓂ 20 ᕿᓚᓗᒐᐃᑦ ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ, ᐊᒻᒪ ᑰᑕᖃᖏᑦᑐᑦ ᑭᓪᓕᖃᖅᑎᑕᐅᔪᑦ (NQL) ᕿᓚᓗᒐᖅᑕᐅᕙᑦᑐᓄᑦ ᐊᓯᐊᓂ ᐃᓗᐊᓂ ᓄᓇᕕᒃ ᐃᒪᕕᖓᓂ ᐅᕕᑦᑐᖅᓯᒪᔪᒥᑦ (NMR). ᑖᒃᑯᐊ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐊᑐᖅᑕᐅᔪᑦ ᑐᕌᕐᓂᖃᖅᑐᑦ ᓴᖑᑎᑕᐅᓗᑎ ᐊᖑᓇᓱᓐᓂᕐᒧᑦ ᑐᕌᖅᑐᓂᑦ ᐱᑕᖃᓂᖅᓴᓄᑦ WHB (ᐱᖓᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᐊᒻᒪ JAM (ᓯᕿᓂᕐᒥᐅᑦ) ᕿᓚᓗᒐᖏᑦ ᐊᒻᒪ ᐅᑯᓇᓂᐅᖏᖔᖅᑐᖅ ᒥᑭᓂᖅᓴᓂᑦ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᕿᓚᓗᒐᖏᑦ.

ᓇᓗᓇᐃᖅᓯᒪᔪᑦ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐊᑐᖅᑕᐅᔪᑦ ᒫᓐᓇᐅᔪᒥᑦ ᐸᕐᓇᐅᒻᒥᑦ ᐊᓯᔾᔨᖅᓯᒪᔪᑦ 2021−ᒥᓂᐅᔪᒻᒪᓂᑦ. ᐅᑭᐅᒃᑯᑦ ᒪᑐᓯᒪᓂᖓ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ ᐊᑯᓐᓂᖏᓐᓂ ᑎᓯᐱᕆ 1 ᐊᒻᒪ ᔭᓐᓄᐊᕆ 31 ᐲᖅᑕᐅᓚᐅᖅᑐᖅ ᐅᑐᐱᕆ 2022. ᐃᓚᒋᐊᕐᓗᒍ, ᐅᐊᓐᓇᖓᓂ ᑭᓪᓕᖓ ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ (ᐊᑖᓂ ᑲᑎᓗᒋᑦ ᐱᔭᐅᒍᓐᓇᑦᑎᑕᐅᔪᑦ) ᓅᑦᑕᐅᓚᐅᖅᑐᖅ ᓂᒋᖓᓄᑦ ᓄᓇᓕᖓᓄᑦ ᐃᓄᒃᔪᐊᖅ ᐅᑐᐱᕆ 2024, ᑐᓐᖓᕕᒋᓪᓗᒋᑦ ᓄᓇᓕᒻᒧᑦ ᖃᐅᔨᒪᔭᐅᔪᑦ ᐅᓇᒻᒥᑦᑎᓚᐅᖅᑐᑦ ᐃᓱᒪᒋᔭᐅᓂᖓ ᕿᓚᓗᒐᓕᒫᑦ ᐃᓄᒃᔪᐊᖅ ᓇᒦᓐᓂᖓᓂ ᐅᕙᓐᖔᖅᓯᒪᓪᓗᑎ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᕿᓚᓗᒐᖏᑦ. ᑕᐃᒪᐃᓐᓂᖓᓄᑦ, ᐃᓄᒃᔪᐊᖅ ᒫᓐᓇ ᓇᒦᓐᓂᕆᓕᖅᑕᖓ ᐅᐊᓐᓇᖓᑕ ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ (ᐊᑖᓂᐅᖏᑦᑐᖅ ᑲᑎᓗᒋᑦ ᐱᔭᐅᒍᓐᓇᑦᑎᑕᐅᔪᑦ) ᐊᒻᒪ ᐃᓄᒃᔪᐊᖅ ᐃᓱᒪᖅᓱᖅᑐᑎ ᐊᐅᔭᒃᑯᑦ ᒪᑐᓯᒪᓂᖓ ᓇᒦᓐᓂᖓ ᓴᖅᑭᑎᑦᑎᓚᐅᖅᑐᖅ (ᐊᔾᔨᙳᐊᖅ 1) ᕿᓚᓗᒐᕋᓱᐊᕐᓂᐅᔪᑦ ᒪᑐᓯᒪᓪᓗᓂ ᐱᒋᐊᖅᑐᓂ ᔪᓚᐃ 15 ᑎᑭᑦᑐᒍ ᓯᑎᐱᕆ 30 ᐊᕐᕌᒍᑕᒫᑦ.

ᐊᓯᖏᑦ ᐊᑐᖅᑕᐅᔪᑦ ᒫᓐᓇᐅᔪᒥᑦ ᐃᓂᖓᓃᑦᑐᑦ ᐊᐱᖅᑯᑎᒋᔭᐅᔪᑦ ᐊᐅᓚᑦᑎᔨᐅᖃᑎᒌᑦᑐᓄᑦ ᐊᒻᒪ ᓄᓇᕕᒃᒥ ᐊᖑᓇᓱᑦᑎᓄᑦ. ᐱᓗᐊᖅᑐᒥᑦ, ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐸᕐᓇᐅᑦ ᐱᖃᓯᐅᔾᔨᔪᖅ ᐊᕐᕌᒍᑕᒫᑦ ᐊᕐᕌᒍ ᐃᓗᐊᓂ ᒪᑐᓯᒪᓂᖓ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ ᐊᑯᓐᓂᖏᓐᓂ ᓯᑎᐱᕆ 1 ᐊᒻᒪ ᐅᑐᐱᕆ 31. ᑭᖑᓂᐊᒍᑦ ᐅᑐᐱᕆ 31, ᐊᑐᓂ ᓇᒦᓐᓂᕆᔭᖏᑦ ᐊᖑᕕᒐᐃᑦ (ᐆᒪᔪᕐᓂᐊᖅᑎᒃᑯᑦ) ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂᑦ ᐃᓱᒪᓕᐅᕈᓐᓇᖅᑐᑦ ᖃᖓᒃᑯᑦ ᒪᑐᐃᒃᑲᓂᖅᑕᐅᓂᖓᓄᑦ ᕿᓚᓗᒐᕋᓱᐊᕐᓂᖅ. ᑖᓐᓇ ᐊᑐᖅᑕᐅᓂᖓ ᐱᔾᔪᖃᕋᓱᐊᖅᑐᖅ ᐊᑦᑎᓪᓕᒋᐊᕐᓗᒋᑦ ᐊᒥᓲᓂᖏᑦ ᐅᕙᓂ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᕿᓚᓗᒐᖅᑕᐅᔪᓂᑦ ᐅᑭᐊᔅᓵᒃᑯᑦ ᐅᑎᖅᑕᑎᓪᓗᒋᑦ, ᖃᐅᔨᔭᔅᓴᐅᓂᖃᕐᖓᑕ ᑖᒃᑯᐊ ᕿᓚᓗᒐᖏᑦ ᐅᑎᖅᑕᖃᑦᑕᕋᐃᓐᓂᖅᓴᐅᔪᑦ ᐅᑭᐊᔅᓵᒃᑯᑦ ᓴᓂᐊᓂ ᐊᒥᓲᓂᖅᓴᓂᑦ WHB (ᐱᖓᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᕿᓚᓗᒐᖏᓐᓂ (ᓲᕐᓗ, Parent et al. 2023). ᐊᒥᓱᒐᓚᐃᑦ ᐊᖑᓇᓱᑦᑏᑦ ᐅᖃᐅᔾᔨᒋᐊᖅᓯᒪᔪᑦ ᐊᑐᖅᑎᑕᐅᓂᖓ ᐊᔾᔨᖓ ᒪᑐᔭᐅᓂᖓᓄᑦ ᐅᓪᓗᖏᑦ ᓄᓇᓕᓕᒫᓄᑦ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ ᐊᑐᕐᓂᖃᑦᑎᐊᖏᑦᑐᖅ ᑭᓪᓕᖃᖅᑎᓪᓗᒍ ᕿᓚᓗᒐᖅᑕᐅᓂᖏᓐᓄᑦ BEL-EHB

ᑯᐸᐃᒃ ᓄᓇᓕᖃᕐᕕᐊᓂ

ᑐᑭᓯᒋᒋᐊᕈᑏᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᓄᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ
ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ ᐊᒻᒪ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ

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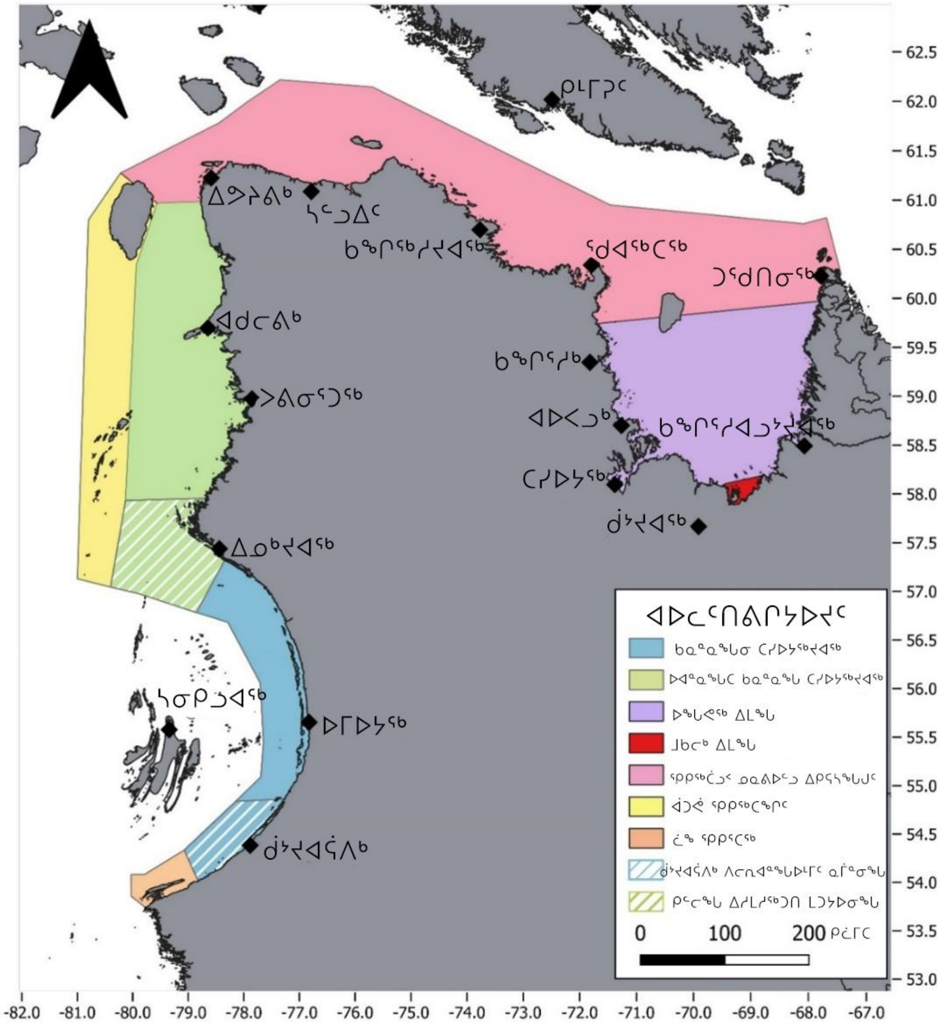
(ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᕿᓚᓗᒐᖏᑦ ᐱᔾᔪᑎᒋᓪᓗᒍ ᖃᖓᒃᑰᓂᖓ ᕿᓚᓗᒐᐃᑦ ᐅᑎᖅᑕᕐᓂᖏᓐᓄᑦ ᓄᓇᕕᒃ ᐃᒪᐅᑉ
ᑭᓪᓕᖓᑎᒍᑦ.

ᐊᔾᔨᙳᐊᖅ 1. ᓄᓇᖑᐊᖅ ᓄᓇᓕᓐᓂᑦ (ᕿᕐᓂᖅᑕᖅ ᑕᐃᒪᓐ) ᐊᒻᒪ ᐊᐅᓚᑦᑎᕕᒋᔭᐅᔪᑦ ᓄᓇᕕᒃᒥᑦ, ᑯᐸᐃᒃ, ᑲᓇᑕ. ᑭᓪᓕᖓ ᐃᓱᒪᖅᓱᖅᑐᑎ ᒪᑐᔭᐅᓂᖓᓄᑦ, ᐃᓚᒋᒋᐊᓐᖓᓚᐅᖅᑕᖓ ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ ᐊᐅᓚᑦᑎᕕᒋᔭᐅᔪᖅ ᓇᒦᓐᓂᖓ, ᓴᖅᑭᖅᑎᑕᐅᓚᐅᖅᑐᖅ ᐊᒻᒪ ᐃᓚᒋᓕᐅᔾᔭᐅᓪᓗᓂ ᐅᐊᓐᓇᖓᑕ ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ ᐊᐅᓚᑦᑎᕕᒋᔭᐅᔪᖅ ᐅᑭᐊᔅᓵᒃᑯᑦ 2024. ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ ᐊᐅᓚᑦᑎᕕᒋᔭᐅᔪᖅ ᐊᑖᓃᑦᑐᑦ ᑲᑎᓗᒋᑦ ᐱᔭᐅᒍᓐᓇᑦᑎᑕᐅᔪᑦ ᐱᒋᐊᖅᑐᓂ ᒪᐃ 1 ᑎᑭᑦᑐᒍ ᓄᕕᐱᕆ 30, ᑭᓯᐊᓂ ᑰᔾᔪᐊᕌᐱᒃᒥ ᐱᓕᕆᐊᖑᒋᐊᓐᖓᖅᑐᒥᑦ ᕿᓚᓗᒐᐃᑦ ᕿᓚᓗᒐᖅᑕᐅᕙᑦᑐᑦ ᐊᑯᓐᓂᖏᓐᓂ ᕕᕝᕗᐊᕆ 1 ᐊᒻᒪ ᔫᓂ 15 ᐱᖃᔨᐅᔾᔭᐅᑎᑕᐅᑎᖏᑦᑐᑦ ᐅᕙᓂ ᑲᑎᓗᒋᑦ ᐱᔭᐅᒍᓐᓇᑦᑎᑕᐅᔪᑦ.

ᐃᓚᒋᓪᓗᓂᐅᒃ ᓄᑕᐅᓐᖑᖅᑎᑕᖑᓂᖓᓄᑦ ᐱᕙᓪᓕᐊᓂᖓ ᓄᓇᕕᒃᒥ ᕿᓚᓗᒐᕐᓂᑦ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐸᕐᓇᐅᑦ, ᐃᒪᕐᒥᐅᑕᓕᕆᔨᒃᑯᑦ ᐃᖃᓗᓕᕆᓂᕐᒧᑦ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐱᓕᕆᐊᖃᖅᑎᓚᐅᖅᑕᖏᑦ ᐃᒪᕐᒥᐅᑕᓕᕆᔨᒃᑯᑦ ᖃᐅᔨᓴᖅᑏᑦ ᕿᒥᕐᕈᓗᑎ ᒫᓐᓇᐅᔪᒥᑦ ᑐᑭᓯᒋᐊᕈᑏᑦ ᐃᒪᐃᓪᓗᑎ

1. ᐅᓪᓗᒥᒨᖓᓕᖅᑎᑕᐅᓗᑎ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᕿᓚᓗᒐᖏᑦ ᖃᐅᓕᓴᓂᕐᒧᑦ ᐊᒻᒪ ᐊᖑᓇᓱᐊᓂᕐᒧᑦ ᐅᖃᐅᔾᔨᒋᐊᓂᐅᔪᓂ ᑐᓴᖅᑎᑦᑎᒍᑕᐅᓯᒪᔪᑦ 2025−ᒥᑦ ᐅᑯᓄᖓ ᓴᓂᑭᓗᐊᖅ ᐊᒻᒪ ᓄᓇᕕᒃᒥ ᓄᓇᓖᑦ;

2. ᖃᐅᔨᓴᒃᑲᓂᕐᓗᒋ ᖃᖓᒃᑰᓂᖏᑦ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᕿᓚᓗᒐᖏᑦ ᐅᑎᖅᑕᖃᑦᑕᕐᓂᖏᓐᓄᑦ ᐊᒻᒪ ᖃᖓᒃᑰᓂᖏᓐᓄᑦ ᓴᖑᓂᖏᑦ ᐊᐅᖏᑎᒍᑦ ᐃᓗᓕᖏᓐᓂ ᕿᓚᓗᒐᖅᑕᐅᔪᓂᑦ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂᑦ (Parent et al. 2023); ᐊᒻᒪ



ᑯᐸᐃᒃ ᓄᓇᓕᖃᕐᕕᐊᓂ

ᑐᑭᓯᒋᒋᐊᕈᑏᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᓄᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ
ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ ᐊᒻᒪ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ

3

3. ᓇᓗᓇᐃᕐᓗᒋᑦ ᕿᓚᓗᒐᐃᑦ ᖃᓄᐃᓕᖓᓂᖏᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᓂᑦ ᐃᓄᒃᔪᐊᒥᑦ ᐃᓱᒪᖅᓱᖅᑐᑎ ᐊᐅᔭᒃᑯᑦ ᒪᑐᔭᐅᓂᖓ
ᓇᒦᓐᓂᖓ ᐅᐱᕐᖓᓵᒃᑯᑦ ᐊᒻᒪ ᐅᑭᐊᔅᓵᒃᑯᑦ.

ᖃᐅᔨᓇᓱᖃᕐᓂᐅᑉ ᑭᐅᔾᔪᑎᖓ ᐋᖅᑭᑦᑕᐅᓚᐅᑦᑐᖅ ᐅᑯᓇᙵᑦ ᑲᓇᑕᒥ ᖃᐅᔨᓇᓱᐊᖅᑎᑦ ᐅᖃᐅᔾᔨᒋᐋᑎᑦ ᐊᐅᓚᑦᑎᕕᖓᓂᑦ (CSAS) ᐱᓕᕆᐋᕆᔭᐅᓂᖓ ᑭᒡᒐᑦᑐᐃᓂᐊᒻᒪᑦ ᑐᓴᐅᒪᔾᔪᑎᒃᓴᒥᒃ ᑐᓴᑦᑕᐅᑎᑕᐅᓚᐅᑦᑐᒥᑦ ᐃᓄᓕᒫᓂᑦ ᓇᓚᒋᐋᑦᑎᑦᑎᓯᒪᑎᓪᓗᒋᑦ ᐱᓕᕆᐊᕆᔭᐅᓚᐅᑦᑐᒧᑦ ᓄᓇᕕᒃ ᐃᒪᕕᐅᓂᖓᓂ ᐆᒪᔪᓕᕆᓂᕐᒧᑦ ᑲᑎᒪᔨᖏᑦ (NMRWB) ᐅᖃᐅᓯᖃᓪᓗᑎᒃ ᐊᓯᕈᑦᑕᐅᑐᐃᓐᓇᕆᐊᖃᓂᖏᓐᓂᒃ ᐊᐅᓚᑕᐅᓂᖏᑕ ᐱᓕᕆᔪᑎᖏᑦ ᐊᒻᒪᓗ ᐱᓕᕆᐋᕆᔭᐅᒍᒪᔪᑦ ᓄᑖᕈᕆᐊᑦᑕᐅᒍᒪᓪᓗᑎᒃ ᓄᓇᕕᐅᑉ ᖃᑯᖅᑕᑦ ᑭᓚᓗᒐᖏᑕ ᐊᐅᓚᑕᐅᓂᖏᓐᓄᑦ ᐸᕐᓇᒍᑎ. ᐃᓚᒋᔭᐅᒃᑲᓐᓂᓪᓗᓂ, ᑖᓐᓇ ᖃᐅᔨᓇᓱᐊᓂᒻᒥᒃ ᐱᓕᕆᒋᐋᕈᑎᒋᔭᐅᔪᖅ ᑐᓴᑦᑎᑦᑎᒍᑎᒋᔭᐅᓂᐊᒻᒪᑦ ᐊᐅᓚᑦᑎᔨᐅᖃᑎᒌᑦ ᐱᓕᕆᖃᑎᒌᑦᑐᓂᒃ ᑕᒪᒃᑯᓂᖓ ᓄᖑᑕᐅᑦᑕᐃᓕᒪᑎᑕᐅᓂᖏᓐᓄᑦ ᐱᔭᕇᔅᓯᒍᑎᒋᔭᐅᒍᓐᓇᑦᑐᓂᒃ ᓅᑕᐅᓯᒪᓕᓐᓂᖓᓄᑦ ᐅᐋᓇᖓᓂ ᑎᑎᖅᓯᒪᓂᖓ ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ ᓂᒋᖓᓅᑦᑕᐅᓗᓂ ᐃᓄᒃᔪᐊᑉ.

ᑕᐃᒃᑯᐋᓪᓗᐊᖅ ᐱᓕᕆᐊᕆᔭᐅᒍᒪᔪᑦ ᑕᕝᕙᓂ ᕿᒥᕐᕈᔭᐅᔪᒥ ᐃᒪᓐᓇᐃᓘᑦᑕᐊᓂᐊᒻᒪᑕ:

1. ᓄᑖᕈᕆᐊᓪᓗᒍ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᖅᑕᑦ ᕿᓚᓗᒐᖏᑕ ᐱᕕᒃᓴᐅᓂᖏᑦ
ᖃᐅᔨᓴᑦᑕᐅᑎᓪᓗᒋᑦ ᐊᒻᒪᓗ ᐊᖑᓇᓱᐊᑦᑕᐃᓂᖏᓄᑦ ᐅᖃᐅᔾᔨᒋᐊᕈᑎᒋᔭᐅᔪᑦ ᐱᖃᓯᐅᑎᓗᒋᑦ ᐊᖑᓇᓱᐊᑦᑕᐅᓂᖏᓄᑦ

ᐅᓂᑳᓕᐋᕆᔭᐅᓚᐅᑦᑐᑦ 2025−ᒥ ᓴᓂᑭᓗᐊᒻᒥᑦ ᐊᒻᒪᓗ ᓄᓇᕕᐅᑉ ᓄᓇᓕᖏᓐᓂᑦ.

2. ᐊᑐᓪᓗᓂ ᑕᐃᒫᓗᐊᖃᑎᒋᑦᑐᑦ ᕿᒥᕐᕈᔭᐅᓯᒪᓂᖏᓐᓂᒃ ᑎᒥᕈᓂᖓᑕ ᕿᒥᕐᕈᔭᐅᑦᑎᐋᓂᖏᓄᑦ ᐱᓕᕆᒍᓯᓐᓂᒃ ᒫᓐᓇ
ᐊᑐᑦᑕᐅᖃᑦᑕᓕᑦᑐᓄᑦ ᓄᓇᕕᐅᑉ ᖃᑯᖅᑕᑦ ᕿᓚᓗᒐᖏᓐᓂᒃ ᐊᐅᓚᑦᑎᓂᖅ ᐃᓱᒪᓕᐅᕈᑎᒋᔭᐅᖁᓪᓗᒋᑦ ᐱᕕᒃᓴᐅᔪᑦ ᖃᓄᐃᑦᑑᓂᖏᓐᓂᒃ ᖃᑯᖅᑕᑦ ᕿᓚᓗᒐᑦ ᕿᓚᓗᒐᑦᑕᐅᓯᒪᔪᑦ ᐃᓄᒃᔪᐋᒻᒥ ᐃᓱᒪᔅᓱᓪᓗᑎᒃ ᐊᐅᔭᒃᑯᑦ ᒪᑐᓯᒪᓂᐅᖃᑦᑕᓂᖓ ᐅᐱᕐᖔᒃᑯᑦ ᐊᒻᒪᓗ ᐅᑭᐊᔅᓵᒃᑯᑦ.

3. ᕿᒥᕐᕈᓗᒍ ᑕᕝᕙᐅᔪᖅ ᖃᐅᔨᒪᔾᔪᑎᒃᓴᖅ ᐅᑯᓇᓂ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᐊᒻᒪᓗ WHB
(ᐱᖓᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᖅᑕᑦ ᕿᓚᓗᒐᖏᑕ ᖃᓄᐃᓕᕙᓪᓕᐋᓂᖏᓐᓂᑦ ᖃᐅᔨᒪᔾᔪᑎᒃᓴᐃᑦ
ᓇᓕᐋᓄᐊᑦᑎᑕᐅᓂᖏᓐᓂᒃ ᐊᒥᓲᓂᔅᓯᐅᑦᑕᐅᖁᓪᓗᒋᑦ ᓇᓪᓕᕉᑎᓂᒻᒥᒃ ᐊᑐᑦᑕᐅᖃᑦᑕᑦᑐᑦ ᖃᑯᖅᑕᑦ ᕿᓚᓗᒐᓄᑦ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ.

4. ᐊᑐᓪᓗᓂ ᑕᐃᒫᓗᐊᖃᑎᒋᑦᑐᑦ ᕿᒥᕐᕈᔭᐅᓯᒪᓂᖏᓐᓂᒃ ᑎᒥᖑᓂᖏᑕ ᕿᒥᕐᕈᔭᐅᑦᑎᐋᓂᖏᓄᑦ ᐱᓕᕆᒍᓯᓐᓂᒃ ᒫᓐᓇ
ᐊᑐᑦᑕᐅᖃᑦᑕᓕᑦᑐᓄᑦ ᓄᓇᕕᐅᑉ ᖃᑯᖅᑕᑦ ᕿᓚᓗᒐᖏᓐᓂᒃ ᐊᐅᓚᑦᑎᓂᖅ ᖃᐅᔨᓇᓱᐋᑦᑕᐅᖁᓪᓗᒋᑦ
ᖃᓄᐃᓕᕙᓪᓕᐋᓂᖏᑕ ᐊᓯᕈᓕᓂᖏᑦ ᐱᕕᒃᓴᐅᔪᑦ ᑲᑎᓯᒪᓂᖏᑦ ᖃᑯᖅᑕᑦ ᕿᓚᓗᒐᑦ ᕿᓚᓗᒐᑦᑕᐅᖃᑦᑕᑦᑐᑦ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓃᑦᑐᓄᑦ ᓄᓇᓕᖏᓄᑦ.

5. ᐱᔭᐅᑎᑦᑎᓗᓂ ᖃᐅᔨᓇᓱᐊᓂᒃᑯᑦ ᐅᖃᐅᔾᔨᒋᐋᕈᑎᓂᒃ ᓄᖑᑕᐅᑎᑕᐅᑦᑕᐃᓕᒪᓂᖏᓄᑦ ᐱᔭᕇᒃᓯᔾᔪᑎᒋᔭᐅᔪᓐᓇᑦᑐᑦ ᒪᑯᓂᖓ

a. ᓅᑕᐅᓯᒪᓕᓂᖓᓄᑦ ᐅᐋᓇᖓᑕ ᑎᑎᔅᓯᒪᓂᖓ ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᑕ ᓂᒋᐋᓂ ᓄᓇᓕᐅᑉ ᐃᓄᒃᔪᐊᑉ ᐊᒻᒪᓗ

b. ᐊᑐᑦᑕᐅᓕᑦᑎᑦᑎᓗᓂ ᓇᓪᓕᕉᑎᓂᒃᑰᑦᑐᒥᒃ ᓈᒻᒪᓇᕆᐊᓗᒍ ᐅᑭᐊᔅᓵᒃᑯᑦ ᒪᑲᓂᖓ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ.

6. ᕿᒥᕐᕈᓗᒍ ᐊᒻᒪᓗ ᓇᓗᓇᐃᓪᓗᒍ ᓇᓗᓈᕿᓂᖓ ᐱᒐᔅᓴᐅᔪᓂ ᖃᐅᔨᒪᔾᔪᑎᔅᓴᓂ, ᐊᒻᒪᓗ ᐱᔭᐅᑎᑦᑎᓗᓂ ᐊᑐᓕᖁᔨᒍᑎᓂᒃ
ᓯᕗᓂᔅᓴᒥ ᖃᐅᔨᓇᓱᐋᓂᒻᒧᑦ ᐱᐅᓂᔅᓴᐅᓕᑦᑎᑕᐅᒐᔭᓂᖏᓄᑦ ᑐᑭᓯᐊᓂᑦᑎᓐᓂᒃ ᖃᓄᐃᓕᕙᓪᓕᐊᒻᒪᖔᑕ ᐱᕕᔅᓴᐅᔪᑦ ᑕᐃᒃᑯᐋᓪᓗᐊᖅ ᑲᑎᓯᒪᓂᖏᑦ ᖃᑯᖅᑕᐃᑦ ᕿᓚᓗᒐᐃᑦ ᕿᓚᓗᒐᑦᑕᐅᓯᒪᔪᑦ ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ ᐊᒻᒪᓗ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ.

ᑖᓐᓇ ᖃᐅᔨᓇᓱᐊᓂᒻᒧᑦ ᐱᓕᕆᒋᐊᕈᑎ ᐅᓂᑳᔅᓯᒪᓂᖓ ᓴᖅᑭᓯᒪᒻᒪᑦ ᐊᕕᑐᔅᓯᒪᓂᒻᒥ ᑕᐃᒫᓗᐊᖃᑎᒋᑦ ᕿᒥᕐᕈᓚᐅᑕᖏᓐᓂᒃ ᒫᑦᓯ 31, 2026−ᒥ, ᑐᑭᓯᒋᒋᐊᕈᑏᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᓄᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ ᐊᒻᒪ ᕿᑭᖅᑖᓗᑉ
ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ.

ᖃᓄᐃᓕᐅᕐᓂᐅᓯᒪᔪᑦ

ᑕᐃᔅᓱᒪᓂᓕᓴᐃᑦ, BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᖅᑕᑦ ᕿᓚᓗᒐᖏᑦ ᐃᓱᒪᒋᔭᐅᓚᐅᔅᓯᒪᒻᒪᑕ ᐅᓄᓂᖃᑦᑐᕆᔭᐅᓪᓗᑎᒃ ᒥᔅᓵᓂᑦᑐᓂᒃ 12,500 ᐆᒪᔪᐅᑦ 1800−ᖏᓐᓂ. ᑮᓇᐅᔭᓕᐅᕋᓱᐊᓗᑎᒃ ᓴᖅᐱᓕᒐᓱᐊᑦᑐᑦ ᑕᐅᕙᓂ 1700−ᖏᓐᓂ, 1800−ᖏᓐᓂ, ᐊᒻᒪᓗ ᐱᒋᐊᓕᕋᑖᓂᖏᓐᓂ 1900−ᖏᑦ ᐊᒃᓱᐋᓗᒃ ᑲᑕᑲᓪᓚᓚᐅᕐᒪᑕ ᐅᓄᓐᓂᖏᑦ (DFO 2005;

ᑯᐸᐃᒃ ᓄᓇᓕᖃᕐᕕᐊᓂ

ᑐᑭᓯᒋᒋᐊᕈᑏᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᓄᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ
ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ ᐊᒻᒪ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ

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Lawson et al. 2006; Hammill et al. 2023), ᐊᒻᒪᓗ ᑲᔪᓯᓪᓗᑎᒃ ᐊᔅᓱᐋᓗᒃ ᐆᒪᒐᓱᐊᕈᑎᒋᔭᐅᓪᓗᑎᒃ ᐊᖑᓇᓱᑦᑕᐅᓂᖏᓄᑦ ᑭᒡᓕᓕᑎᑦᑎᓯᒪᒻᒪᑦ ᐃᓕᖅᑯᓯᕆᓚᐅᑕᒥᑎᑑᓕᓂᖏᑦ, ᓯᓚᐅᓪᓗ ᐊᓯᔾᔨᑉᐸᓪᓕᐊᓂᖓ ᐊᒻᒪᓗ ᐆᒪᔪᖃᓂᐅᕙᑦᑐᑦ ᐋᖅᑭᖏᐊᑦᑕᐅᒍᑎᖏᑦ ᐃᓚᓕᐅᑎᒃᑲᓂᒻᒪᑕ ᐃᓚᒃᑲᓂᖓᓄᑦ ᐊᑕᕕᓪᓗᐋᑕᕆᔭᖓᓂᑦ. 2001−ᒥ, ᐱᕕᒃᓴᐅᔪᑦ ᖃᐅᔨᓴᑦᑕᐅᑎᓪᓗᒋᑦ ᒥᔅᓴᐅᓴᔅᓯᓚᐅᒻᒪᑕ ᕿᓚᓗᒐᑦᑕᐅᖃᑦᑕᓂᖏᑦ ᒥᑭᓕᒋᐋᑦᑕᐅᖏᑉᐸᑕ, BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᐱᕕᔅᓴᐅᓂᖏᑦ ᓄᖑᑕᐅᒐᔭᒻᒪᑕ ᐃᓗᐊᓂ ᒪᕐᕉᒃ ᑎᑭᓪᓗᒋᑦ ᐱᖓᓱᑦ ᖁᓕᐅᔪᖅᑐᑦ ᐊᕐᕌᒍᐃᑦ (Bourdages et al. 2002). ᑭᖑᓕᕇᑦᑐᑦ ᐊᔅᓱᐋᓗᒃ ᐊᐅᓚᑕᐅᒐᓱᐋᓐᓂᖏᑦ ᑕᒪᒃᑯᐊ ᐊᔅᓱᑲᓪᓛᓗᒃ ᒪᓕᑦᑕᐅᑦᑎᐊᓂᖏᑦ ᖃᐅᔨᔭᐅᓚᐅᒻᒪᑕ (Lesage et al. 2001) ᓱᒃᑲᐃᓕᑎᑦᑎᒻᒪᑕ ᐱᕕᐅᒍᓐᓇᑦᑐᑦ ᖃᔅᓰᓐᓇᕈᑦᑎᑕᐅᓂᖏᓂᒃ.

ᒫᓐᓇ ᐊᐅᓚᑦᑎᓂᒻᒧᑦ ᐱᓕᕆᐋᕆᔭᐅᒍᒪᔪᑦ ᐅᑯᓇᙵᑦ EHB (ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᖅᑕᑦ ᕿᓚᓗᒐᐃᑦ ᐱᕕᔅᓴᐅᖏᓐᓇᑦᑎᑕᐅᒐᓱᐋᒻᒪᑕ ᑎᑭᐅᒪᐃᓐᓇᖁᓪᓗᒋᑦ ᐅᕝᕙᓘᓐᓃᑦ ᐅᖓᑖᓂᓪᓗᑎᒃ 3,400 ᖃᑯᖅᑕᑦ ᕿᓚᓗᒐᐃᑦ ᑭᖑᓂᖓᒍᑦ ᑕᓪᓕᒪᑦ ᐊᕐᕌᒍᐃᑦ 50%-ᖏᓐᓃᑲᔭᓪᓗᑎᒃ ᐅᕝᕙᓘᓐᓃᑦ ᐅᓄᓐᓂᔅᓴᐅᒐᔭᓪᓗᑎᒃ ᑕᐃᒪᐃᒍᓐᓇᑐᐊᑉᐸᑕ. 3,400 ᐅᓄᓐᓂᖏᓐᓄᑦ ᑐᕌᒃᑕᐅᒍᒪᔪᖅ ᐋᖅᑭᑦᑕᐅᓚᐅᔅᓯᒪᒻᒪᑦ ᑐᙵᕕᖃᓪᓗᑎᒃ ᐱᐅᓛᓂᒃ ᐱᔭᐅᒍᓐᓇᑦᑐᓂᒃ ᖃᐅᔨᓇᓱᐊᓂᒃᑯᑦ ᑕᐃᔅᓱᒪᓂ ᐊᐅᓚᑦᑎᓂᒻᒧᑦ ᐸᕐᓇᒍᑎ ᐋᖅᑭᒃᑕᐅᓚᐅᑦᑎᓪᓗᒍ (DFO 2020). ᑕᐃᔅᓱᒪᓂᐅᑎᓪᓗᒍ, ᐱᕕᔅᓴᐅᔪᑦ ᐋᖅᑭᒃᑕᐅᓚᐅᔅᓯᒪᒻᒪᑕ ᓯᕐᓚᕈᓗᒃ ᐅᓄᔅᓯᕙᓪᓕᐊᑎᑕᐅᓪᓗᑎᒃ ᐅᕝᕙᓘᓐᓃᑦ ᑕᐃᒫᑦᑕᐃᓐᓇᓕᑎᑕᐅᓪᓗᑎᒃ ᐅᓄᓐᓂᖃᑦᑎᑕᐅᓗᑎᒃ 3,400−ᓂᒃ ᐃᒻᒥᒃᑰᖓᐅᑦᑐᓂᒃ 2016−ᒥ. ᐅᓄᓛᖏᑦ ᐅᓄᓂᕆᔭᐅᖁᔭᐅᔪᑦ ᐊᕐᕌᒍᑕᒪᑦ EHB (ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂᑦ) ᐲᑦᑕᐅᔪᑦ ᐱᔭᐅᒐᓱᐋᓪᓗᑎᒃ ᐊᐅᓚᑦᑎᓂᒻᒧᑦ ᐸᕐᓇᒍᑎᒧᑦ ᑎᑭᑕᐅᒍᒪᔪᑦ ᐋᖅᑭᑦᑕᐅᓚᐅᔅᓯᒪᒻᒪᑕ ᑎᑭᐅᒪᓪᓗᑎᒃ 58−ᓄᑦ EHB (ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᖅᑕᑦ ᕿᓚᓗᒐᖏᑦ ᐃᓘᓐᓇᓕᒫᖓᓂ ᓄᓇᕕᐅᑉ ᐃᒪᕕᖓᓂ ᐊᕕᒃᑐᖅᓯᒪᓂᒻᒥ (DFO 2020). ᑖᓐᓇ ᕿᓚᓗᒐᑦᑕᐅᒍᓐᓇᑦᑎᑕᐅᔪᑦ ᐅᓄᓂᖏᑦ ᓇᓗᓇᐃᑦᑕᐅᓚᐅᒻᒪᑕ ᕿᓚᓗᒐᑦᑕᐅᒍᓐᓇᑦᑐᓄᑦ ᑭᒡᓕᒋᔭᐅᑎᑕᐅᓪᓗᓂ ᐅᖓᑖᓄᓂᑉᐸᑕ ᑲᑎᒪᔨᒃᑯᑦ ᐃᓱᒪᓕᐅᕈᑎᒋᔭᖏᑦ ᕿᓚᓗᒐᕋᓱᒋᐋᖃᕈᓐᓃᖅᑎᑦᑎᔾᔪᑎᒋᔭᖏᓐᓂᒃ ᐱᒋᐊᖅᑎᑦᑎᒍᓐᓇᒻᒪᑕ.

ᑕᐃᒪᖓᑦ ᐊᑐᓕᑦᑎᑕᐅᓚᐅᔅᓯᒪᑎᓪᓗᒍ ᑖᓐᓇ ᐊᐅᓚᑦᑎᓂᒻᒧᑦ ᐸᕐᓇᒍᑎ, ᐃᓚᔭᐅᒃᑲᓂᓚᐅᒻᒪᑕ ᖃᖓᑕᔪᒃᑯᑦ ᖃᐅᔨᓇᓱᐋᓐᓂᑦ ᖃᖓᑕᑎᑕᐅᓪᓗᑎᒃ 2021−ᒥ ᐊᒻᒪᓗ 2024−ᒥ, ᐊᒻᒪᓗ ᓄᑖᑦ ᑕᒻᒪᔅᓯᒪᒍᓐᓃᑦᑎᑦᑎᒍᑎᑦ ᐋᖅᑭᔅᓯᒪᓂᖏᑦ ᐱᔭᐅᒍᓐᓇᑦᑐᑦ ᐊᒻᒪᓗ ᑐᑭᓯᓃᑦ ᐃᓚᐃᓐᓈᓐᓂᖏᓐᓂᑦ ᐆᒪᔪᓂᑦ ᑕᑯᔭᐅᓂᖏᑦᑐᓂᑦ ᖃᐅᔨᓴᔅᓯᑎᓪᓗᒋᑦ ᐋᖅᑭᒃᑕᐅᓯᒪᓕᒻᒥᔪᑦ ᐊᒻᒪᓗ ᐊᑐᑦᑕᐅᓕᑦᑐᑎᒃ ᑕᑯᔅᓴᐅᔪᑦ ᐅᓄᓂᖏᓐᓄᑦ ᒥᔅᓴᐅᓴᔅᓯᒍᑎᓂ ᑕᐃᒃᑯᓇᙵᐊᓚᐅᑦᑐᖅ ᖃᐅᔨᓇᓱᐋᓂᐅᓚᐅᔅᓯᒪᔪᓂᑦ (St-Pierre et al. 2024; Sauvé et al. 2025). ᐃᓚᒋᔭᐅᒃᑲᓐᓂᓪᓗᓂ, ᖃᐅᔨᓇᓱᐊᑦᑕᐅᑦᑎᐊᒃᑲᓂᓐᓂᖓᓄᑦ ᑎᒥᕈᓂᖓᑕ ᖃᐅᔨᓴᒐᔅᓴᐅᓂᖏᑦ ᐃᒪᓐᓇᐃᓕᑎᑦᑎᓚᐅᒻᒪᑕ ᑕᒪᒃᑯᓂᖓ ᖃᑯᖅᑕᑦ ᕿᓚᓗᒐᓐᓂᒃ ᐊᐅᔭᓕᒫᑦᑐᓂᒃ ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ ᓴᖑᖓᓂᖓᓂ ᐊᒻᒪᓗ ᐅᓄᓐᓂᔅᓯᐅᑕᐅᓂᖏᓐᓂ ᖃᖓᑎᑕᐅᔪᖃᑦᑎᓪᓗᒍ ᖃᐅᔨᓇᓱᐊᓯᒍᑎᒋᔭᐅᔪᒥᒃ ᐃᓚᒋᔭᐅᔪᓄᑦ ᒪᕐᕉᓐᓄᒃ ᐊᑕᐅᓯᑐᐋᖑᖏᑦᑐᒧᑦ ᐅᓄᓂᕆᔭᐅᔪᓄᑦ (ᓴᓂᑭᓗᐊᖅ ᐊᒻᒪᓗ ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ ᐅᑯᓄᖓᑐᐋᖓᓇᑎᒃ ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ), ᑕᐃᒪᓐᓇᐅᓂᖓᓄᑦ ᑭᒡᒐᑦᑐᐃᓪᓗᑎᒃ ᑲᑎᓯᒪᔪᓂᒃ ᐱᕕᒃᓴᐅᔪᓂᑦ (Parent et al. 2023). ᐃᓚᒋᓕᐅᑎᓯᒪᔪᑦ ᐅᓄᓐᓂᖏᓐᓄᑦ ᐋᖅᑭᔅᓱᐃᒍᑎ ᐃᓚᒋᔭᐅᓕᑦᑎᓪᓗᒍ ᑖᓐᓇ ᐊᖑᒻᒪᑎᓕᕆᐋᕈᑎ ᑐᓴᐅᒪᔾᔪᑎᔅᓴᖅ ᐋᖅᑭᒃᑕᐅᓚᐅᑦᑐᖅ ᑖᒃᑯᐊ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᐱᕕᔅᓴᐅᔪᑦ ᖃᔅᓰᓐᓇᕈᑉᐸᓪᓕᐋᓯᒪᓕᒻᒪᑕ 2014−ᒥᓂᑦ, ᐃᒪᓐᓇᑎᒋᓂᒃ ᐅᓄᓐᓂᖃᓪᓗᑎᒃ 5.1%-ᓂᒃ ᐊᑐᓂ ᐊᕐᕌᒍᓂ ᐱᒋᐊᓪᓗᑎᒃ 2021−ᒥᓂᑦ ᒥᔅᓴᐅᓴᑦᑕᐅᓗᑎᒃ 2,200 ᐃᒻᒥᒃᑰᖓᓗᑎᒃ 2024−ᒥᓂᑦ (Van de Walle et al. 2025). ᑕᐃᒪᐃᓕᔾᔪᑎᒋᔭᐅᓪᓗᑎᒃ ᑕᒪᒃᑯᓄᖓ ᐋᖅᑭᒋᐊᑦᑕᐅᔪᓄᑦ, 2016 ᐅᓄᓐᓂᖏᑦ ᐅᑯᐊ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᐱᕕᔅᓴᐅᓂᖏᑦ ᒫᓐᓇᕋᑖᖑᓚᐅᑦᑐᖅ ᒥᔅᓴᐅᓴᑦᑕᐅᒃᑲᓂᓚᐅᒻᒪᑕ ᑎᑭᐅᒪᓪᓗᑎᒃ 3,000−ᖏᓐᓄᑦ ᖃᑯᖅᑕᑦ ᕿᓚᓗᒐᐃᑦ (Van de Walle et al. 2025). ᐃᒪᐃᒻᒪᑦ, ᕿᓚᓗᒐᑦᑕᐅᒍᓐᓇᑦᑐᓄᑦ ᑭᒡᓕᒋᔭᐅᑎᑕᐅᓪᓗᓂ 58 ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᓇᓗᓇᐃᑦᑕᐅᓯᒪᒧᑦ 2021-2026−ᒥ ᐊᐅᓚᑦᑎᓂᒻᒧᑦ ᐸᕐᓇᒍᑎᒥ ᐅᖓᑖᓂᒻᒪᑦ ᐊᕐᕌᒍᑕᒪᑦ ᕿᓚᓗᒐᑦᑕᐅᒍᓐᓇᑦᑐᓄᑦ ᐅᓄᓂᕆᔭᐅᔪᓂᒃ ᐱᓕᕆᔾᔪᑕᐅᒍᓐᓇᑦᑎᐊᑦᑐᓄᑦ 50%-ᖏᓐᓂᒃᐋᖅᑭᐅᒪᑎᑦᑎᒍᓐᓇᑐᐃᓇᕆᐊᖃᓂᖏᓄᑦ ᐱᕕᔅᓴᐅᔪᑦ ᑕᐃᒫᑦᑕᐃᓇᓕᒍᓐᓇᓪᓗᑎᒃ ᐅᓄᓂᕆᓚᐅᑕᖏᓄᑦ 2016−ᒥ ᐊᒥᓲᓂᕆᓚᐅᑕᖏᓐᓄᑦ.

ᑕᐃᒪᐃᒃᑲᓗᐊᖅᑎᓪᓗᒍ, ᖃᓄᑐᐄᓐᓇᖅ ᓈᓴᐅᓯᕆᐋᕆᔭᐅᒐᔭᓂᕋᓗᐊᑉᐸᑕ, ᐅᖃᐅᑎᒋᔭᐅᓯᒪᔪᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᐊᔅᓱᑲᓪᓛᓗᒃ ᐅᖓᑖᓄᔅᓯᒪᒻᒪᑕ ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᐅᓄᓐᓂᖏᓐᓄᑦ ᓇᓗᓇᐃᑦᑕᐅᓯᒪᔪᑦ ᐊᐅᓚᑦᑎᓂᒻᒧᑦ ᐸᕐᓇᒍᑎᒥ ᑕᐃᔅᓱᒪᓂ ᐊᑐᓕᑦᑎᑕᐅᓚᐅᑦᑎᓪᓗᒋᑦ 2021−ᒥ, ᐊᒻᒪᓗ ᐅᖓᑖᓂᓕᒻᒪᑕ ᐅᓄᓐᓂᖏᑦ ᐱᕕᔅᓴᐅᑎᑕᐅᔪᑦ ᖃᔅᓰᓐᓇᕈᐸᓕᐋᙱᑎᑕᐅᒐᔭᓂᖏᓐᓂᒃ (ᐊᔾᔨᙳᐊᖅ 2). ᑕᐃᒪᐃᒃᑲᓗᐊᖅᑎᓪᓗᒍ ᐊᕙᑎᑦᑕ ᐊᓯᕈᓂᖏᑦ ᐊᒻᒪᓗ ᓱᕈᓐᓇᑦᑐᕈᑦᑎᑦᑎᓂᑦ ᐱᓕᕆᓂᐅᔪᑦ ᓲᕐᓗ ᒪᑯᐊ ᑐᓴᖅᓴᐅᔪᑦ, ᐅᒥᐊᕐᔪᐊᑦ ᓇᓕᐊᓄᕋᑦᑐᑦ ᐊᒻᒪᓗ ᓴᓇᕖᑦ ᐱᕙᓪᓕᐊᑎᑕᐅᓂᖏᑦ ᐃᓚᓕᐅᔾᔨᖃᑕᐅᑐᐃᓐᓇᕆᐊᖃᕐᒪᑕ ᖃᓄᐃᓘᖅᑎᑦᑎᓂᐅᔪᓄᑦ, ᐊᑯᓂᖏᓐᓂ 2021 ᐊᒻᒪᓗ 2024, ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᒥᔅᓴᐅᓴᑦᑕᐅᓯᒪᒻᒪᑕ 52%-ᒋᔭᐅᑎᑕᐅᓪᓗᑎᒃ ᐃᓘᓐᓇᓕᒫᖓᓄᑦ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓄᑦ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓐᓄᑦ ᐆᒪᑯᑖᖃᑦᑕᓂᖏᓄᑦ (Van de Walle et al. 2025). ᑕᐃᒪᐃᒻᒪᑕ, ᖃᔅᓰᓐᓇᕈᓂᖏᑦ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᑦ ᑕᐃᒪᐃᑎᑕᐅᒻᒪᑕ ᐅᖓᑖᓄᑦ ᕿᓚᓗᒐᑦᑕᐅᖃᑦᑕᓂᖏᑕ ᐅᓄᓐᓂᖏᓄᑦ (Sauvé et al. 2024; Van de Walle et al. 2025).

ᑯᐸᐃᒃ ᓄᓇᓕᖃᕐᕕᐊᓂ

ᑐᑭᓯᒋᒋᐊᕈᑏᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᓄᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ
ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ ᐊᒻᒪ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ

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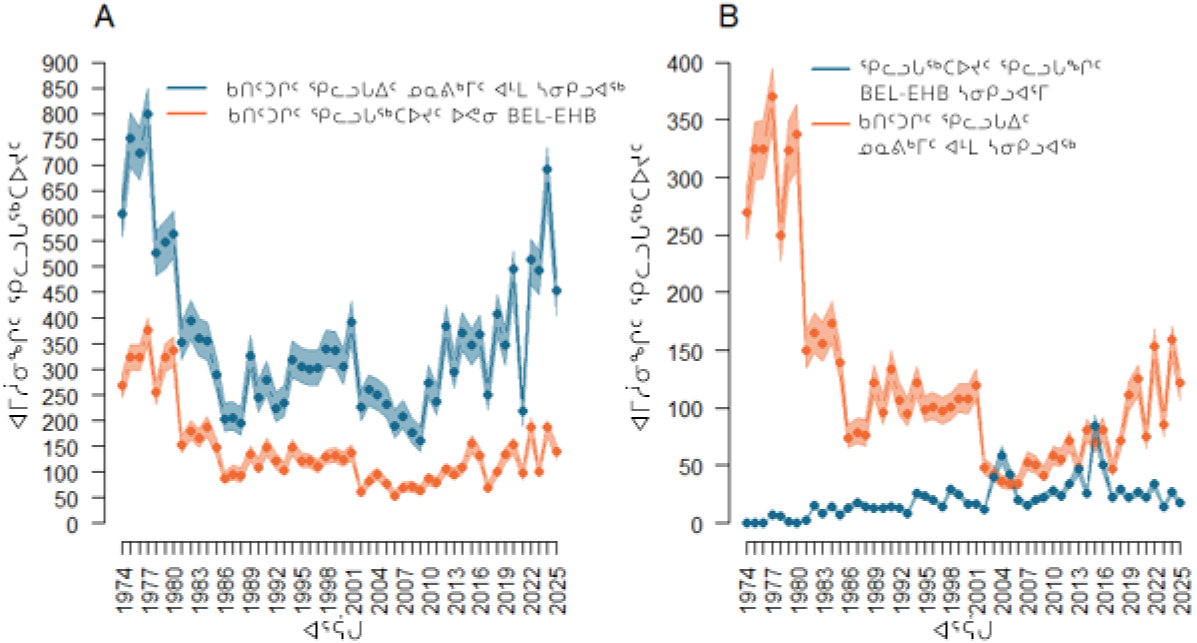
ᐊᔾᔨᙳᐊᖅ 2. ᐱᕕᖃᓂᒻᒥ ᐊᔾᔨᒌᒍᓐᓃᓐᓂᖏᑦ A−ᒥ) ᐅᓄᓐᓂᖏᑦ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᑲᑎᓪᓗᒋᑦ ᐊᒻᒪᓗ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᐱᕕᔅᓴᐅᓂᖏᓐᓂᑦ, ᐊᒻᒪᓗ B) ᐅᓄᓐᓂᖏᑦ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᓄᓇᕕᒻᒥ ᐊᒻᒪᓗ ᓴᓂᑭᓗᐊᒻᒥ. ᖃᐅᔨᓇᓱᐋᑦᑎᑕᐅᔪᓂ (A−ᒥ) ᓄᕐᓗᓕᐊᕆᓯᒪᔪᑦ ᑭᒡᒐᑦᑐᐃᒻᒪᑕ ᐅᖃᐅᑎᒋᔭᐅᓯᒪᔪᓂᒃ ᕿᓚᓗᒐᑦᑕᐅᔪᓂᒃ, ᐃᒪᓐᓇᐅᑎᓪᓗᒋᑦ ᖃᐅᔨᓇᓱᐋᑦᑎᑕᐅᔪᓂ (B−ᒥ), ᓄᕐᓗᓕᐊᕆᓯᒪᔪᑦ ᑕᑯᔅᓴᐅᑎᑦᑎᒻᒪᑕ ᐅᖃᐅᑎᒋᔭᐅᓯᒪᔪᓂᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᓂᑦ ᐅᓄᔅᓯᑎᑕᐅᒋᐊᓗᑎᒃ ᓇᓪᓕᕉᑎᓂᒃᑯᑦ ᐊᒻᒪᓗ ᐊᕕᑦᑐᔅᓯᒪᓂᒃᑯᑦ ᑕᐃᒃᑯᑎᒎᓇᓗᐊᖅ ᐱᕕᒃᓴᐅᔪᑦ ᐋᖅᑭᔅᓱᔅᓯᒪᓂᖏᑎᖑ ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᐱᕕᒋᔭᐅᒍᓐᓇᑦᑎᑕᐅᔪᑦ ᑕᐃᑯᓇᖓᑦ ᑎᒥᖑᓂᖓᓂᑦ ᖃᐅᔨᓴᔅᓯᓂᐅᔪᓂᑦ. ᑕᒪᒃᑭᖏᓐᓂ ᖃᐅᔨᓇᓱᐋᑦᑎᑕᐅᔪᓂ, ᕿᕐᓂᖅᓯᑎᓯᒪᓂᖓ 95%-ᒋᒻᒪᒋᑦ ᖁᓚᓐᓇᖏᓐᓂᖏᑕ ᐊᑯᓐᓂᖏᓐᓂ ᓇᓗᓈᕿᔪᑦ ᐅᓄᓐᓂᖏᓐᓂᑦ ᐱᒋᐊᓪᓗᑎᒃ ᐅᓄᓐᓂᖏᓐᓂᒃ ᐋᖅᑭᔅᓯᒪᓂᖏᑕ ᐃᓚᒋᓕᐅᑎᓯᒪᓗᑎᒃ ᐅᓄᓐᓂᖏᓄᑦ ᐋᖅᑭᒃᓱᐃᔾᔪᑎᖓᓄᑦ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᖅᑕᑦ ᕿᓚᓗᒐᖏᓐᓄᑦ (ᑕᑯᓗᒋᑦ Van de Walle et al. 2025 ᑐᑭᓯᓇᑦᑎᐊᖁᓪᓗᒋᑦ).

ᖃᐅᔨᓴᔅᓯᑦᑎᐋᓂᖅ ᐊᒻᒪᓗ ᐱᓕᕆᒋᐋᓂᖅ

ᐃᓘᓐᓇᓕᒫᖓᓂ ᑖᔅᓱᒪ ᑎᑎᕋᔅᓯᒪᔪᑉ, ᐅᖃᐅᓯᑦᑕᖓ ᖃᑯᖅᑕᑦ ᕿᓚᓗᒐᑦ “ᐅᓄᓐᓂᖏᑦ” ᐅᖃᐅᓯᖃᒻᒪᑦ ᐊᐅᔭᒃᑯᑦ ᑲᑎᓯᒪᑎᓪᓗᒋᑦ ᑕᑯᔅᓴᐅᑎᑦᑎᓲᖑᒻᒪᑕ ᓇᓗᓇᖏᑦᑎᐊᑦᑐᓂᒃ ᑎᒥᖑᓂᖏᑕ ᐃᓕᓴᓐᓇᕈᑎᖏᑦ, ᐃᒪᓐᓇᐅᑎᓪᓗᒋᑦ “ᐱᕕᔅᓴᐅᔪᑦ” ᐅᖃᐅᓯᖃᒻᒪᑦ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᓇᒦᓐᓂᖏᓐᓂᒃ ᐊᒻᒪᓗ ᐱᕕᖃᓂᖓᑕ ᓇᒦᓐᓂᖓ ᐃᓗᐊᓂ ᐊᐅᓚᑕᐅᓂᖏᓐᓂ, ᐊᒻᒪᓗ ᐱᖃᓯᐅᔾᔨᒍᓐᓇᑦᑐᓂ ᐅᓄᓐᓂᔅᓴᓂᒃ ᐊᑕᐅᓯᑦ ᐅᓄᑦᑑᓂᖏᓐᓂᒃ ᐅᕝᕙᓘᓐᓃᑦ ᐋᖅᑭᔅᓯᒪᒃᑲᓂᓐᓂᖏᓐᓂᒃ ᐃᒻᒥᒃᑰᖓᔪᑦ ᐅᓄᑦᑑᓂᖏᓐᓂᑦ (Parent et al. 2023; Watt et al. 2023).

ᐱᕕᔅᓴᐅᔪᑦ ᖃᐅᔨᓴᑦᑕᐅᓂᖏᓐᓄᑦ ᐊᖑᒻᒪᑎᒋᐋᕈᑎᑦ

2025−ᒥ, 424 ᐊᒻᒪᓗ 35 ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᕿᓚᓗᒐᑦᑕᐅᓚᐅᒻᒪᑕ ᓄᓇᕕᒻᒥ ᐊᒻᒪᓗ ᓴᓂᑭᓗᐊᒻᒥ ᐊᖑᓇᓱᐋᑦᑎᓄᑦ, ᐱᓕᕆᒋᐊᕈᑎᒋᔭᐅᔪᓂ (ᑎᑎᕋᖅᓯᒪᔪᑦ 1). ᑐᙵᕕᒋᓗᒋᑦ ᓇᓪᓕᕉᑎᓂᖅ ᐊᒻᒪᓗ ᓇᒦᓐᓂᖓ ᑕᐃᓐᓇᓪᓗᐊᖅ ᓇᓕᐋᓄᐊᑦᑎᑕᐅᓂᖏᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᐱᕕᒋᔭᐅᔪᑦ ᑎᒥᖑᔅᓯᒪᓂᖏᓐᓂᒃ ᖃᐅᔨᓴᔅᓯᓂᑦ (ᑎᑎᕋᖅᓯᒪᔪᑦ 3 ᐅᕙᓂ Van de Walle et al. 2025), ᑖᓐᓇ ᑭᒡᒐᑦᑐᐃᒻᒪᑦ 118−ᓂᒃ ᐊᒻᒪᓗ 20−ᓂᒃ ᖃᑯᒃᑕᑦ ᕿᓚᓗᒐᓐᓂᒃ ᑕᐅᕙᖓᑦ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂᑦ) ᐱᕕᔅᓴᐅᔪᓂᑦ ᕿᓚᓗᒐᑦᑕᐅᓯᒪᔪᓂᑦ ᓄᓇᕕᒻᒥᒃ ᐊᒻᒪᓗ ᓴᓂᑭᓗᐊᒻᒥᑦ ᐊᖑᓇᓱᐋᑦᑎᓂᒃ 2025−ᒥ, ᐱᓕᕆᒋᐊᕈᑎᒋᔭᐅᔪᓂ (ᑎᑎᕋᖅᓯᒪᔪᑦ 1). ᐊᑯᓂᖏᓐᓂ 2021 ᐊᒻᒪᓗ 2025, ᐃᒪᓐᓇᑎᒋᐅᒐᔪᓪᓗᑎᒃ ᐊᕐᕌᒍᑕᒪᑦ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᐅᖃᐅᑎᒋᔭᐅᓯᒪᔪᑦ ᕿᓚᓗᒐᑦᑕᐅᓯᒪᔪᑦ ᐃᒪᓐᓇᑎᒋᐅᓚᐅᒻᒪᑕ 119 ± 17−ᓂᒃ ᐊᒻᒪᓗ 23−ᓂᒃ ± 4−ᓂᒃ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᓂᒃ ᓄᓇᕕᒻᒥ ᐊᒻᒪᓗ ᓴᓂᑭᓗᐊᒻᒥ ᐊᖑᓇᓱᐋᑦᑎᓄᑦ, ᐃᓚᒋᔭᐅᓕᑦᑎᓪᓗᒋᑦ, ᐅᑯᓄᖓ ᐅᓄᓐᓂᖏᓄᑦ ᐃᒪᓐᓇᑎᒋᑦ 142 ± 20−ᓂᒃ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᓐᓂᒃ.



ᑯᐸᐃᒃ ᓄᓇᓕᖃᕐᕕᐊᓂ

ᑐᑭᓯᒋᒋᐊᕈᑏᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᓄᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ
ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ ᐊᒻᒪ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ

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ᑎᑎᕋᖅᓯᒪᔪᑦ 1. ᐅᖃᐅᑎᒋᔭᐅᓯᒪᔪᑦ ᕿᓚᓗᒐᑦᑕᐅᓯᒪᔪᑦ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓂᒃ ᑎᓴᒪᓂ ᐊᐅᓚᑦᑎᕕᒋᔭᐅᔪᓂ ᓄᓇᕕᒻᒥ ᐊᒻᒪᓗ ᓴᓂᑭᓗᐊᒻᒥ, ᓄᓇᕗᑦ (SAN) 2025−ᒥ. ᐃᓘᓐᓇᑎᒃ ᑭᒡᒐᑦᑐᐃᒻᒪᑕ ᐅᓄᓐᓂᓕᒫᖏᓐᓂᒃ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓐᓂᒃ ᐃᓘᓐᓇᓕᒫᖏᓐᓂᑦ ᐱᕕᔅᓴᐅᔪᓕᒫᓂᑦ ᐊᒻᒪᓗ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓐᓂᒃ ᕿᓚᓗᒐᑦᑕᐅᔪᓂᒃ. ARC (ᓴᖑᖓᓂᖅ) ᑭᒡᒐᑦᑐᐃᒻᒪᑦ ᓴᖑᖓᓂᖓᓂᑦ ᓂᒋᖓᑕ ᑲᓇᓐᓇᐸᓯᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂᑦ ᐊᒻᒪᓗ ᐱᖃᓯᐅᔾᔨᓪᓗᓂ ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂᑦ, ᑰᔾᔪᐊᕋᐱᒃ ᑲᔪᓯᒍᓐᓇᒪᖔᑦ ᐱᓕᕆᐊᒃᓴᖅ, ᐊᒻᒪᓗ ᐅᐊᓇᖓ ᑲᓇᓐᓇᐸᓯᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂᑦ ᐊᕕᔅᓯᒪᓂᖓ ᐃᓱᒪᔅᓱᓪᓗᑎᒃ ᒪᑐᔭᖑᓂᖏᑦ ᐊᐅᓚᑦᑎᕕᒋᔭᐅᔪᑦ (ᐊᔾᔨᙳᐊᖅ 1). HS ᑭᒡᒐᑦᑐᐃᒻᒪᑦ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ ᐊᐅᓚᑎᓂᖃᕕᒋᔭᐅᔪᖅ, SAN ᑭᒡᒐᑦᑐᐃᒻᒪᑦ ᓴᓂᑭᓗᐊᑉ ᓄᓇᓕᖓᓂᑦ, UB ᑭᒡᒐᑦᑐᐃᓪᓗᓂ ᐅᖓᕙᒻᒥᒃ ᐊᒻᒪᓗ NEHB ᑭᒡᒐᑦᑐᐃᒻᒪᑦ ᐅᐊᓇᖓᑕ ᑲᓇᓐᓇᖓ ᑕᓯᐅᔭᖅᔪᐊᓂ, ᐱᖃᓯᐅᑎᓇᒍ ᐊᕕᔅᓯᒪᓂᖓ ᐃᓱᒪᔅᓱᓪᓗᑎᒃ ᒪᑐᔭᖑᓂᖓᓂ. ᑎᑎᖃᖏᑦ FA, EF ᐊᒻᒪᓗ LF ᑐᑭᖃᒻᒪᑕ “ᐅᑭᐊᔅᓵᒻᒥᒃ”, “ᐅᑭᐊᔅᓴᓕᓂᖓᓂᒃ” ᐊᒻᒪᓗ “ᐅᑭᐊᔅᓵᑐᖃᐅᓕᑦᑎᓪᓗᒍ”, ᑭᒡᒐᑦᑐᐃᓗᑎᒃ, ᐃᒪᓐᓇᐅᑎᓪᓗᒋᑦ ᑎᑎᖃᐃᑦ SP ᑐᑭᖃᒻᒪᑦ “ᐅᐱᕐᖔᒥᒃ”.

ᑲᑎᙵᔪᑦ ARC HSSP HSEF HSLF UBSP UBFA NEHBSP NEHBFA JAM ᑲᑎᓗᒋᑦ

ᓄᓇᕕᒃ SAN
ᐊᑕᖏᖅᑐᑎ 35 136 95 105 20 2 0 22 9 424 35
BEL-EHB 35 19 48 5 0 0 0 11 0 118 20

ᐃᓚᓕᐅᑎᓗᒍ 2025 ᕿᓚᓗᒐᑦᑕᐅᔪᓂᒃ ᖃᐅᔨᒪᒍᑎᓄᑦ ᐅᑯᓄᙵᓪᓗᒍ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᓄᑦ ᐃᓚᓕᐅᑎᓗᒋᑦ ᐅᓄᓐᓂᖏᓄᑦ ᐋᖅᑭᔅᓱᐃᒍᑎᒧᑦ ᖃᓄᑐᐃᓐᓇᖅ ᑕᐅᕗᖓᒃᑲᓂᖅ ᐋᖅᑭᖏᐊᒃᑲᓐᓂᖏᓪᓗᒋᑦ ᐋᖅᑭᓱᐃᒍᑎᒧᑦ ᓯᕗᓂᖏᓐᓂ ᐅᕝᕙᓘᓐᓃᑦ ᐃᓚᓕᐅᑎᔭᐅᔪᑦ ᖃᐅᔨᒪᔪᑎᔅᓴᓂᒃ ᐊᖏᒻᒪᑎᒋᐋᓕᑦᑎᑦᑎᓚᐅᒻᒪᑦ 2025 ᐅᓄᓐᓂᖏᑕ ᒥᔅᓴᐅᓴᑦᑕᐅᒍᑎᖏᓐᓂᒃ ᐃᒪᓐᓇᑎᒋᓂᒃ 2,100 ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓐᓂᒃ (95% Crl = [1,700; 2,500]). ᐊᑯᓐᓂᖏᓐᓂ 2021 ᐊᒻᒪᓗ 2025, ᐱᕕᔅᓴᐅᔪᑦ ᒥᔅᓴᐅᓴᑦᑕᐅᓂᖏᑦ ᖃᔅᓰᓐᓇᕈᑲᓂᔅᓯᒪᓱᕆᔭᐅᓕᓚᐅᕐᒪᑕ ᐃᒪᓐᓇᑎᒋᐅᓗᑎᒃ ᐅᓄᓐᓂᖏᑦ 5.0%-ᖏᓐᓂᒃ ᐊᑐᓂ ᐊᕐᕌᒍᒥ (95% CrI = [3.2; 7.5]; ᐊᔾᔨᙳᐊᖅ 3). ᐊᑯᓂᖏᓐᓂ 2024 ᐊᒻᒪᓗ 2025, ᐱᕕᓴᐅᔪᑦ ᒥᔅᓴᐅᓴᑦᑕᐅᓯᒪᓚᐅᒻᒪᑕ ᖃᔅᓰᓐᓇᕈᒃᑲᓂᔅᓯᒪᓱᕆᔭᐅᓪᓗᑎᒃ ᐃᒪᓐᓇᑎᒋᓂᒃ 5.0%-ᓂᒃ (95% Crl = [1.4; 9.2]). ᐅᑯᓇᓂ ᐅᓄᓛᖏᑦ ᐃᓚᖓᓗᐋᖃᑦᑕᖏᓪᓗᒋᑦ ᐅᓄᕐᓂᕆᓚᐅᑦᑕᖓᑎᑑᓕᒃᑲᓐᓂᕈᓐᓇᖁᓪᓗᒋᑦ (DFO-MSY) ᐱᓂᓪᓗᑦᑕᐅᑦᑕᐃᓕᒪᓂᒧᑦ ᐱᓕᕆᒋᐋᕈᑎᒧᑦ ᐋᖅᑭᔅᓱᔅᓯᒪᕕᒻᒥ, ᑭᓪᓕᖓ ᖃᐅᔨᒪᔾᔪᑎᔅᓴᐅᓂᖓᓂ (LRP) ᐅᑯᓇᓂ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᐱᕕᔅᓴᐅᓂᖏᑦ ᒥᔅᓴᐅᓴᑦᑕᐅᓯᒪᒻᒪᑕ ᐃᒪᓐᓇᑎᒋᐅᑎᑕᐅᓪᓗᑎᒃ 1,900 ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᐊᒻᒪᓗ ᐱᓂᓪᓗᑦᑕᐅᑦᑕᐃᓕᒪᓂᒻᒧᑦ ᓇᓂᑦᑎᓯᖃᕕᖓᓂ (PRP) ᐃᒪᓐᓇᑎᒋᐅᓪᓗᑎᒃ 3,900 ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ. ᑐᙵᕕᒋᓗᒋᑦ 2025−ᒥ ᐅᓄᓂᕆᓚᐅᑦᑕᖏᓐᓂ ᒥᔅᓴᐅᓴᑦᑕᐅᓗᑎᒃ, 100%-ᐅᒻᒪᑕ ᑕᐃᒫᖑᑐᐃᓐᓇᕆᐊᖃᕐᓂᖏᑦ ᑖᒃᑯᐊ ᐱᕕᔅᓴᐅᔪᑦ ᑐᖔᓕᓂᒻᒪᑕ ᐱᓂᕐᓗᒃᑕᐅᑦᑕᐃᓕᒪᓂᕐᒧᑦ ᓇᓂᑦᑎᓯᖃᕕᖓᑕ ᐊᒻᒪᓗ 82%-ᖏᓐᓃᑐᐃᓇᕆᐊᖃᓕᑦᑐᑎᒃ ᐅᖓᑖᓂᓕᑦᑐᑎᒃ ᑭᓪᓕᖓ ᖃᐅᔨᒪᔾᔪᑎᔅᓴᐅᓂᖓᓂ. ᐱᕕᔅᓴᐅᔪᑦ ᒥᔅᓴᐅᓴᑦᑕᐅᓯᒪᒻᒪᑕ ᑎᑭᐅᒪᔪᒥᓂᐅᓂᕋᑦᑕᐅᓪᓗᑎᒃ ᐅᔾᔨᑦᑐᑦᑕᐅᑦᑎᐊᕆᐊᖃᓂᖓᓃᓐᓂᕋᑕᐅᓗᑎᒃ ᐱᒋᐊᓗᑎᒃ 1992−ᒥᑦ.

ᑯᐸᐃᒃ ᓄᓇᓕᖃᕐᕕᐊᓂ

ᑐᑭᓯᒋᒋᐊᕈᑏᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᓄᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ
ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ ᐊᒻᒪ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ

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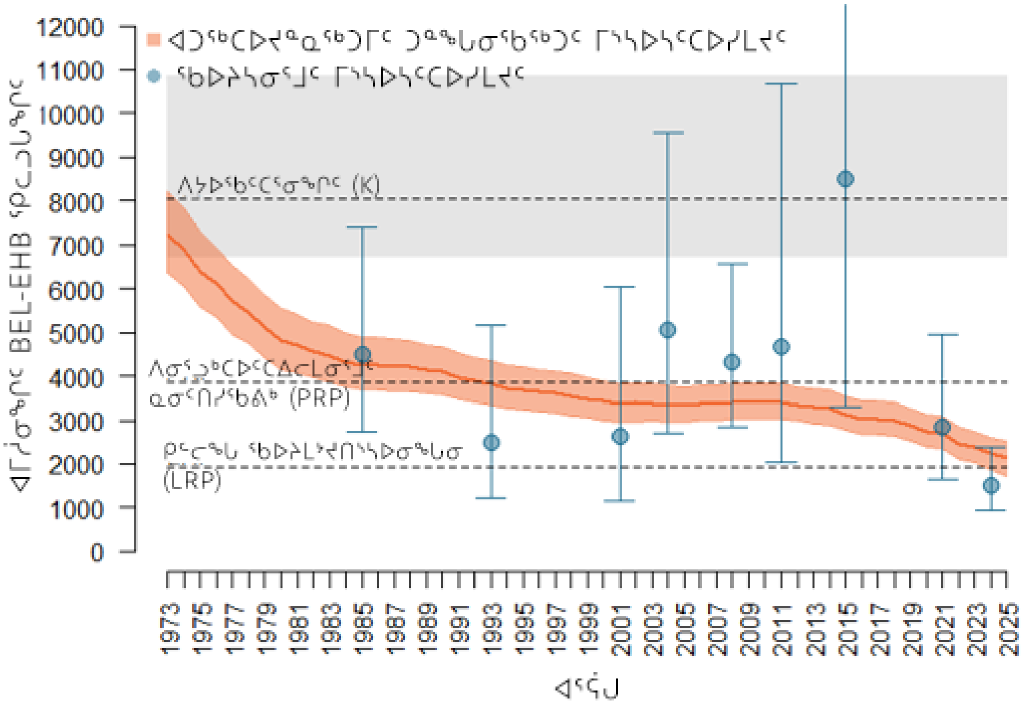
ᐊᔾᔨᙳᐊᖅ 3. ᐅᓄᓐᓂᖏᑕ ᖃᓄᐄᓕᕙᓪᓕᐋᓂᖏᑦ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᑦ ᐱᕕᔅᓴᐅᔪᑦ. ᐅᓄᓐᓂᖏᑦ (ᑐᑭᖃᒻᒪᑦ: ᑖᖅᑭᖓᔪᖅ ᖁᒃᓱᐋᖓᔪᖅ ᑎᑎᖅᓯᒪᓂᖓ, 95% ᖁᓚᓐᓇᖏᓐᓂᖏᑕ ᐊᑯᓐᓂᖓ: ᖁᔅᓱᐋᖓᔭᕈᔪᑦᑐᖅ ᖁᐋᔾᔪᖔᑦᑐᖅ) ᒥᔅᓴᐅᓴᑦᑕᐅᓯᒪᒻᒪᑕ ᐃᓚᒋᓕᐅᑎᓯᒪᔪᓂᑦ ᐅᓄᓐᓂᖏᓐᓂᒃ ᐋᖅᑭᔅᓱᐃᒍᑎᓂ (ᑕᑯᓗᒍ Van de Walle et al. 2025). ᓇᓗᓇᐃᑯᑕᖏᑦ ᓇᓗᓇᐃᑦᑕᐅᔪᑦ ᐃᒪᕐᒥᐅᑕᓕᕆᔨᒃᑯᓂᑦ ᑲᓇᑕᒥ ᐅᓄᓛᖏᑦ ᐃᓚᖓᓗᐋᖃᑦᑕᖏᓪᓗᒋᑦ ᐅᓄᕐᓂᕆᓚᐅᑦᑕᖓᑎᑑᓕᒃᑲᓐᓂᕈᓐᓇᖁᓪᓗᒋᑦ (MSY) ᐊᐅᓚᑦᑎᓂᒻᒧᑦ ᐋᖅᑭᔅᓱᔅᓯᒪᕕᒋᔭᐅᔪᖅ ᓇᓗᓇᐃᑦᑕᐅᒻᒪᑕ, ᐱᓂᕐᓗᒃᑕᐅᑦᑕᐃᓕᒪᓂᕐᒧᑦ ᓇᓂᑦᑎᓯᖃᕕᒃ (PRP) ᐊᒻᒪᓗ ᑭᓪᓕᖓ ᖃᐅᔨᒪᔾᔪᑎᔅᓴᐅᓂᖓᓂ (LRP) ᑭᒡᒐᑦᑐᐃᓪᓗᑎᒃ 48%-ᖏᓐᓂᒃ ᐊᒻᒪᓗ 24%-ᖏᓐᓂᒃ ᐱᔭᐅᖃᑦᑕᕐᓂᖏᓐᓂᒃ (K), ᐃᒻᒥᒃᑰᖓᓗᑎᒃ. ᓯᐋᕐᓇᕈᔪᕈᑦᑎᓯᒪᔪᖅ ᐊᕙᑖᓂ ᒥᔅᓴᐅᓴᑦᑕᐅᓯᒪᔪᑦ ᐱᔭᐅᖃᑦᑕᕐᓂᖏᓐᓂᒃ (K) ᑭᒡᒐᑦᑐᐃᒻᒪᑕ 95%-ᖏᓐᓂᒃ CrI. ᑐᖑᔪᑦᑐᑦ ᓄᕐᓗᐃᑦ ᐊᒻᒪᓗ
ᑎᑎᓛᓯᒪᓂᖏᑦ ᑭᒡᒐᑦᑐᐃᒻᒪᑕ ᖃᖓᑕᔪᒃᑯᑦ ᖃᐅᔨᓇᓱᐊᑦᑕᐅᓯᒪᓂᖏᑕ ᒥᔅᓴᐅᓴᑦᑕᐅᒍᑎᖏᑦ ᐊᒻᒪᓗ 95% ᖁᓚᓐᓇᖏᓐᓂᖏᑕ ᐊᑯᓐᓂᖏᓐᓂ (CI). ᖁᕝᕙᓯᓐᓂᔅᓴᖅ ᑭᒡᓕᖓ 95%-ᖏᑕ ᓇᓗᓇᐅᖏᑦᑎᐊᓂᖏᑦ 2015−ᒥᓂᑦ ᖃᖓᑕᑎᑕᐅᔪᒧᑦ ᖃᐅᔨᓇᓱᐊᑦᑕᐅᔪᑦ ᒥᔅᓴᐅᓴᑦᑕᐅᓂᖏᑦ ᐃᒪᓐᓇᑎᒋᐅᕗᑦ 21,800 ᐊᒻᒪᓗ ᐱᔮᕆᔭᐅᓪᓗᑎᒃ ᐅᓄᓛᖏᓐᓅᖓᑎᑕᐅᖏᓚᑦ y-ᑲᐃᕙᓂᕆᕙᑦᑕᖓᑕ ᐱᐃᓂᔅᓴᐅᓕᑦᑎᑕᐅᖁᓪᓗᒍ ᑎᑎᕋᐅᔭᔅᓯᒪᓂᖓᑕ ᑐᑭᓯᓇᑦᑎᐋᓂᖓ.

ᕿᓚᓗᒐᑦᑕᐅᕙᑦᑐ ᐅᖃᐅᔾᔨᒋᐋᕈᑎᖏᑕ ᐊᖑᒪᑎᓕᑦᑎᑕᐅᒋᐊᕈᑎᖓ

ᐊᔾᔨᙳᐊᖅ 4 ᑕᑯᔅᓴᐅᑎᑦᑎᒻᒪᑦ ᓴᖅᑭᑎᑕᐅᓯᒪᔪᓂᒃ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᓐᓂᑦ ᐱᕕᔅᓴᐅᑎᑕᐅᔪᑦ ᐅᓄᓐᓂᖏᓐᓂᑦ ᑐᙵᕕᒋᓗᒋᑦ ᐊᔾᔨᒋᙱᑕᖏᓐᓂᒃ ᐊᑐᑉᐸᓪᓕᐋᒐᔭᙳᐋᑦᑐᑦ ᐊᕐᕌᒍᑕᒪᑦ ᕿᓚᓗᒐᑦᑕᐅᕙᑦᑐᑦ ᐅᓄᓐᓂᖏᓐᓂᑦ. ᐅᓄᓛᖏᑦ ᐅᓄᓐᓂᖏᑕ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᑕᐃᒃᑯᓂᖓ ᕿᓚᓗᒐᑦᑕᐅᒍᓐᓇᑦᑐᓂᒃ ᐊᕐᕌᒍᑕᒪᑦ ᐃᒪᓐᓇᐅᓚᕆᖁᓪᓗᒋᑦ 50%, 80% ᐊᒻᒪᓗ 95% ᑕᐃᒫᖑᑐᐃᓐᓇᕆᐊᖃᓂᖏᓐᓂᒃ ᑕᐃᒃᑯᐊ ᐱᕕᔅᓴᐅᔪᑦ ᓄᖑᑉᐸᓪᓕᐋᖁᓇᒋᑦ ᑕᐃᔅᓱᒪᓂ 2025−ᖏᓐᓂ ᐅᓄᓂᕆᓚᐅᔅᓯᒪᔭᖏᓐᓂ ᐃᒪᓐᓇᑎᒋᐅᒻᒪᑕ 51, 44, ᐊᒻᒪᓗ 35 BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ, ᐃᒻᒥᒃᑰᖓᓗᑎᒃ. ᑕᒪᓐᓇᐅᑎᓪᓗᒍ ᒫᓐᓇ ᖃᔅᓰᓐᓇᕈᔅᓯᒪᒻᒪᑕ ᐅᓄᓐᓂᖏᑦ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᐱᕕᔅᓴᐅᔪᑦ, ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᐅᖓᑖᓄᑦᑕᐅᑎᓗᒋᑦ ᐅᓄᓂᖏᑕ ᐊᖑᒻᒪᑎᒍᓐᓇᑦᑎᑕᐅᓗᑎᒃ ᐱᕕᐅᒍᓐᓇᑦᑐᑦ ᓄᖑᑕᐅᕙᓪᓕᐋᙱᒍᓐᓇᓪᓗᑎᒃ ᓇᓪᓕᐋᓂᑐᐃᓐᓇᖅ ᐊᕐᕌᒍᓂ ᐱᐅᓇᖏᑦᑐᒃᑯᑦ ᐊᑦᑐᐃᒐᔭᖁᓇᒋᑦ ᓯᕗᓂᔅᓴᑦᑎᓐᓂᒃ ᕿᓚᓗᒐᑦᑕᐅᒐᔭᑦᑐᑦ ᐅᓄᓐᓂᖏᑦ ᐋᖅᑭᒍᑎᓯᒪᑦᑎᐊᓪᓗᑎᒃ ᐋᖅᑭᐅᒪᑎᑕᐅᓂᖏᓄᑦ ᓄᖑᑕᐅᕙᓪᓕᐊᒐᔭᖁᓇᒋᑦ. ᑐᙵᕕᒋᓗᒋᑦ ᐅᓪᓗᒥᓕᓴᐃᑦ ᖃᓄᐃᓕᖓᒐᔭᓐᓂᖏᑦ, ᒫᓐᓇᓕᓴᐃᑦ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᐅᓄᓐᓂᖏᑦ ᐋᖅᑭᐅᒪᑎᑕᐅᒐᔭᑉᐸᑕ ᐅᓄᓐᓂᕆᖃᑦᑕᓲᖏᓐᓂ ᖃᐅᔨᔭᐅᓚᐅᑦᑐᓂ ᐊᑯᓂᖏᓐᓂ 2021 ᐊᒻᒪᓗ 2025 (ᓲᕐᓗ 142 ᕿᓚᓗᒐᐃᑦ), ᐱᕕᔅᓴᐅᔪᑦ ᑎᑭᐅᑎᑐᐃᓐᓇᕆᐊᖃᒻᒪᑕ ᓄᖑᑕᐅᓂᐋᑦᑐᕆᔭᐅᓕᓪᓗᑎᒃ (ᓲᕐᓗ, ᐅᓄᖏᓂᔅᓴᐃᑦ 50−ᓂᒃ ᐃᓂᖅᓯᒪᔪᓂ ᓄᓂᕐᓂᒃ) ᐃᓚᖃᓪᓗᑎᒃ 50%-ᖏᓐᓂᒃ ᑎᑭᓪᓗᒋᑦ 95% ᑕᐃᒫᖑᑐᐃᓐᓇᕆᐋᖃᕋᔭᓐᓂᖏᓐᓂᒃ ᑎᑭᓪᓗᒋᑦ 2038 ᐊᒻᒪᓗ 2040, ᐃᒻᒥᒃᑰᖓᓗᑎᒃ.



ᑯᐸᐃᒃ ᓄᓇᓕᖃᕐᕕᐊᓂ

ᑐᑭᓯᒋᒋᐊᕈᑏᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᓄᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ
ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ ᐊᒻᒪ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ

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ᐊᕐᕌᒍᑕᒪᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᐅᓄᓐᓂᖏᑦ ᐅᖓᑖᓄᔅᓯᒪᖏᑦᑐᑦ 84, 65, ᐊᒻᒪᓗ 55 BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᐱᕕᖃᑦᑎᑦᑎᒐᔭᒻᒪᑕ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᐱᕕᔅᓴᐅᓂᖏᑦ ᓱᕐᕋᔅᓯᒪᒐᔭᖏᓪᓗᑎᒃ ᑎᑭᐅᒪᓗᑎᒃ ᐅᕝᕙᓘᓐᓃᑦ ᐅᖓᑖᓂᓪᓗᑎᒃ ᑭᓪᓕᖓ ᖃᐅᔨᒪᔾᔪᑎᔅᓴᐅᓂᖓᓂ ᐃᓚᖃᓪᓗᑎᒃ 50%-ᖏᓐᓂᒃ ᑕᐃᒫᖑᑐᐃᓐᓇᕆᐋᖃᓂᖏᓐᓂᒃ 5−ᓂ, 10 ᐊᒻᒪᓗ 25−ᓂ ᐊᕐᕌᒍᓂ.

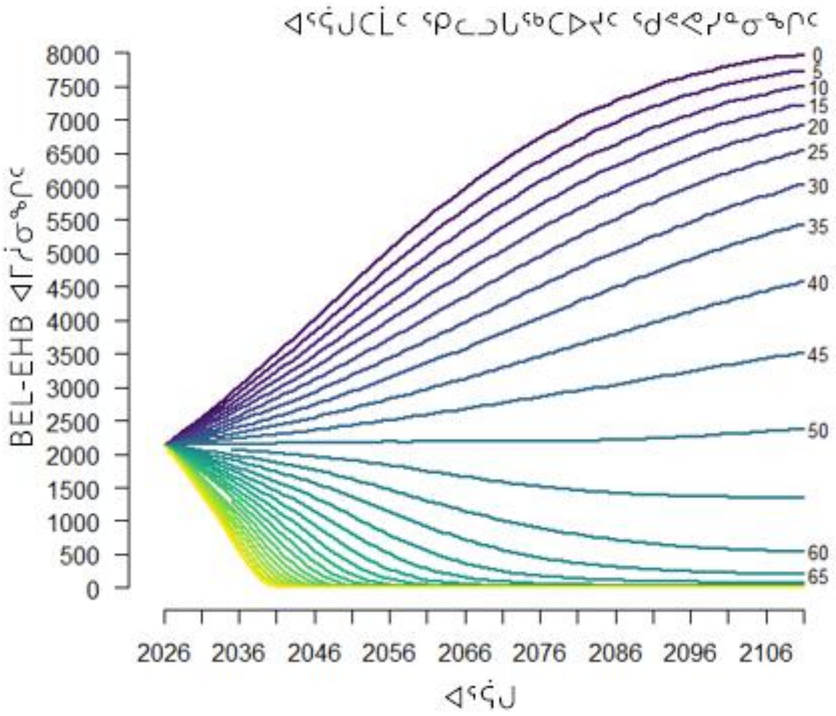
ᐆᒪᔪᓂᑦ ᐲᖅᓯᕕᐅᑐᐃᓐᓇᕆᐋᓕᒃ (PBR) ᐅᑯᓄᖓ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓐᓂᒃ ᐱᕕᔅᓴᐅᔪᓂᑦ ᒥᔅᓴᐅᓴᑦᑕᐅᓚᐅᒻᒪᑕ ᑎᑭᐅᒪᓪᓗᑎᒃ 4 ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓐᓄᑦ ᐊᑐᓂ ᐊᕐᕌᒍᒥ.

ᐊᔾᔨᙳᐊᖅ 4. ᓴᖅᑭᑎᑕᐅᔪᖅ ᐅᓄᓐᓂᕆᔭᐅᔪᓄᑦ ᖃᓄᐃᓕᕙᓪᓕᐊᓂᕆᔭᐅᔪᖅ (ᐊᑐᑦᑎᓪᓗᒋᑦ ᐱᖓᓱᑦ ᑭᖑᕚᕆᑦ) ᐅᑯᓄᖓ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᐱᕕᔅᓴᐅᔪᓄᑦ ᐃᓱᒪᒋᓗᒋᑦ ᐊᑐᑉᐸᓪᓕᐊᒐᔭᙳᐋᑦᑐᑦ ᓯᕗᓂᔅᓴᒥ ᕿᓚᓗᒐᑦᑕᐅᖃᑦᑕᕋᔭᑦᑐᑦ ᐅᓄᓐᓂᖏᑦ ᑎᑭᐅᒪᓗᑎᒃ ᐱᒋᐊᕕᖃᕐᓗᑎᒃ 0 ᑎᑭᓪᓗᒋᑦ 142 BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᐊᑐᓂ ᐊᕐᕌᒍᓂ (ᐱᖃᓯᐅᑎᖏᓪᓗᒋᑦ ᐃᑭᓕᑦᑕᐅᒐᓗᐊᓪᓗᑎᒃ ᐊᓯᐅᔨᔭᐅᔪᑦ). ᐅᖓᑖᓂᓪᓗᑎᒃ 70 BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᑦᑕᐅᕙᑦᑐᑦ ᐊᑐᓂ ᐊᕐᕌᒍᓂ, ᐅᓄᓐᓂᖏᑦ ᓄᖑᓐᓂᐊᓐᓂᕋᑦᑕᐅᕗᑦ ᐃᓗᐋᓂ ᑭᖑᓪᓖᑦ ᐱᖓᓱᑦ ᑭᖑᕚᕆᔭᐅᓂᐊᑦᑐᓂ.

ᐊᑦᑐᐄᓂᖏᑦ ᐊᓯᕈᓂᖏᑕ EHB (ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᐊᐅᓚᑕᐅᕕᒋᔭᖏᓐᓂ

ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᐅᓄᓐᓂᖏᑦ

ᓯᕗᓂᖓᒍᑦ ᓂᒋᒧᐋᖓᓕᑦᑎᓪᓗᒋᑦ ᓴᙳᓗᑎᒃ ᐅᐋᓐᓇᑉᐸᓯᒻᒥᒃ ᑎᑎᔅᓯᒪᓂᖓᓂᑦ ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ (EHB) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᐊᐅᓚᑕᐅᕕᒋᔭᖓᓂ ᐅᑐᐱᕆ 2024−ᒥ, ᓄᓇᓕᖓ ᐃᓄᒃᒧᐊᑉ ᐱᖃᓯᐅᑎᔭᐅᓯᒪᓚᐅᒻᒪᑦ ᐃᓗᐊᓂ EHB (ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᐊᐅᓚᑦᑎᕕᒋᔭᐅᓂᖓᓂ (ᐊᔾᔨᙳᐊᖅ 1). ᑕᐃᒪᓐᓇᐃᓂᖓᓄᑦ, ᑖᓐᓇ ᓄᓇᓕᒃ ᐱᖃᖃᑎᖃᓚᐅᒻᒪᑕ ᑲᑎᓗᒋᑦ ᐱᔭᐅᒍᓐᓇᑦᑎᑕᐅᔪᓂᒃ 20−ᓂᑦ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓐᓂᑦ ᐱᔭᐅᒍᓐᓇᓪᓗᑎᒃ ᐊᓯᖏᓐᓂᒃ ᓄᓇᓕᓐᓂᒃ ᐅᑯᓇᓂ EHB (ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᐊᐅᓚᑦᑎᕕᒋᐅᓂᖓᓂ (ᑎᑎᕋᖅᓯᒪᔪᑦ 2). ᐅᑐᐱᕆ 2024−ᒥᓂᑦ, ᓄᓇᓕᒃ ᐃᓄᒃᔪᐊᖅ ᐱᖃᓯᐅᑎᔭᐅᒍᓐᓃᒻᒪᑦ ᑲᑎᓗᒋᑦ ᐱᔭᐅᒍᓐᓇᑦᑎᑕᐅᕕᒋᔭᐅᔪᓂᒃ, ᐊᒻᒪᓗ ᑲᑎᓗᒋᑦ ᐱᔭᐅᒍᓐᓇᑦᑎᑕᐅᔪᓂᑦ 20−ᓂᒃ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓐᓂᒃ ᐊᑐᒻᒪᑦ ᒥᑭᓪᓕᒋᐋᑦᑕᐅᓂᖏᓄᑦ EHB (ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᐊᐅᓇᑦᑎᕕᒋᔭᐅᓂᖓᓄᑦ.



ᑯᐸᐃᒃ ᓄᓇᓕᖃᕐᕕᐊᓂ

ᑐᑭᓯᒋᒋᐊᕈᑏᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᓄᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ
ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ ᐊᒻᒪ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ

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ᑎᑎᕋᖅᓯᒪᔪᑦ 2. ᐊᕐᕌᒍᑕᒪᑦ ᐅᓄᓐᓂᖏᑦ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐋᑕ ᐊᐅᓚᑦᑎᕕᒋᔭᐅᓂᖓᓂ (ᐱᖃᓯᐅᑎᓪᓗᒍ ᐃᒻᒥᒃᑰᖓᓂ ᐃᓱᒪᔅᓱᓪᓗᑎᒃ ᒪᑐᔭᖑᓂᖓᓂᑦ) ᐊᑐᑦᑎᓪᓗᒍ ᒫᓐᓇ ᐊᐅᓚᑦᑎᓂᒻᒧᑦ ᐸᕐᓇᒍᑎ ᐊᖑᓴᓱᐋᑦᑎᓄᑦ ᓄᓇᓕᒋᔭᐅᔪᖅ. ᐅᓄᓐᓂᖏᑦ ᑐᑭᓯᓇᔅᓯᑎᑦᑎᒋᐋᕈᑎᖏᓐᓃᑦᑐᑦ ᑭᒡᒐᑦᑐᐃᒻᒪᑕ ᐊᕐᕌᒍᑕᒪᑦ ᑲᑎᓗᒋᑦ ᐱᔭᐅᒍᓐᓇᑦᑎᑕᐅᔪᑦ, ᑕᐃᒃᑯᐊᓗ ᐋᖅᑭᑦᑕᐅᓯᒪᓪᓗᑎᒃ 20−ᖑᓗᑎᒃ ᐊᐅᓚᑦᑎᓂᒻᒧᑦ ᐸᕐᓇᒍᑎᒥ. ᑕᐃᒪᐃᒃᑲᓗᐊᑦᑎᓪᓗᒍ, ᑖᓐᓇ ᐅᓄᓐᓂᖓ ᐊᔾᔨᒌᒍᓐᓃᖃᑦᑕᓚᐅᒻᒪᑦ ᐊᕐᕌᒍᑕᒪᑦ ᑕᐃᒪᙵᓂᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᓕᒫᑦ ᐅᖓᑖᓄᑉᐸᑕ ᑲᑎᓗᒋᑦ ᐱᔭᐅᒍᓐᓇᑦᑎᑕᐅᔪᑦ ᐲᑦᑕᐅᓲᖑᒻᒪᑕ ᑕᐃᑲᙵᑦ ᑲᑎᓗᒋᑦ ᐱᔭᐅᒍᓐᓇᑦᑎᑕᐅᔪᓂᑦ ᐊᕐᕌᒍᓂᐊᑦᑐᒥᑦ, ᐊᒻᒪᓗ ᑕᐃᒃᑯᐊ ᑲᑎᓗᒋᑦ ᐱᔭᐅᒍᓐᓇᑦᑎᑕᐅᔪᑦ ᐱᔭᐅᔪᐃᓐᓇᐅᖏᑉᐸᑕ ᐊᑐᑦᑐᒥ ᐊᕐᕌᒍᒥ, ᑎᑭᐅᒪᔪᑦ 25%-ᖏᓄᑦ ᐱᔭᐅᓯᒪᖏᓐᓂᖏᑦ ᑲᑎᓗᒋᑦ ᐱᔭᐅᒍᓐᓇᑦᑎᑕᐅᔪᓂᑦ ᑲᔪᓯᑎᑕᐅᒍᓐᓇᑦᑐᑦ ᓯᕗᒧᐋᑦᑎᑕᐅᓗᑎᒃ.

ᓄᓇᓕᒃ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓐᓂᒃ ᓄᓈᑦᑕᐅᔪᖃᖏᑦᑐᖅ

2021 2022 2023 2024 2025
ᑰᔾᔪᐊᕌᐱᒃ 1 3 6 6 6
ᐅᒥᐅᔭᖅ 4 11 6 12 10
ᐃᓄᒃᔪᐊᖅ 22 1+4* 4 5+18** 19**
ᐳᕕᓂᕐᑐᖅ 1 0 0 0 0
ᑲᑎᓪᓗᒋᑦ ᓄᓈᑦᑕᐅᔪᓕᒫᑦ
(ᑲᑎᓗᒋᑦ
ᐱᔭᐅᒍᓐᓇᑦᑎᑕᐅᔪᓂᑦ)

28 (20) 15+4* (12) 16 (17) 23 (21) +18** 16 (18) +19**

*2023−ᒥ, ᑎᓴᒪᑦ ᖃᑯᖅᑕᑦ ᕿᓚᓗᒐᐃᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᖃᓂᒋᔭᖓᓂ ᐃᓄᒃᒧᐊᑉ 2022−ᒥ ᐅᑎᑦᑎᑕᐅᓚᐅᒻᒪᑕ ᑲᑎᓗᒋᑦ ᐱᔭᐅᒍᓐᓇᑦᑎᑕᐅᔪᓅᑦᑕᐅᓪᓗᑎᒃ ᒪᓕᑦᑕᐅᓗᑎᒃ ᑐᔅᓯᕌᕆᔭᐅᓯᒪᔪᑦ ᐃᓱᒪᓕᐅᕈᑎᒋᔭᐅᖁᔭᐅᓪᓗᑎᒃ ᐊᖑᕕᒐᒻᒥᒃ ᐊᖏᑦᑕᐅᓚᐅᑦᑐᑎᓪᓗ ᑲᑎᒪᔨᓄᑦ ᐊᒻᒪᓗ ᐃᒪᕐᒥᐅᑕᓕᕆᔨᒃᑯᓂᑦ ᑲᓇᑕᒥ ᒥᓂᔅᑕᒧᑦ.
**ᐱᖃᓯᐅᑎᔭᐅᓇᑎᒃ ᑲᑎᓗᒋᑦ ᐱᔭᐅᒍᓐᓇᑦᑎᑕᐅᔪᓂ ᑕᐃᒪᐃᑎᑕᐅᓪᓗᑎᒃ EHB (ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᐊᐅᓚᑦᑎᕕᒋᔭᐅᓂᖓᑕ ᑎᑎᔅᓯᒪᓂᖓᑕ ᐊᓯᕈᑦᑕᐅᓂᖏᓄᑦ. ᑕᒪᒃᑯᐊ ᐆᒪᔪᐃᑦ ᐱᔭᐅᓚᐅᒻᒪᑕ ᓯᓚᑖᓂ ᔪᓚᐃ 15 ᑎᑭᓪᓗᒍ ᓯᑎᐱᕆ 1 ᐃᓱᒪᔅᓱᓪᓗᑎᒃ ᒪᑐᔭᖑᓂᖓᓂᒃ.

ᑕᐃᒪᐃᒻᒪᑦ ᓴᖅᑭᑉᐳᑦ ᑕᒪᓐᓇ ᐊᓯᕈᓂᖓ EHB (ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᑕ ᐊᐅᓚᑦᑎᕕᒋᔭᐅᓂᖓᑕ ᑭᒡᓕᒋᑎᑕᐅᔪᖅ ᓴᖅᑭᑎᑦᑎᓚᐅᒻᒪᑦ ᐅᓄᓂᔅᓴᐅᓕᑦᑎᑦᑎᓪᓗᓂ ᑲᑎᓗᒋᑦ ᐅᓄᓐᓂᖏᓐᓂᒃ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ

ᕿᓚᓗᒐᑦᑕᐅᖃᑦᑕᓂᖏᓐᓂᒃ ᐊᕐᕌᒍᑕᒪᑦ ᐱᖓᓱᓂ ᓴᖑᖓᓂᖓᓂ ᓄᓇᓕᓐᓂ (2021-2023 ᐊᒻᒪᓗ 2024-2025 ᐃᒪᓐᓇᑎᒋᐅᕙᓪᓗᑎᒃ 21 ± 4−ᓂᒃ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓐᓂᒃ ᐊᒻᒪᓗ 38 ± 3−ᓂᒃ, ᐃᒻᒥᒃᑰᖓᓂᖓᓂ; P = 0.02). ᑖᓐᓇ ᐅᓄᔅᓯᓂᖓ
ᑕᐃᒪᐃᓚᕿᑎᑕᐅᒍᓐᓇᒻᒪᑦ 18−ᓄᑦ ᐊᒻᒪᓗ 19−ᓄᑦ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓐᓄᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᓄᑦ 2024−ᒥ ᐊᒻᒪᓗ 2025−ᒥ

ᐃᒻᒥᒃᑰᖓᓗᑎᒃ, ᓯᓚᑖᓂ ᔪᓚᐃ 15 ᑎᑭᓪᓗᒍ ᓯᑎᐱᕆ 30 ᐃᓱᒪᔅᓱᓪᓗᑎᒃ ᒪᑐᔭᖑᓂᖓᓂᒃ. ᐃᓘᓐᓇᑎᒃ 18 ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᕿᓚᓗᒐᑦᑕᐅᓚᐅᒻᒪᑕ ᐅᑭᐊᔅᓵᖑᑎᓪᓗᒍ 2024−ᒥ. ᐊᔾᔨᒋᙱᑕᖓᒍᑦ, 9 ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᕿᓚᓗᒐᑦᑕᐅᓚᐅᒻᒪᑕ ᐅᐱᕐᖔᖑᑎᓪᓗᒍ ᐊᒻᒪᓗ 10 ᕿᓚᓗᒐᑦᑕᐅᓚᐅᕆᓪᓗᑎᒃ ᐅᑭᐊᔅᓵᖓᓂ 2025.

ᑎᒥᖑᓂᖓᑕ ᑲᑎᓯᒪᓂᖏᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᓂ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓂᒃ

ᐊᐅᔭᒃᑯᑦ ᑲᑎᓯᒪᓂᖏᑦ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᐃᓗᐊᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ/ᐃᑭᕋᓴᖓᓂ ᐱᔭᕆᐋᑐᔪᑦ ᑎᒥᖑᓂᖏᑕ ᓇᓗᓇᖏᓐᓂᖏᑦ ᐊᒻᒪᓗ ᑕᐃᒪᐃᒻᒪᑦ ᐃᓱᒪᒋᔭᐅᕗᑦ ᐃᒻᒥᒃᑰᖓᓂᖏᓐᓂᒃ ᐅᓄᓐᓂᖏᑕ (Brennin et al. 1997; Brown Gladden et al. 1997, Brown Gladden et al. 1999, de March and Maiers 2001, de March et al. 2002, de March and Postma 2003; Turgeon et al. 2009, Parent et al. 2023). ᐱᕕᔅᓴᐅᔪᑦ ᑕᐃᒃᑯᐊᓪᓗᐊᖅ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᑕᐃᒪᓐᓇᐃᓘᑦᑎᑕᐅᓕᒻᒪᑕ ᐊᐅᓚᑦᑎᕕᒋᔭᐅᔪᓕᒫᓂ ᑲᓇᓐᓇᑉᐸᓯᖓᓂ ᑲᓇᑕᐅᑉ ᐅᑭᐅᑦᑕᑦᑐᖓᓂ ᑕᑎᖃᓕᒻᒪᑕ ᑎᒥᙳᕈᑎᒥᑦ DNA (mtDNA) ᐃᓚᒌᑦᑐᓃᖓᑦᑐᓂᒃ (Parent et al. 2023; DFO 2025). ᐃᒪᓐᓇᐅᑎᓪᓗᒋᑦ ᐅᓄᓐᓂᖏᑕ ᐋᖅᑭᔅᓱᔅᓯᒪᓂᖓ
ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᑲᓇᓇᖓᓂ ᑲᓇᑕᐅᑉ ᖃᐅᔨᓇᓱᐊᑦᑕᐅᕙᓪᓕᐊᑎᓪᓗᒋᑦ ᐊᑐᓪᓗᑎᒃ ᑭᓱᕋᔭᐅᓂᖓᓂᒃ ᐱᓕᕆᒍᑎᖃᓪᓗᑎᒃ

ᑐᙵᕕᒋᓗᒍ ᑭᓱᕈᒃᓯᒪᔾᔪᑎᖓᑕ DNA (nDNA), ᑕᐅᕗᖓᒃᑲᓐᓂᖅ ᐃᓕᖅᑯᓯᖃᓕᑦᑎᓪᓗᒋᑦ ᐅᓄᓐᓂᖏᑕ ᐋᖅᑭᔅᓱᔅᓯᒪᓂᖏᑦ ᐊᒻᒪᓗ ᐱᕙᓪᓕᐋᓯᒪᓂᖏᑦ ᐊᑭᖏᑕ ᐊᒻᒪᓗ ᐱᕕᖃᓂᖓᓂ ᐊᑐᓕᓐᓂᖏᑦ ᑭᓱᕋᔭᐅᓂᖓᓄᑦ ᓴᓇᕐᕈᑏᑦ ᐋᖅᑭᒃᓱᑦᑕᐅᒋᐊᖃᒻᒪᑕ ᐊᒻᒪᓗ ᐆᑦᑐᕋᑦᑕᐅᓗᑎᒃ ᐊᑐᑦᑕᐅᒋᐋᓚᐅᖏᓐᓂᖏᓂ ᐊᐅᓚᑦᑎᒍᑎᒋᔭᐅᓂᐊᓂᖏᓄᑦ ᐊᑐᑦᑕᓂᐊᓪᓗᑎᒃ (Montana et al. 2024).

mtDNA ᑎᒥᖑᕈᑎ ᐃᓚᒌᑦᑐᓃᑦᑐᑦ ᑲᑎᓯᒪᓂᖏᑦ ᐅᖃᐅᓯᖃᑦᑎᐋᑦᑐᑦ ᐊᑐᓂ ᐅᓄᓐᓂᖏᓐᓂᒃ ᐊᑐᑦᑕᐅᓚᐅᒻᒪᑕ ᐃᒪᓐᓇᐅᓪᓗᒋᑦ “ᓇᓗᓇᐃᔅᓯᒍᑎ ᐅᓄᓐᓂᓕᐅᖃᑎᒌᑦᑐᓂᒃ” ᒥᔅᓴᐅᓴᑦᑕᐅᖁᓪᓗᒋᑦ ᐅᓄᓐᓂᖏᑕ ᕿᓚᓗᒐᑦᑕᐅᒍᓐᓇᕈᑎᒋᔭᖏᑦ ᐊᐅᓚᑦᑎᓂᖃᕕᒋᔭᐅᔪᓂ ᑕᐃᒃᑯᓇᓂ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᐊᓯᖏᓐᓃᙵᔅᓯᒪᔪᑦ ᐅᓄᓂᖃᑦᑐᓂᒃ ᑲᖐᒋᔭᐅᓕᒻᒪᑕ ᑲᑎᓯᒪᓱᕆᔭᐅᓕᑦᑐᑎᒃ, ᓲᕐᓗ, ᑕᒪᐅᓈᖃᑎᒌᑦᑎᓪᓗᒋᑦ ᑎᑭᕝᕕᒋᕙᑦᑕᖏᑎᒍ ᐊᖅᑯᑎᒋᓲᖏᑕ ᐃᖏᕐᕋᖃᑎᒌᕕᐅᓪᓗᑎᒃ ᐅᓄᓂᖃᑎᒌᖏᑦᑐᓄᑦ. ᐊᐅᓚᑦᑎᓂᒻᒧᑦ ᐊᑐᑦᑕᐅᒐᔭᓪᓗᑎᒃ, ᖃᐅᔨᓇᓱᐊᑦᑕᐅᓯᒪᔪᑦ ᐱᓕᕆᐊᕆᔭᐅᓂᖏᑦ ᐊᑐᑦᑕᐅᓱᑦ ᒥᔅᓴᐅᓴᔅᓯᒋᑎᒋᔭᐅᓪᓗᑎᒃ ᐅᓄᓐᓂᖏᓐᓂᒃ ᐊᑐᓂ ᓇᓕᐋᓂᖔᓂᑰᒪᖓᑕ ᐅᓄᓐᓂᓕᓐᓂᒃ ᐃᓚᓕᐅᑎᓪᓗᑎᒃ ᑲᑎᓯᒪᔪᓄᑦ

ᑯᐸᐃᒃ ᓄᓇᓕᖃᕐᕕᐊᓂ

ᑐᑭᓯᒋᒋᐊᕈᑏᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᓄᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ
ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ ᐊᒻᒪ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ

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ᐃᓚᓯᒪᓂᖃᓪᓗᑎᒃ ᐃᒻᒥᓂᔅᓱᑦᑐᓃᖓᔅᓯᒪᔪᓂᑦ ᐃᓘᓐᓇᓕᒫᖏᓐᓃᙵᑦᑐᓂᒃ ᐅᕝᔭᓗᓂᑦ ᓇᓕᐋᓐᓃᖓᔅᓯᒪᔪᓂᒃ ᐃᓚᓯᒪᓕᑦᑐᓂᒃ ᑕᒪᒃᑯᓇᖓᑦ ᓇᓕᐋᓂᖓᔅᓯᒪᓂᖃᓂᖏᓐᓂᒃ ᐅᓄᓐᓂᖏᓐᓃᙵᔅᓯᒪᔪᓂᒃ ᑎᒥᙳᓐᓂᖏᑕ ᑲᑎᓯᒪᓂᖏᓐᓂᒃ ᖃᐅᔨᓇᓱᐊᔅᓯᓂᒻᒥᒃ (GMA; Turgeon et al. 2009; Parent et al. 2023). ᐊᔾᔨᒋᖏᒻᒪᒍ ᐃᒻᒥᓂᔅᓱᑦᑐ ᐱᓕᕆᖁᔭᐅᓂᖏᓐᓄᑦ ᐱᓕᕆᒍᓰᑦ, GMA ᐃᓚᓕᐅᔾᔨᓲᖑᖏᒻᒪᑦ ᐊᑐᓂ ᐃᒻᒥᓂᔅᓴᑦᑐᓄᑦ ᑕᐃᑯᓄᖓ ᑲᑎᓯᒪᔪᓄᑦ ᖃᐅᔨᓴᒐᔅᓴᓕᐅᕕᒋᔭᐅᓯᒪᔪᓄᑦ ᐃᓚᒋᔭᐅᓕᑦᑎᓪᓗᓂᐅᓪᓗ ᓇᓪᓕᐋᓐᓃᙵᔅᓯᒪᔪᓄᑦ ᐅᓄᓂᓕᓃᖓᔅᓯᒪᕕᒋᔭᖏᓐᓂᒃ. ᐃᒪᓐᓇᐃᓗᖔᓱᖑᒪᑕᓕ, ᖃᐅᔨᒋᐋᑦᑐᓂᒋᑦ ᓇᓕᐋᓂᖔᔅᓯᒪᑐᐃᓐᓇᕆᐊᖃᓂᖏᓐᓂᒃ ᐊᑐᓂ ᐃᒻᒥᒃᑰᖓᔪᑦ ᖃᐅᔨᓴᒐᔅᓴᓕᐅᕕᐅᓯᒪᔪᑦ ᑐᕌᖓᒻᒪᖔᑕ ᐊᔾᔨᒋᖏᑕᖏᓐᓄᑦ ᖃᐅᔨᔭᐅᓇᓱᐋᑦᑐᓄᑦ ᐅᓄᓐᓂᖃᑎᒋᔭᐅᖏᑦᑐᓄᑦ. ᑲᑎᓯᒪᓂᖏᑦ ᖃᐅᔨᓴᒐᔅᓴᓕᐅᕝᕕᐅᓯᒪᔪᑦ ᐃᓗᐋᓂᑦᑐᑦ ᒥᔅᓴᐅᓴᑦᑕᐅᓕᓲᖑᒻᒪᑕ ᑐᑭᓯᒍᑎᒋᔭᐅᒐᓱᐋᓕᑦᑐᑎᒃ ᑕᒪᒃᑯᐊ ᐃᒪᓐᓇᐃᓕᖓᑐᐃᓐᓇᕆᐊᖃᓂᖏᓐᓂᒃ ᑖᒃᑯᓇᓂ ᐃᒻᒥᒃᑰᖓᐅᓂᖏᓐᓂᒃ. ᑖᓐᓇ ᐱᓕᕆᓂᖅ ᐊᑑᑎᖃᓂᔅᓴᐅᓲᖑᒻᒪᑦ ᐊᒻᒪᓗ ᓇᓚᐅᑦᑎᓂᔅᓴᐅᓲᖑᓪᓗᓂ ᐊᑐᑦᑕᐅᓂᖏᓐᓂᓪᓕ ᐃᒻᒥᒃᑰᖓᔪᓂᒃ ᐱᓕᕆᐋᖃᕋᓱᐋᓂᐅᔪᓂᒃ ᑕᐃᓐᓇ ᐱᖃᑖ ᑲᑦᑐᑎᐅᑎᓯᒪᒑᖓᑦ ᓇᓗᓈᕿᔪᓄᑦ, ᑐᑭᓕᐅᑎᓗᒍ ᑎᒥᙳᕈᑎ ᐃᓚᒌᑦᑐᓂᑦᑐᑦ ᐱᑕᖃᕌᖓᑕ ᐊᔾᔨᒌᖏᑦᑐᓂ ᐅᓄᓂᖃᕕᒋᔭᐅᔪᓂᑦ (Pella and Masuda 2005; Manel et al. 2005; Turgeon et al. 2009). ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᐅᓄᓐᓂᖏᑕ ᐋᖅᑭᔅᓱᔅᓯᒪᓂᖏᑦ ᑐᑭᓯᓇᕈᑎᐅᒻᒪᑕ ᑖᔅᓱᒧᖓ, ᐱᔾᔪᑎᒋᓪᓗᒍ ᖃᐅᔨᓴᒐᔅᓴᓕᐊᕆᔭᐅᓯᒪᔪᑦ ᑕᐃᒃᑯᓇᙶᑦᑐᑦ ᓇᓗᓇᖏᑦᑎᐊᑦᑐᓂᒃ ᐊᐅᔭᔅᓯᐅᕆᐊᕕᒋᓲᖏᓐᓃᑦᑐᑦ ᐃᓗᑦᑎᕈᑎᖏᑎᒍ ᐊᔾᔨᒌᖏᓐᓂᔅᓯᐅᑦᑕᐅᓕᓲᖑᒻᒪᑕ, ᐱᑕᖃᒻᒪᑦ ᖃᔅᓰᓐᓇᐅᒐᓗᐊᓂᑦ ᑎᒥᙳᕈᑎᑦ ᐃᓚᒌᑦᑐᓃᖓᔅᓯᒪᔪᓂᒃ, ᑕᐃᒪᓐᓇᐅᓂᖓᓄᑦ ᐃᒻᒥᓂᔅᓱᑦᑐᑦ ᐱᓕᕆᐊᕆᔭᐅᔪᑦ ᓇᓗᓇᐃᑦᑕᐅᑦᑎᐋᑦᑐᑯᓘᒍᓐᓇᖏᒻᒪᑕ (Turgeon et al. 2009; Doniol-Valcroze et al. 2016; Mosnier et al. 2017; Parent et al. 2025).

ᐃᓱᒪᓕᐅᕈᑎᒋᓂᐊᓪᓗᒍ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᐃᑲᔪᕈᑎᒋᓯᒪᔭᖓ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓂᒃ ᕿᓚᓗᒐᑦᑕᐅᔪᓂᒃ ᓯᓚᑖᓂᑦ ᐊᐅᔭᒃᑯᑦ ᐃᓄᒃᔪᐊᒻᒥ, ᓇᓪᓕᕉᑎᓂᒻᒥ ᑕᐃᔅᓱᒪᓂᓪᓗᐊᖅ ᑎᒥᙳᓂᐅᑉ ᑲᑎᓯᒪᓂᖓᓂ ᖃᑯᑦᑕᑦ
ᕿᓚᓗᒐᐃᑦ ᖃᐅᔨᓴᒐᔅᓴᓕᐅᕕᐅᓯᒪᓂᖏᑦ ᐃᓄᒃᔪᐊᒻᒥ ᐃᓱᒪᔅᓱᔾᓗᑎᒃ ᒪᑐᔭᐅᓯᒪᓂᖓ ᖃᐅᔨᓴᑦᑕᐅᓚᐅᒻᒪᑦ. ᑕᐃᒪᙵᓂ

ᐊᑑᑎᖃᑦᑎᐊᓕᑦᑎᑕᐅᓚᐅᑦᑎᓪᓗᒋᑦ ᓄᓇᕕᐅᑉ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᑦ ᖃᐅᔨᓴᒐᔅᓴᓕᐅᕕᐅᑎᓪᓗᒋᑦ 1980−ᒥ, 35 ᖃᐅᔨᓴᒐᔅᓴᐃᑦ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓐᓂᒃ ᕿᓚᓗᒐᑦᑕᐅᔪᓂᒃ ᑕᒫᙵᑦ ᑕᐃᒫᓪᓗᐊᖃᑎᒋᔭᐅᓪᓗᑎᒃ ᐃᓄᒃᔪᐊᖅ ᐃᓱᒪᔅᓱᓪᓗᑎᒃ ᒪᑐᔭᐅᓯᒪᕕᒋᔭᖓᓂᑦ ᓄᐋᑦᑎᕕᒋᔭᐅᓚᐅᒻᒪᑕ. ᑕᒪᒃᑯᓇᙵᑦ, 20 ᓄᐋᑕᐅᓚᐅᒻᒪᑕ ᑕᐃᔅᓱᒪᓂ 11 ᐅᐱᕐᖔᒃᖁᑦ ᐊᖑᓇᓱᐋᑦᑐᖃᑦᑎᓪᓗᒍ (ᓲᕐᓗ, ᓯᕗᓂᖓᓂ ᐃᓱᒪᔅᓱᓪᓗᑎᒃ ᒪᑐᔭᐅᓯᒪᑎᓪᓗᒍ ᐱᒋᐊᓪᓗᓂ ᔪᓚᐃ 15−ᒥᑦ, ᐊᒻᒪᓗ 12−ᒥ ᓄᐋᑕᐅᓚᐅᒻᒪᑕ ᑕᐃᔅᓱᒪᓂ ᐱᖓᓲᔪᑦᑐᑦ ᐊᑕᐅᓯᓪᓗ ᐅᑭᐊᔅᓵᖓᓂ ᐊᖑᓇᓱᐋᑦᑐᖃᑦᑎᓪᓗᒍ (ᓲᕐᓗ ᑭᖑᓂᖓᒍᑦ ᐃᓱᒪᔅᓱᓪᓗᑎᒃ ᒪᑐᔭᐅᓯᒪᓚᐅᑦᑎᓪᓗᒍ ᐃᓱᓕᓐᓂᖓᓂ ᓯᑎᐱᕆ 30; ᑎᑎᕋᖅᓯᒪᔪᑦ 3). ᒥᔅᓴᐅᓴᒐᓱᐋᓪᓗᒋᒃ ᓇᒦᓐᓂᖓ ᐊᒻᒪᓗ ᓇᓪᓕᕉᑎᓂᖓᑕ ᑕᐃᓐᓇᓗᐊᖑᓂᖓ ᑲᑎᓯᒪᓂᖓ ᐊᖑᓇᓱᐋᓂᐅᑉ ᐊᑐᑦᑐᐅᓗᓂ GMA, ᒥᑭᓛᖅ ᖃᐅᔨᓴᒐᔅᓴᐅᑉ ᐊᖏᓂᖏᑦ 10 ᐃᒻᒥᒃᑰᖓᔪᑦ ᐃᓱᒪᒋᔭᐅᒻᒪᑕ ᐱᔭᐅᔭᕆᐋᖃᓚᕆᑦᑐᕆᔭᐅᓪᓗᑎᒃ (Parent et al. 2023). ᑕᐃᒪᐃᒻᒪᑦ, ᒫᓐᓇᕋᑕᖅ ᖃᐅᔨᓴᒐᔅᓴᐃᑦ ᐱᔭᐅᓚᐅᑦᑐᑦ ᐃᓄᒃᔪᐋᑉ ᐊᖑᓇᓱᑦᑎᖏᓐᓂᒃ ᐊᓯᕈᑦᑕᐅᓚᐅᑦᑎᓪᓗᒍ ᐊᐅᓚᑦᑎᓂᖃᕕᐅᔫᑉ ᑭᒡᓕᖃᕕᒋᔭᖓ ᒫᓐᓇ ᐱᕕᖃᑦᑎᑦᑎᓕᒻᒪᑦ ᐊᐅᓚᑦᑎᓂᐋᓕᓪᓗᓂ GMA ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓐᓂᒃ ᓄᐋᑕᐅᓯᒪᔪᓂᒃ ᓯᓚᑖᓂᑦ ᐊᐅᔭᒃᑯᑦ ᐃᓄᒃᔪᐋᒻᒥ ᐃᓱᒪᔅᓱᓪᓗᑎᒃ ᒪᑐᔭᐅᓯᒪᓂᖓᓂ.

ᑎᑎᕋᖅᓯᒪᔪᑦ 3. ᓇᓪᓕᕉᑎᓂᒻᒥ ᓇᓕᐋᓄᐋᑦᑎᑕᐅᓂᖏᑦ ᑎᒥᙳᕈᑎᒥᒃ ᖃᐅᔨᓴᒐᔅᓴᓕᐅᓃᑦ ᓄᐊᑕᐅᔪᑦ ᐃᓄᒃᔪᐊᕐᒥᑦ ᐃᓱᒪᔅᓱᓪᓗᑎᒃ ᒪᑐᔭᐅᓯᒪᕕᒋᔭᖓᓂ ᑕᐃᒪᖓᓂᑦ ᐊᑑᑎᖃᑦᑎᐊᓕᑦᑎᑕᐅᓚᐅᓂᖓᓂᒃ ᓄᓇᕕᐅᑉ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᓐᓂᒃ ᖃᐅᔨᓴᒐᔅᓴᓕᐅᓂᒻᒧᑦ ᐱᓕᕆᔾᔪᑎᓂᒃ 1980−ᖏᓐᓂ.

ᐅᓪᓗᖓ

ᕿᓚᓗᒐᑦᑕᐅᕕᖏᑕ ᓇᓪᓕᕈᑎᓂᖅ ᐅᓄᓐᓂᖏᑦ ᖃᐅᔨᓴᒐᔅᓴᐃᑦ

ᓄᐋᑕᐅᔪᑦ
2009-06-22 ᐅᐱᕐᖔᒃ 1
2010-07-03 ᐅᐱᕐᖔᒃ 1
2010-07-04 ᐅᐱᕐᖔᒃ 1
2017-07-02 ᐅᐱᕐᖔᒃ 2
2018-06-23 ᐅᐱᕐᖔᒃ 1
2022-05-30 ᐅᐱᕐᖔᒃ 2
2023-05-27 ᐅᐱᕐᖔᒃ 1
2024-05-28 ᐅᐱᕐᖔᒃ 2
2025-06-25 ᐅᐱᕐᖔᒃ 2
2025-06-26 ᐅᐱᕐᖔᒃ 2
2025-06-29 ᐅᐱᕐᖔᒃ 5
2007-08-11 ᐊᐅᔭᖓᓂ 1

ᑯᐸᐃᒃ ᓄᓇᓕᖃᕐᕕᐊᓂ

ᑐᑭᓯᒋᒋᐊᕈᑏᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᓄᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ ᐊᒻᒪ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ

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ᐅᓪᓗᖓ

ᕿᓚᓗᒐᑦᑕᐅᕕᖏᑕ ᓇᓪᓕᕈᑎᓂᖅ ᐅᓄᓐᓂᖏᑦ ᖃᐅᔨᓴᒐᔅᓴᐃᑦ

ᓄᐋᑕᐅᔪᑦ
2024-08-15 ᐊᐅᔭᖓᓂ 1
2024-08-19 ᐊᐅᔭᖓᓂ 1
2012-10-25 ᐅᑭᐊᔅᓵᖅ 1
2023-10-13 ᐅᑭᐊᔅᓵᖅ 1
2024-10-14 ᐅᑭᐊᔅᓵᖅ 5
2024-10-28 ᐅᑭᐊᔅᓵᖅ 2
2025-10-28 ᐅᑭᐊᔅᓵᖅ 1
2025-10-29 ᐅᑭᐊᔅᓵᖅ 1
2025-11-14 ᐅᑭᐊᔅᓵᖅ 1

ᑎᒥᙳᓐᓂᖏᑕ ᑲᑎᓯᒪᓂᖏᓐᓂᒃ ᖃᐅᔨᓇᓱᐊᔅᓯᓂᖅ ᐱᓕᕆᐊᕆᔭᐅᓚᐅᒻᒪᑦ ᐅᐱᕐᖔᖓᓂ ᐊᒻᒪᓗ ᐅᑭᐋᔅᓵᒥ ᖃᐅᔨᓴᒐᔅᓴᐃᑦ ᐃᒻᒥᒃᑰᖓᑎᑕᐅᓪᓗᑎᒃ ᐃᓱᒪᓕᐅᕈᑎᒋᔭᐅᒐᓱᐋᓪᓗᑎᒃ ᓇᓪᓕᕉᑎᓂᒻᒥ ᑕᐃᒃᑯᐋᓪᓗᐊᖅ ᐱᕕᔅᓴᐅᔪᑦ ᑲᑎᓯᒪᓂᖏᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᓂ. ᐅᑭᐊᔅᓵᖑᑎᓪᓗᒍ, 61.8% (95% CI: 26.8-88.0%) ᑭᓚᓗᒐᑦᑕᐅᔪᓂᒃ ᑕᐅᕙᖔᔅᓯᒪᓱᕆᔭᐅᓚᐅᒻᒪᑕ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂᑦ) ᐱᕕᔅᓴᐅᔪᓂᒃ, ᐃᒪᓐᓇᐅᑎᓪᓗᒋᑦ 21.1% (95% CI: 1.1-57.4%), 10.9% (95% CI: 2.3-24.9%) ᐊᒻᒪᓗ 7.6% (95% CI: 0.1-34.1%) ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓐᓃᙵᓯᒪᓱᕆᔭᐅᓚᐅᒻᒪᑕ ᑎᓄᔾᔭᕐᕕᒃ (CSB), ᐱᖓᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂᑦ (WHB) ᐊᒻᒪᓗ ᓯᕿᓂᕐᒥᐅᓂᑦ (JAM) ᐅᓄᓐᓂᖏᓐᓂᒃ, ᐃᒻᒥᒃᑰᖓᓗᑎᒃ (ᑎᑎᕋᖅᓯᒪᔪᑦ 4). ᑎᓄᔾᔭᕐᕕᐅᑉ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᐅᓄᓐᓂᖏᑦ ᓈᓴᑦᑕᐅᓯᒪᔪᑦ 15 ᐃᒻᒥᒃᑰᖓᔪᑦ ᑎᒥᖑᕈᑎᑦ ᐃᓚᒌᑦᑐᓃᑦᑐᑦ ᑕᐃᒃᑯᐊ ᓇᓗᓇᐃᔅᓯᒍᓐᓇᓂᖏᑦ ᐃᒻᒥᓂᔅᓱᑦᑐᓂᒃ ᖃᐅᔨᓴᒐᔅᓴᓂᒃ ᑖᔅᓱᒧᖓ ᐊᐅᔭᔅᓯᐅᕕᒋᔭᐅᕙᒃᑐᒥ ᐊᕕᔅᓯᒪᓂᒻᒥᒃ. 207 ᖃᐅᔨᓴᒐᔅᓴᓂᒃ ᓄᐊᑦᑎᕕᒋᔭᐅᓯᒪᔪᑦ ᑎᓄᔾᔭᕐᕕᒻᒥᒃ ᐊᑯᓐᓂᖏᓐᓂ 1982-2021, 35% ᐅᖃᐅᑎᒋᔭᐅᓚᐅᑉᐳᑦ ᑎᒥᖑᕈᑎᖃᓂᐸᑦᑕᐅᓗᑎᒃ ᐃᓚᒌᑦᑐᓃᑦᑐᓂᑦ ᐃᒻᒥᒃᑰᖓᔪᓂᒃ ᑕᒫᓂ ᐊᕕᔅᓯᒪᓂᒻᒥ (Watt et al. 2023). ᐊᔾᔨᒋᐹᓗᓪᓗᓂᒋᑦ, ᐊᑯᓐᓂᖏᓐᓂ 2022-2025, 39.6% ᑖᒃᑯᐊ 53 ᖃᐅᔨᓴᒐᔅᓴᐃᑦ ᓄᐋᑕᐅᓯᒪᔪᑦ ᑎᓄᔾᔭᕐᕕᒃᒻᒥᒃ ᑎᒥᖑᕈᑎᖏᑦ ᐃᓚᒌᑦᑐᓃᖔᔅᓯᒪᓚᐅᒻᒪᑕ ᐃᒻᒥᒃᑰᖓᓪᓗᑎᒃ ᑎᓄᔾᔭᕐᕕᐅᑉ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᓐᓅᖓᓪᓗᑎᒃ (ᐃᒻᒥᒃᑰᖓᓂᖅ 1).

ᑕᐃᒪᐃᒃᑲᓗᐊᑦᑎᓪᓗᒍ, ᐱᑕᖃᓚᐅᖏᒻᒪᑕ ᖃᐅᔨᓴᒐᔅᓴᐃᑦ ᓄᐋᑕᐅᓯᒪᔪᑦ ᐃᓄᒃᔪᐊᒻᒥᒃ ᐃᓱᒪᔅᓱᓪᓗᑎᒃ ᒪᑐᔭᐅᓯᒪᓂᖓᓂ ᐅᑭᐊᒃᓵᒃᑯᑦ ᐃᒻᒥᑰᖓᔪᓂᒃ ᑎᒥᖑᕈᑎᑦ ᐃᓚᒌᑦᑐᓃᖓᔅᓯᒪᔪᓂᒃ ᑕᐅᕙᖓᑦ ᑎᓄᔾᔭᕐᕕᐅᑉ ᖃᑯᖅᑕᑦ ᕿᓚᓗᒐᖏᓐᓃᖓᔅᓯᒪᔪᓂᒃ ᐅᓄᓐᓂᖏᓐᓂᒃ,
ᐊᒻᒪᓗ ᑕᐃᒪᐃᒻᒪᑦ ᑭᒡᒐᑦᑐᐃᒍᓐᓇᒻᒪᑕ ᑕᑯᔭᒐᓐᓂᒃ ᐅᓄᓐᓂᖏᓐᓂᒃ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᐊᐅᔭᔅᓯᐅᑦᑐᓂᒃ ᑕᐅᕙᓂ ᑎᓄᔾᔭᕝᕕᒻᒥ ᑎᒥᙳᔅᓯᒪᓂᖃᓪᓗᑎᒃ ᓇᓗᓇᐃᑯᑕᓂᑦ ᐊᔾᔨᐸᓗᖏᓐᓂᒃ WHB (ᐱᖓᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᑕ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ (Watt et al. 2023). ᐅᐱᕐᖔᖑᑎᓪᓗᒍ, ᐅᓄᓐᓂᖏᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᑕᐅᕙᖔᔅᓯᒪᓚᐅᒪᑕ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂᑦ) ᐱᕕᔅᓴᐅᔪᓂᒃ ᑕᐃᑯᐊᓗ 90.5% (95% CI: 70.4-98.7%) ᓇᓗᓇᐃᑦᑕᐅᓕᑦᑎᓪᓗᒋᑦ ᐅᐱᕐᖔᒃᑯᑦ ᑕᐃᒪᓐᓇᐅᒻᒪᑕ ᑕᐃᑲᓂ ᕿᑐᙵᖃᑦᑎᑦ Parent et al. (2023; ᓲᕐᓗ, ᕕᕝᕗᐊᕆ 1 –ᔫᓂ 30; ᑎᑎᕋᖅᓯᒪᔪᑦ 4). ᐊᔾᔨᒋᐸᓗᓪᓗᓂᐅᒃ, ᑕᐃᒪᓕ ᐅᐱᕐᖔᖓ ᓇᓗᓇᐃᑦᑕᐅᑉᐸᑦ ᐊᑐᓐᓂᖓᓂ ᐊᕐᕌᒍ ᓯᕗᓂᖓᓂ ᐃᓱᒪᔅᓲᑎᒋᔭᐅᓗᓂ ᒪᑐᔭᐅᓯᒪᓂᖓ (ᓲᕐᓗ, ᕕᕝᕗᐊᕆ 1 – ᔪᓚᐃ 15), 91.2% (95% CI: 78.9-98.1%) ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᑕᐅᕙᖔᓂᑰᓱᕆᔭᐅᕗᑦ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂᑦ) ᐱᕕᔅᓴᐅᔪᓂᑦ (ᑎᑎᕋᖅᓯᒪᔪᑦ 4). ᓇᓗᓈᕿᓂᖏᑦ ᑕᒪᒃᑯᐊ ᐱᕕᔅᓴᐅᔪᑦ ᑲᑎᓯᒪᓂᖏᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᓂ ᐊᖏᔪᐋᓗᒻᒪᑕ ᑕᐃᒪᐃᑎᑕᐅᓪᓗᑎᒃ ᖃᔅᓰᓐᓇᐅᓂᖏᓄᑦ ᖃᐅᔨᓴᒐᔅᓴᓕᐊᕆᔭᐅᓯᒪᔪᑦ ᐊᒻᒪᓗ ᐊᖑᓇᓱᐊᑦᑕᑎᓪᓗᒋᑦ ᐊᑐᑦᑕᐅᕙᑦᑐᑦ ᒥᔅᓴᐅᓴᔅᓯᒍᑎᒋᔭᐅᑎᓪᓗᒋᑦ ᐅᓄᓂᖏᓐᓂᒃ. ᑕᐃᒪᐃᒃᑲᓗᐊᑦᑎᓪᓗᒍ, ᑕᒪᒃᑯᐊ ᑎᒥᙳᓂᖏᓐᓂᒃ ᖃᐅᔨᓴᔅᓯᔩᑦ ᓇᓗᓇᐃᔅᓯᓚᐅᒻᒪᑕ ᑕᒪᒃᑯᐊ ᓴᖅᐱᓕᑦ ᕿᓚᓗᒐᑦᑕᐅᕙᑦᑐᑦ ᐃᓄᒃᔪᐊᒻᒥ ᐃᓱᒪᔅᓱᓪᓗᑎᒃ ᒪᑐᔭᐅᓯᒪᕕᒋᔭᖓᓂ ᐱᓪᓗᐋᑕᐅᓗᐊᙳᐋᒻᒪᑕ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᑦ. ᐅᕙᓂ ᒫᓐᓇ ᐊᐅᓚᑦᑎᓂᒻᒧᑦ ᐸᕐᓇᒍᑎᒥ, BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᐱᒍᒥᓇᓐᓂᖏᑦ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᑕᒫᓂ ᐅᐱᕐᖔᖑᑎᓪᓗᒍ ᐊᒻᒪᓗ ᐅᑭᐊᔅᓵᒃᑯᑦ ᒥᔅᓴᐅᓴᑦᑕᐅᓯᒪᒻᒪᑕ ᐊᑐᓪᓗᑎᒃ ᐅᓄᓐᓂᖏᓐᓂᒃ ᒥᔅᓴᐅᓴᔅᓯᒍᑎᑦ ᐅᐊᓐᓇᖓᑕ ᑲᓇᓐᓇᖓ ᑕᓯᐅᔭᖅᔪᐊᓂ (NEHB) ᐱᔾᔪᑎᒋᓪᓗᒍ ᓇᓪᓕᕉᑎᓂᒻᒥ ᐱᕕᔅᓴᐅᔪᑦ ᑲᑎᑕᐅᓯᒪᓂᖏᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᐱᔭᔅᓴᐅᔪᖃᓚᐅᖏᒻᒪᑦ ᐃᓄᒃᔪᐊᑉ ᐃᓱᒪᔅᓱᓪᓗᑎᒃ ᒪᑐᔭᐅᓯᒪᓂᖓᓂᒃ. ᒫᓐᓇᕋᑖᕐᓂᓴᐅᓛᖅ ᒥᒃᓴᐅᓴᒃᓯᓂᒃ ᐅᑯᓂᖓ NEHB (ᐅᐊᓐᓇᖓᑕ ᑲᓇᓐᓇᖓ ᑕᓯᐅᔭᖅᔪᐊᓂ) ᐃᓚᖏᑦ ᐅᑯᐊ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ) ᐊᖑᓇᓱᑦᑕᐅᓂᖏᑦ ᐃᒪᓐᓇᑎᒋᐅᕗᑦ 52% (95% CI: 38-65%) ᐅᑭᐊᔅᓵᒃᑯᓪᓗ 22% (95% CI: 5-70%) ᐅᐱᕐᖔᒃᑯᑦ (Van de Walle et al. 2025). ᒫᓐᓇ ᖃᐅᔨᓴᑦᑕᐅᓯᒪᔪᑦ ᓇᓗᓇᐃᔅᓯᒻᒪᑕ ᑖᒃᑯᐊ ᓇᓪᓕᕉᑎᓂᒃᑯᑦ ᑕᐃᒃᑯᐊᓪᓗᐊᖅ ᐃᓚᖏᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᑕᒫᙵᔅᓯᒪᒻᒪᑕ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂᑦ) ᐱᕕᔅᓴᔪᓂᒃ ᐃᓄᒃᔪᐊᒻᒥ ᐃᓱᒪᔅᓱᓪᓗᑎᒃ ᒪᑐᔭᐅᓯᒪᓂᖓᓂ ᐊᔅᓱᑲᓪᓛᓗᒃ ᐅᓄᓐᓂᔅᓴᐅᒻᒪᑕ ᑕᐃᒃᑯᓇᙵᓪᓕ ᒥᔅᓴᐅᓴᒃᑕᐅᓯᒪᔪᓂᒃ NEHB (ᐅᐊᓐᓇᖓᑕ ᑲᓇᓐᓇᖓ ᑕᓯᐅᔭᖅᔪᐊᓂᑦ). ᑖᓐᓇ

ᑯᐸᐃᒃ ᓄᓇᓕᖃᕐᕕᐊᓂ

ᑐᑭᓯᒋᒋᐊᕈᑏᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᓄᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ
ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ ᐊᒻᒪ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ

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ᓴᖅᑭᓯᒪᔪᖅ ᒪᓕᑦᑎᐊᔅᓯᒪᒻᒪᑦ ᖃᐅᔨᒪᓇᓂᖓᓂᒃ ᖃᖓᑕᑎᑕᐅᔪᒃᑯᑦ ᖃᐅᔨᓇᓱᐋᕈᑎᒋᔭᐅᔪᓂᒃ, GPS (ᓇᒦᒻᒪᖓᑉᐱᑦ ᖃᐅᔨᒪᔾᔪᑎ) ᖃᐅᔨᒪᓇᖅᓯᑎᑦᑎᒍᑎᖓᒍᑦ ᐊᒻᒪᓗ ᓄᓇᓕᒻᒥᐅᑕᓐᓄᑦ ᑕᑯᔭᐅᔪᖃᓐᓂᑉᐸᑦ ᖃᐅᔨᒪᑎᑦᑎᔾᔪᑎᓂᒃ, ᐃᒪᓐᓇᐅᓂᕋᐃᓪᓗᓂᓗ ᐃᓄᒃᔪᐊᑉᐸᓯᑦᑐᑦ ᒪᓕᑦᑎᐊᔅᓯᒪᓂᕋᑦᑕᐅᓪᓗᑎᒃ ᐅᐋᓇᖓᓂᑐᖅ ᐃᓚᒃᑲᓂᖓ ᐊᐅᔭᔅᓯᐅᕕᒋᔭᐅᕙᑦᑐᑉ ᓇᓕᐊᓄᐋᑦᑎᑦᑎᓂᖏᑦ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᐱᕕᔅᓴᐅᔪᓂᑦ (DFO 2024). ᐃᓚᒋᔭᐅᒃᑲᓐᓂᓪᓗᓂ, GPS (ᓇᒦᒻᒪᖓᑉᐱᑦ ᖃᐅᔨᒪᔾᔪᑎᐅᑉ) ᖃᐅᔨᒪᓇᖅᓯᑎᑦᑎᒍᑎᖓᒍᑦ ᖃᐅᔨᒪᔾᔪᑎ ᐃᒪᓐᓇᐅᓂᕋᐃᒻᒪᑦ WHB (ᐱᖓᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᐊᑐᓲᖑᓂᖏᓐᓂᒃ ᓇᓕᐋᒃᑰᖓᓕᓪᓗᑎᒃ ᓇᓕᐋᓐᓄᐋᑦᑎᓪᓗᒋᑦ ᐃᖏᕐᕋᓪᓗᑎᒃ ᑕᐅᕗᖔᓪᓗᑎᒃ ᐊᒻᒪᓗ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓃᙶᓕᑦᑎᓪᓗᒋᑦ ᐊᒻᒪᓗ ᐊᑐᐋᔅᓰᓐᓈᓗᓲᖑᓇᑎᒃ ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐋᑕ ᓯᒡᔭᖓᓂᒃ (DFO 2024).

ᑐᙵᕕᒋᓗᒋᑦ ᐱᕕᔅᓴᐅᔪᑦ ᑲᑎᓯᒪᓂᖏᑕ ᐃᓚᖏᑦ ᓴᖅᑭᑕᐅᓯᒪᒻᒪᑕ ᑎᑎᕋᖅᓯᒪᓂᖓᓂ 4−ᒥ, 11−ᒥ ᐊᒻᒪᓗ 14−ᒥ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᖓᖏᓐᓂ ᒥᔅᓴᐅᓴᑦᑕᐅᓯᒪᓪᓗᑎᒃ ᕿᓚᓗᒐᑦᑕᐅᔪᒥᓂᐅᓱᕆᔭᐅᓪᓗᑎᒃ ᐃᓄᒃᔪᐋᒻᒥ ᐃᓱᒪᔅᓱᓪᓗᑎᒃ ᒪᑐᔭᐅᓯᒪᓂᖓᓂ 2024−ᒥ ᐊᒻᒪᓗ 2025−ᒥ, ᐃᒻᒥᒃᑰᖓᓗᑎᒃ. ᑕᒪᒃᑯᐊ ᐃᓚᒃᑲᓂᖏᑦ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᐃᓱᒪᒋᔭᐅᖃᓯᐅᑎᒋᐋᖃᒻᒪᑕ, ᐃᓱᒪᒋᓗᒋᑦ ᕿᓚᓗᒐᑦᑕᐅᖃᑦᑕᓂᖏᑕ ᐅᓄᓐᓂᖏᑦ ᐱᓕᕆᒍᑎᒋᔭᐅᒍᓐᓇᑦᑎᐊᓂᖏᓄᑦ 50%-ᖏᑕ ᐊᒻᒪᓗ 95%-ᖏᑕ ᐃᒪᓇᐅᒍᓐᓇᑐᐃᓐᓇᕆᐊᖃᓂᖏᓄᑦ ᑖᒃᑯᐊ ᐱᕕᐅᒍᓐᓇᑦᑐᑦ ᓱᕐᕌᒃᐸᓪᓕᐋᒍᓐᓃᓪᓗᑎᒃ ᑕᒫᙵᑦ 2025−ᖑᑎᓪᓗᒍ ᐅᓄᓐᓂᕆᓚᐅᑦᑕᖏᓐᓂᒃ, ᐅᓄᙱᓛᖑᓪᓗᑎᒃ ᐅᓄᓂᖏᑦ ᐱᕕᖃᓂᑦ ᑭᖑᓕᕇᑦᑐᓂ, ᑕᒪᒃᑯᓇᓂ ᐃᑉᐱᒋᔭᐅᑦᑎᐊᓪᓗᑎᒃ ᒥᔅᓴᐅᓴᑦᑕᐅᓂᖏᓐᓂ ᑎᑭᐅᒪᓗᑎᒃ 51−ᓄᑦ ᐊᒻᒪᓗ 35−ᓄᑦ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓐᓄᑦ ᐃᓘᓐᓇᓕᒫᖏᓐᓂ ᐱᕕᔅᓴᐅᔪᓄᑦ ᑎᑭᐅᒪᔭᐅᔪᓂᒃ (Van de Walle et al. 2025).

ᑯᐸᐃᒃ ᓄᓇᓕᖃᕐᕕᐊᓂ

ᑐᑭᓯᒋᒋᐊᕈᑏᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᓄᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ
ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ ᐊᒻᒪ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ

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ᑎᑎᕋᖅᓯᒪᔪᑦ 4. ᑎᒥᙳᓐᓂᖓᑕ ᑲᑎᓯᒪᓂᖏᓐᓂᒃ ᖃᐅᔨᓇᓱᐊᔅᓯᔨ ᐊᑐᓪᓗᓂ ᑎᒥᖑᕈᑎᑦ ᐃᓚᒌᑦᑐᓃᑦᑐᓂᒃ ᐊᒻᒪᓗ ᓄᑖᓂᒃ ᓇᓗᓇᐅᔅᓯᒍᑎᓂᒃ ᑲᑎᑕᐅᓯᒪᔪᓂᒃ ᓇᓗᓇᐃᔭᑦᑕᐅᔪᓂᒃ ᐅᑯᓇᓂ ᕿᑐᙵᖃᑎ Parent et al. (2023) ᖃᑯᑦᑕᑦ ᕿᓚᓗᖓᓐᓂᒃ ᕿᓚᓗᒐᑦᑕᐅᔪᓂᒃ ᐃᓄᔾᔪᐊᒻᒥ ᐃᓱᒪᔅᓲᑎᒋᔭᐅᓗᓂ ᒪᑐᔭᐅᓯᒪᔪᒥ. Ns: ᐅᓄᓂᖏᑦ ᐃᒻᒥᒃᑰᖓᔪᑦ ᖃᐅᔨᓴᒐᔅᓴᐃᑦ; Nv: ᐅᓄᓐᓂᖏᑦ ᐊᔾᔨᒋᙱᑕᖏᑦ ᐊᖑᓇᓱᐊᑦᑕᐅᕕᖏᑕ ᐅᓪᓗᖏᑦ (ᖃᓄᐄᓗᕕᒋᔭᐅᔪᑦ); P: ᐃᓚᖏᑦ ᐱᓕᕆᐊᕆᔭᐅᖁᔭᐅᔪᖅ; WHB: ᐱᖓᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ, BEL-EHB: ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ, JAM: ᓯᕿᓂᕐᒥᐅᑦ, CSB: ᑎᓄᔾᔭᕐᕕᒃ, CI: ᖁᓚᓐᓇᖏᓐᓂᖏᑕ ᐊᑯᓐᓂᖓᓂ ᑐᙵᕕ ᐊᔾᔨᒌᖏᑦᑐᓂ ᐊᖑᓇᓱᐊᓂᐅᔪᓂᒃ ᖃᓄᐃᓘᓂᐅᔪᓂᒃ; CV: ᐅᓄᓂᕆᔭᐅᖏᓐᓇᕈᓐᓇᑦᑐᖅ ᐊᔾᔨᒌᒍᓐᓃᖃᑦᑕᓂᖏᓐᓂᒃ ᑐᙵᕕᖃᓪᓗᓂ ᐃᒻᒥᒃᑰᖓᔪᓂᒃ ᖃᐅᔨᓴᒐᔅᓴᓕᐊᕆᔭᐅᓯᒪᔪᓂᒃ (CVs)/ᐊᖑᓇᓱᐊᓂᒻᒥ ᖃᓄᐃᓘᕆᑎᒋᔭᐅᔪᓂ (CVv).

ᓇᓪᓕᕈᑎᓂᖅ Ns/Nv WHB ᐅᓄᓐᓂᖏᑦ (%) BEL-EHB ᐱᕕᔅᓴᐅᔪᑦ (%) JAM ᐅᓄᓐᓂᖏᑦ (%) CSB ᐅᓄᓐᓂᖏᑦ (%)

P 95% CI CV P 95% CI CV P 95% CI CV P 95% CI CV
ᐊᑯᓂᐅᓂᔅᓴᐅᓕᑦᑎᑕᐅᓯᒪᔪᖅ
ᐅᐱᕐᖔᒃ*
(ᕕᕝᕗᐊᕆ 1 – ᔪᓚᐃ 15)

20/11 3.5 0.4-10.6 72.7% 91.2 78.0-98.1 5.8% 2.9 0.6-7.6 57.8% 2.4 0.6-5.9 52.6%

ᐅᐱᕐᖔᒃ**

(ᕕᕝᕗᐊᕆ 1 –ᔫᓂ 30) 16/8 3.0 0.3-10.0 73.4% 90.5 70.4-98.7 8.5% 4.1 0.3-15.4 81.6% 2.4 0.7-6.0 49.7%
ᐅᑭᐊᔅᓵᖅ

(ᓯᑎᐱᕆ 1 – ᔭᓐᓄᐊᕆ 31) 12/7 9.4 1.5-27.4 68.4% 61.8 26.8-88.0 27.1% 7.6 0.1-34.1 102.8% 21.1 1.2-57.4 73.9%
*ᐊᔾᔨᒌᐸᓗᑦᑐᒃ ᐊᖑᓇᓱᐋᕕᒋᔭᐅᓂᖏᒃ ᐃᓱᒪᔅᓱᓪᓗᑎᒃ ᒪᑐᔭᐅᑲᐃᓐᓇᓂᖓᓄᑦ
**ᑎᒥᙵᓂᖓᑕ ᖃᐅᔨᓴᑦᑕᐅᕋᑖᓚᐅᓂᖏᓐᓂᒃ, ᐊᐅᓚᐅᑎᓪᓗᒍ ᐊᑐᑦᑕᐅᔪᑦ ᓇᓗᓇᐃᑦᑕᐅᖁᓪᓗᒋᑦ ᖃᐅᔨᒪᓇᕈᑎᖏᑦ ᐅᓄᓐᓂᖏᑕ ᐊᑯᓂᐅᓂᔅᓴᐅᓕᑦᑎᑕᐅᓪᓗᓂ ᐱᒋᐊᓪᓗᓂ ᔪᓚᐃ 1−ᒥᒃ ᑎᑭᓪᓗᒍ ᐋᒡᒌᓯ 31 (ᓲᕐᓗ Parent et al. 2023).

ᑯᐸᐃᒃ ᓄᓇᓕᖃᕐᕕᐊᓂ

ᑐᑭᓯᒋᒋᐊᕈᑏᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᓄᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ
ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ ᐊᒻᒪ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ

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ᐊᕕᑦᑐᔅᓯᒪᓂᖏᑕ ᐊᔾᔨᒌᒍᓐᓃᓐᓂᖏᑦ ᐱᔭᐅᒍᓐᓇᑦᑐᑦ ᑕᐃᒃᑯᐊᓪᓗᐊᖅ ᓈᒻᒪᓇᑦᑕᐅᒋᐊᓂᖏᑦ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᓇᓪᓕᕉᑎᓂᒻᒥ ᓇᓕᐋᓄᐊᓂᖏᓐᓂ ᑕᒪᐅᓇ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᒍᑦ

ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖏᑦ (IQ) ᐃᒪᓐᓇᐅᓂᕋᐃᒪᑕ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᐊᒻᒪᓗ WHB (ᐱᖓᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᑕ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᑦ ᑕᑯᔅᓴᐅᑎᑦᑎᒻᒪᑕ ᐊᔾᔨᒌᖏᓐᓂᖏᓐᓂᒃ ᓇᓕᐊᓄᐋᑦᑎᓪᓗᒋᑦ ᖃᖓᒃᑰᓐᓂᖏᓐᓂᒃ, ᐅᑯᐊ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᓯᕗᓪᓕᑉᐸᖏᑦ ᑕᒪᐅᓇᑦᑎᓪᓗᒋᑦ ᑲᓇᓐᓇᖓᓄᑦ ᑕᒪᐅᓈᓪᓗᑎᒃ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᒍᑦ ᐅᑭᐊᔅᓵᖑᑎᓪᓗᒍ, ᑭᖑᓂᖓᒎᓕᒻᒥᓗᑎᒃ ᐅᓄᓐᓂᔅᓴᐃᑦ WHB (ᐱᖓᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᑕ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᑦ (NMRWB & EMRWB 2020). ᓂᕆᐅᒋᔭᐅᔪᖅ ᐊᓯᕈᓂᖓ ᐱᕕᔅᓴᔪᑦ ᑕᐃᒃᑯᐊᓪᓗᐊᖅ ᑲᑎᓯᒪᓂᖏᑦ ᕿᓚᓗᒐᑦᑕᐅᓚᐅᑦᑐᑦ ᐅᑭᐊᔅᓵᖑᑎᓪᓗᒍ ᑐᕌᖓᔪᓂᒃ ᐊᔾᔨᒌᖏᑕᖏᑎᒍ ᓇᓕᐋᓄᐋᓪᓗᑎᒃ ᖃᖓᒃᑰᓲᖑᓂᖏᓐᓂᒃ ᐅᑯᐋ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᐊᒪᓗ WHB (ᐱᖓᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᑕ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᑕ ᐱᔾᔪᑎᒋᔭᐅᓪᓗᐋᑕᓚᐅᒻᒪᑕ ᐱᕙᓪᓕᐊᑎᑕᐅᓂᖏᑦ ᐅᑭᐊᔅᓵᒃᑯᑦ ᒪᑐᔭᐅᓂᕆᓚᐅᑦᑕᖓᑕ ᒫᓐᓇᕋᑖᖑᓚᐅᑦᑐᖅ ᓄᓇᕕᐅ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᓐᓄᑦ ᐊᐅᓚᑦᑎᓂᒻᒧᑦ ᐸᕐᓇᒍᑎᒋᔭᐅᔪᒥᒃ, ᑖᒃᑯᓇᓂᓗ ᕿᓚᓗᒐᕋᓱᐋᓂᖅ ᒪᑐᔭᐅᓯᒪᓪᓕᓂ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ ᐱᒋᐊᓪᓗᓂ ᓯᑎᐱᕆ 1−ᒥᒃ ᑎᑭᓪᓗᒍ ᐅᑐᐱᕆ 31−ᖓ ᐱᕕᖃᑦᑎᑕᐅᖁᓪᓗᒋᑦ ᓇᒻᒪᓈᑦᑕᐅᒋᐋᓂᖏᑦ EHB (ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᓇᓕᐋᓄᐋᓂᖏᑦ ᑲᓇᓐᓇᑉᐸᓯᖓᓄᑦ ᐱᒋᐊᓚᐅᖏᓐᓂᖓᓂ ᕿᓚᓗᒐᕋᓱᐋᓂᐅᓂᐋᑦᑐᖅ ᖃᑯᑦᑕᓂᒃ.

ᒫᓐᓇᕋᑖᖑᓚᐅᑦᑐᖅ ᑎᒥᙳᓂᒻᒥᒃ ᖃᐅᔨᓇᓱᐋᔅᓯᔨ ᓇᓗᓇᐃᔅᓯᒻᒪᑦ ᓇᓗᓇᐃᔅᓯᒪᔪᓂᒃ ᐊᒻᒪᓗ ᓄᖑᑉᐸᓪᓕᐊᓂᖏᓐᓂᒃ ᐃᓚᖏᑦ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᐱᕕᔅᓴᐅᓂᖏᑦ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᓂᒃ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂᑦ ᐊᑐᑦᑎᓪᓗᒍ ᓄᕕᐱᕆ (Parent et al. 2023). ᖃᐅᔨᓇᓱᐋᓐᓂᖅ ᑕᑯᔅᓴᐅᑎᑦᑎᒻᒪᑦ ᑕᒪᑯᐊ ᐃᓚᖏᑦ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ) ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᖃᔅᓰᓐᓇᐅᓂᔅᓴᐅᓕᒻᒪᑕ ᐱᒋᐊᕕᒋᓚᐅᑕᖓᓂᑦ 51.5%-ᖏᓐᓂᒃ (95% CI: 39.0-63.9%) ᐊᑐᑦᑎᓪᓗᒍ ᓄᕕᐱᕆ 1−10 ᖃᖓᒃᑰᓐᓂᖓ, ᑎᑭᓪᓗᒍ 10.4% (95% CI: 0.9-29.5%) ᐊᑯᓂᖏᓐᓂ ᓄᕕᐱᕆ 21-30 (Parent et al. 2023), ᑕᐃᒪᐃᒻᒪᑦ ᐃᑲᔪᓪᓗᒍ ᐃᒪᓐᓇᐅᓂᕋᐃᓂᖓ ᑖᒃᑯᓂᖓ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᑕ ᓇᓕᐊᓐᓄᐋᓐᓂᖏᑦ ᑕᒪᐅᓇ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᒍᑦ ᑕᒪᐅᓇᔅᓴᕋᐃᓂᔅᓴᐅᓪᓗᑎᒃ ᑖᒃᑯᓇᙵᑦ WHB (ᐱᖓᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᑕ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᓐᓂᒃ. ᑕᐃᒪᐃᒃᑲᓗᐊᑦᑎᓪᓗᒍ, ᐱᕕᔅᓴᐅᔪᑦ ᑲᑎᓯᒪᓂᖏᑕ ᒥᔅᓴᐅᓴᑦᑕᐅᒍᑎᖏᑦ ᓂᒋᐊᓂ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ ᓈᓴᐅᓯᕆᐊᕆᔭᐅᓚᐅᔅᓯᒪᒻᒪᑕ ᑲᑎᑕᐅᓪᓗᑎᒃ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓐᓂᒃ ᖃᐅᔨᓴᒐᔅᓴᑦᑖᕕᐅᓚᐅᔅᓯᒪᔪᓂᒃ 1994−ᒥᒃ, ᐃᒪᐃ ᐅᑭᐊᔅᓵᒃᑯᑦ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᑕ ᓇᓕᐋᓄᐊᓂᖏᑦ ᑭᖑᕙᐱᐋᑦᑎᑕᐅᓯᒪᒻᒪᑕ ᐃᒪᓐᓇᑎᒋᓗᐋᖑᓈᑦᑎᔅᓯᒪᔪᓂᒃ 10 ᐅᓪᓗᓂᒃ ᐊᑐᓂ ᖁᔨᐅᔪᑦᑐᑦ ᐊᕐᕌᖑᓂ ᐱᒋᐊᓪᓗᑎᒃ 1990−ᒥᒃ (Niemi et al. 2019). ᐃᓚᒋᔭᐅᒃᑲᓐᓂᓪᓗᓂ, ᑎᓴᒪᑦ ᓄᓇᕕᒻᒥ ᓄᓇᓕᖏᑦ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ ᐃᑲᔪᕈᑎᖃᔅᓯᒪᒻᒪᑕ ᐊᔾᔨᒋᙱᑕᖏᓐᓂᒃ ᖃᐅᔨᓴᒐᔅᓴᐃᑦ ᓄᐊᑦᑕᐅᓯᒪᓂᖏᓐᓂ (ᑎᑎᕋᖅᓯᒪᔪᑦ 5). ᐱᓗᐊᙳᐊᑦᑐᒥᒃ, ᖃᐅᔨᓴᒐᔅᓴᐃᑦ ᐱᔭᐅᓯᒪᔪᑦ ᖁᐋᖅᑕᕐᒥ ᑭᒡᒐᑦᑐᐃᒻᒪᑕ 65.9%-ᖏᓐᓂᒃ ᐅᑭᐊᔅᓵᒃᑯᑦ ᖃᐅᔨᒐᔅᓴᓂᒃ ᐱᕕᔅᓴᐅᔪᓂᒃ ᓂᒋᐋᓂᖔᔅᓯᒪᔪᓂᒃ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂᑦ. ᑕᐃᒪᐃᒻᒪᑦ ᖃᐅᔨᒪᓇᑦᑑᔭᑉᐳᖅ ᑕᐃᒃᑯᐊ ᒫᓐᓇ ᑐᓴᐅᒪᔾᔪᑎᔅᓴᐃᑦ ᑲᑎᓯᒪᓂᖏᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᑭᒡᒐᑦᑐᐄᓗᐊᙳᐊᒻᒪᑕ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓐᓂᒃ ᓇᓕᐋᓄᐊᑦᑐᓂᒃ ᖃᓂᒋᔭᖏᓐᓂ ᖁᐋᑦᑕᐅᑉ, ᐊᒻᒪᓗ ᑕᒪᑐᒪ ᐅᓂᒃᑳᓕᐊᕆᔭᐅᓯᒪᔪᑉ ᐊᓯᕈᓂᖓ ᐃᓚᖓᓂ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᑕ ᐃᓱᓕᓕᑦᑎᓪᓗᒍ ᓄᕕᐱᕆ ᓇᓗᓇᐃᔅᓯᔫᔭᒻᒪᑕ ᓈᒻᒪᖁᑦᑎᓂᖏᑦ ᐱᕕᔅᓴᐅᔪᑦ ᓇᓕᐋᓄᐊᓂᖏᓐᓂᒃ ᑲᓇᓐᓇᑉᐸᓯᖓᑕ ᐃᓱᓕᑦᑎᑎᓪᓗᒋᑦ ᐃᖏᕐᕋᓂᕆᔭᒻᒥᓐᓂᒃ ᑕᒫᓂ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ.

ᑯᐸᐃᒃ ᓄᓇᓕᖃᕐᕕᐊᓂ

ᑐᑭᓯᒋᒋᐊᕈᑏᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᓄᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ
ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ ᐊᒻᒪ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ

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ᑎᑎᕋᖅᓯᒪᔪᑦ 5. ᐅᓄᓐᓂᖏᑦ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᖃᐅᔨᓴᒐᔅᓴᓂᒃ ᐱᕕᒋᔭᐅᓯᒪᔪᑦ ᐊᖑᓇᓱᐋᑦᑎᓄᑦ ᐊᒻᒪᓗ ᐱᔭᐅᑎᑕᐅᓪᓗᑎᒃ ᐃᒪᕐᒥᐅᑕᓕᕆᔨᒃᑯᓄᑦ ᑲᓇᑕᒥ ᑎᒥᙵᓂᖓb ᖃᐅᔨᓴᑦᑕᐅᒍᑎᔅᓴᖓᓂᒃ ᐊᖑᓇᓱᐋᑦᑑᑉ ᓇᒦᓐᓂᖓᓂᒃ ᐃᓗᐊᓂ ᓂᒋᑉᐸᓯᐊᓂ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ. ᖃᐅᔨᓴᒐᔅᓴᐃᑦ ᐱᔭᐅᓚᐅᑉᐳᑦ ᐊᑯᓐᓂᖏᓐᓂ 1985 ᐊᒻᒪᓗ 2025. ᑎᒥᙳᓂᖓᑕ ᑲᑎᓯᒪᓂᖏᓐᓂᒃ ᖃᐅᔨᓴᔅᓯᔨᑦ (GMA) ᐃᓱᒪᒋᔭᐅᒻᒪᑕ ᑕᑎᒋᒐᔅᓴᐅᓂᕋᑦᑕᐅᓪᓗᑎᒃ ᐱᓕᕆᐊᕆᔭᐅᓯᒪᑐᐊᑉᐸᑕ 10−ᓂ ᖃᐅᔨᓴᒐᔅᓴᓂ ᐅᖓᑖᓂᓘᓐᓂᑦ.

ᖃᐅᔨᓴᕋᑦᓴᓂᑦ ᓄᐊᑦᑎᓯᒪᙱᑦᑐᑦ ᑕᐃᒪᙵᓂ 1985-ᒥ

(ᐃᓚᖓ ᐊᕐᕌᒍ ᐃᓚᖓᓂ ᑲᑎᓪᓗᒋᑦ)

ᖃᐅᔨᓴᕋᑦᓴᓂᑦ ᓄᐊᑦᓯᓚᖓᙱᑦᑐᑦ 2021-2025-ᒥ

(ᐃᓚᖓ ᐊᕐᕌᒍ ᐃᓚᖓᓂ ᑲᑎᓪᓗᒋᑦ)

ᖃᓂᓛᖓᔪᖅ
ᓄᓇᓕᐅᔪᖅ

ᐅᑭᐊᔅᓵᖅ
(ᓯᑎᐱᕆ 1 –
ᔭᓐᓄᐊᕆ 31)

ᐅᐱᕐᖔᒃ
(ᕕᕝᕗᐊᕆ 1 –
ᐋᒡᒌᓯ 31)

ᐅᑭᐊᔅᓵᖅ
(ᓯᑎᐱᕆ 1 –
ᔭᓐᓄᐊᕆ 31)

ᐅᐱᕐᖔᒃ
(ᕕᕝᕗᐊᕆ 1 –
ᐋᒡᒌᓯ 31)

ᐃᕗᔨᕕᒃ 263 (26.7%) 147 (14.1%) 41 (10.7%) 59 (33.5%)

ᓴᓪᓗᐃᑦ 3 (0.3%) 153 (14.7%) 0 (0%) 4 (2.3%)

ᑲᖏᖅᓱᔪᐊᖅ 83 (8.4%) 268 (25.7%) 5 (1.3%) 37 (21.0%)

ᖁᐊᖅᑕᖅ 636 (64.6%) 473 (45.4%) 337 (88.0%) 76 (43.2%)

ᐃᓚᒋᔭᐅᒃᑲᓐᓂᓪᓗᓂ, ᓄᓇᕗᑉ ᓄᓇᓕᖏᑦ ᑭᒻᒥᕈᑦ ᐊᒻᒪᓗ ᑭᙵᐃᑦ ᐃᑲᔪᔅᓯᒪᒻᒪᑕ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓂᒃ ᖃᐅᔨᓴᒐᔅᓴᓕᐅᕕᖃᔅᓯᒪᓂᖏᓄᑦ ᐱᒋᐊᓪᓗᑎᒃ 1989−ᒥᒃ ᑕᐃᒃᑯᐊᓗ ᑎᒥᖑᕈᑎᑦ ᐃᓚᒌᑦᑐᓃᖓᔅᓯᒪᔪᑦ ᐃᓚᒋᔭᐅᑎᑕᐅᓪᓗᑎᒃ ᓄᑖᖑᓛᓄᑦ ᑎᒥᖑᕈᑎᖏᑕ ᖃᐅᔨᓴᑦᑕᐅᒃᑲᓂᕈᑎᖏᓐᓂᒃ (Parent et al. 2023), ᐱᕕᔅᓴᐅᓂᖏᑕ ᐋᖅᑭᔅᓱᔅᓯᒪᓂᖏᑦ ᕿᓚᓗᒐᑦᑕᐅᓯᒪᔪᑦ ᐅᐋᓐᓇᑉᐸᓯᖓᓂᑦ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂᑦ ᒫᓐᓇ ᐅᓂᒃᑳᓕᐋᕆᔭᐅᖃᑦᑕᔅᓯᒪᖏᒻᒪᑕ ᐅᖃᓕᒫᒐᓕᐊᕆᔭᐅᓯᒪᔪᓂ ᖃᐅᔨᓇᓱᐋᓂᐅᔪᓂ. ᑕᐃᒪᐃᒻᒪᑦ ᖃᐅᔨᒪᓇᖏᓚᑦ ᑕᒪᒃᑯᐊ ᓄᓇᓖᑦ ᕿᓚᓗᒐᖃᑦᑕᕋᓗᐋᒻᒪᖔᑕ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᓐᓂᒃ ᑕᒪᒃᑯᐊ ᐱᕕᔅᓴᐅᔪᑦ ᓇᓕᐋᓄᐋᓕᑦᑎᓪᓗᒋᑦ.

ᐱᖃᑖᓂ, ᐊᑐᓲᖑᔪᒍᑦ ᐱᒐᔅᓴᐅᔪᓂᒃ ᑐᓴᐅᒪᔾᔪᑎᔅᓴᓂᒃ ᐊᔾᔨᒌᖏᑦᑑᑎᓂᒃ ᐱᕕᔅᓴᐅᔪᓂᒃ ᒥᔅᓴᐅᓴᔅᓯᒍᒪᓪᓗᑕ ᒫᓐᓇᕋᑖᖅ ᐱᕕᔅᓴᐅᔪᓂᒃ ᑕᐃᒃᑯᓂᖓᓪᓗᐊᖅ ᓈᒻᒪᓇᕆᒋᐊᑦᑐᑕ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᓇᓕᐋᓄᐊᓂᖏᓐᓂᒃ ᐃᓘᓐᓇᓕᒫᖓᓂ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂᑦ. ᑕᒪᑯᐊ ᑐᓴᐅᒪᔾᔪᑎᔅᓴᐃᑦ ᐱᓕᕆᒍᑎᖃᕋᓱᐋᒻᒪᑕ ᑐᕌᑦᑎᑦᑎᒍᑎᒋᔭᐅᒐᓱᐋᓗᑎᒃ ᐊᐅᓚᑦᑎᒍᑎᒋᔭᐅᓕᕈᓐᓇᕋᔭᑦᑐᓂᒃ ᐱᓕᕆᒍᓯᓐᓂᒃ ᐱᓕᕆᒐᓱᐊᓪᓗᑎᒃ ᑐᕌᓕᑦᑎᑕᐅᖔᕋᓱᐊᓪᓗᑎᒃ ᕿᓚᓗᒐᑦᑕᐅᔪᓂᒃ ᑐᕌᖓᓕᓪᓗᑎᒃ WHB (ᐱᖓᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐋᑕ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᓐᓄᑦ ᐅᑯᓄᖓᐅᙱᖔᓕᓪᓗᑎᒃ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ)
ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᓐᓄᑦ.

ᕿᓚᓗᒐᑦᑕᐅᔪᓂᒃ ᐊᒻᒪᓗ ᖃᐅᔨᒪᒋᐊᔅᓯᓂᒻᒧᑦ ᖃᐅᔨᒪᔾᔪᑎᔅᓴᖅ

ᐱᒋᐊᓪᓗᓂ ᕿᑎᖓᓂ 1990−ᖏᓐᓂᒃ, ᐱᓕᕆᖁᔭᐅᓯᒪᔪᑦ ᓄᓇᓕᒥᐅᑕᐃᑦ ᐃᓘᓐᓇᖓᓂ ᓄᓇᕕᐅᑉ, ᐅᓪᓗᒥ ᖃᐅᔨᒪᔭᐅᔪᑦ ᐆᒪᔪᐃᑦ ᐅᒪᔪᓂᐊᑦᑎᒃᑯᑦ, ᐱᓕᕆᖁᔭᐅᓯᒪᒻᒪᑕ ᐅᓂᒃᑳᔅᓯᒪᔪᓕᐅᖃᑦᑕᖁᔭᐅᓪᓗᑎᒃ ᐃᒪᕕᒻᒥ ᐳᐃᔨᓂᒃ ᐱᔭᐅᔪᖃᕌᖓᑦ ᐊᒻᒪᓗ ᑕᑯᔪᖃᑦᑎᒥᓂᐅᔭᕌᖓᑦ ᐃᒪᒻᒥᐅᑕᓕᕆᔨᒃᑯᓄᑦ ᑲᓇᑕᒥ. ᐱᒋᐊᓪᓗᓂ 2006−ᒥᒃ, ᐅᓂᒃᑳᔅᓯᒪᔪᓕᐊᕆᔭᐅᖃᑦᑕᔅᓯᒪᓕᒻᒪᑕ ᑕᒪᒃᑯᐊ ᑎᑭᐅᑎᔭᐅᔪᑦ ᐊᒻᒪᓗ ᑕᑯᔭᐅᔪᖃᑦᑐᒥᓂᐅᑉᐸᑦ ᐱᓇᓱᐊᕈᓯᑦᑕᒫ ᐅᖃᐅᑎᒋᔭᐅᕙᓪᓗᑎᒃ. ᐅᓂᒃᑳᔅᓯᒪᔪᓕᐋᖑᖃᑦᑕᑦᑎᓪᓗᒋᑦ ᐃᓘᓐᓇᑎᒃ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᐊᒻᒪᓗ ᐃᑭᓕᑦᑕᐅᓗᑎᒃ ᐊᓯᐅᔨᔭᐅᓗᑎᓪᓗᒃ ᐆᒪᔪᐃᑦ ᐅᒪᔪᓂᐊᑦᑎᒃᑯᓐᓄᑦ ᐅᖃᐅᑎᒋᔭᐅᖃᑦᑕᕆᐊᖃᑦᑎᑕᐅᒻᒪᑕ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓐᓂᒃ ᐊᐅᓚᑦᑎᓂᒻᒧᑦ ᐸᕐᓇᒍᑎᒧᑦ, ᐅᖃᐅᑎᖃᖃᑦᑕᖁᔭᐅᓂᖏᑦ ᐃᒪᕕᒻᒥ ᐳᐃᔨᓂᒃ ᑕᑯᔭᐅᔪᖃᑦᑐᒥᓂᐅᑉᐸᑦ ᓄᓇᓕᒻᒥᐅᑕᒻᒧᑦ ᑲᔪᖏᔅᓴᑦᑕᐅᕗᑦ ᑭᓯᐊᓂ ᐃᓱᒪᔅᓲᑎᒋᔭᐅᑎᑕᐅᓪᓗᓂ. ᑎᑎᕋᑦᑕᐅᓂᖏᑦ ᑕᒪᒃᑯᐊ ᐱᓇᓱᐊᕈᓯᑦᑕᒫᑦ ᐅᖃᐅᑎᒋᔭᐅᔪᑦ ᑭᒡᒐᑦᑐᐃᒻᒪᑕ ᐱᓕᕆᒋᐊᕕᔅ ᑕᑯᔭᐅᔪᓂᒃ, ᐅᖃᐅᑎᒋᔭᐅᔪᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᐊᒻᒪᓗ ᖃᔅᓯᐅᓂᖏᓐᓂᒃ ᐃᒪᕕᒻᒥ ᐳᐃᔨᑦ ᑕᐃᒃᑯᐊ ᐃᑭᓕᑦᑕᐅᔪᑦ ᐊᓯᐅᔨᔭᓪᓗᑎᓪᓗ ᐊᑐᓂ ᓄᓇᓕᓐᓂᒃ ᐃᓘᓐᓇᓕᒫᖓᓂ ᓄᓇᕕᐅᑉ.

ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᐊᒻᒪᓗ ᑕᑯᔭᐅᔪᒃ ᐅᖃᐅᑎᒋᔭᐅᓯᒪᔪᑦ ᐊᑯᓐᓂᖏᓐᓂ 2021 ᐊᒻᒪᓗ 2025 ᓇᓚᐅᑦᑎᓪᓗᐋᓕᑦᑎᑕᐅᓯᒪᒻᒪᑕ ᑕᑎᖃᑦᑐᑎᒃ ᓇᒦᓐᓂᖏᓐᓂᒃ ᐅᖃᐅᑎᒋᔭᐅᔪᓂᒃ ᐆᒪᔪᐃᑦ ᐅᒪᔪᓂᐊᑦᑎᒧᑦ ᐱᒐᔅᓴᐅᓕᑐᐊᕌᖓᑕ. ᑕᐃᒪᓕ ᓇᒦᓐᓂᖏᑦ ᐅᖃᐅᑎᒋᔭᐅᓐᓂᖏᑉᐸᑕ, ᐅᖃᐅᑎᒋᔭᐅᔪᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᐅᕝᕙᓘᓐᓃᑦ ᑕᑯᔭᐅᕕᒋᔭᐅᔪᑦ ᓄᓇᐅᑉ ᐊᑎᖓ ᐊᑐᑦᑕᐅᓲᖑᒻᒥᔪᑦ, ᐊᒻᒪᓗ ᑕᒪᒃᑯᐊ ᐅᖃᐅᑎᒋᔭᐅᒍᓐᓇᖏᑉᐸᑕ, ᐅᖃᐅᓯᖃᑦᑐᖅ ᓄᓇᓕᒃ ᐊᑐᑦᑕᐅᓲᖑᒻᒥᔪᖅ. ᖃᓂᓛᖅ ᐃᓄᓐᓄᑦ ᓄᓇᒋᔭᐅᔪᖅ ᐱᓕᕆᖁᔭᐅᓚᐅᑉᐳᑦ ᐊᑐᓂ ᕿᓚᓗᒐᑦᑕᐅᔪᓂᒃ ᐊᒻᒪᓗ ᑕᑯᔭᐅᔪᖃᓂᑉᐸᑦ. ᑕᐃᒫᖑᑐᐃᓐᓇᕆᐊᖃᓐᓂᖓ ᖃᓂᒌᓂᖏᓄᑦ ᐊᐅᓚᓂᕆᔭᐅᔪᖅ ᓈᒻᒪᑦᑎᑦᑕᐅᓚᐅᒻᒪᑦ ᐊᕐᕌᒍᑕᒪᑦ ᐅᓂᒃᑳᓕᐊᕆᔭᐅᔪᓄᑦ ᐊᑐᓂ ᑎᓴᒪᓂ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ ᓄᓇᓕᓐᓄᑦ (ᐊᔾᔨᙳᐊᖅ 5) ᐊᒻᒪᓗ ᓴᖑᖓᓂᖓ ᐃᕗᔨᕕᒻᒥᒃ ᐊᒻᒪᓗ ᖁᐊᑦᑕᒥᒃ ᕿᒥᕐᕈᔭᐅᓚᐅᒻᒪᑕ ᓇᓪᓕᕉᑎᓂᒻᒥ ᖁᕝᕙᓯᓛᖏᓐᓂ ᑕᐃᒫᓪᓗᐊᖃᑎᖃᓪᓗᑎᒃ ᓈᒻᒪᖁᑦᑎᒋᐋᓂᖏᓐᓂᒃ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᓇᓕᐋᓄᐊᓂᖏᓐᓂᒃ (ᐃᒻᒥᒃᑰᖓᓂᖅ 2).

ᑯᐸᐃᒃ ᓄᓇᓕᖃᕐᕕᐊᓂ

ᑐᑭᓯᒋᒋᐊᕈᑏᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᓄᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ
ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ ᐊᒻᒪ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ

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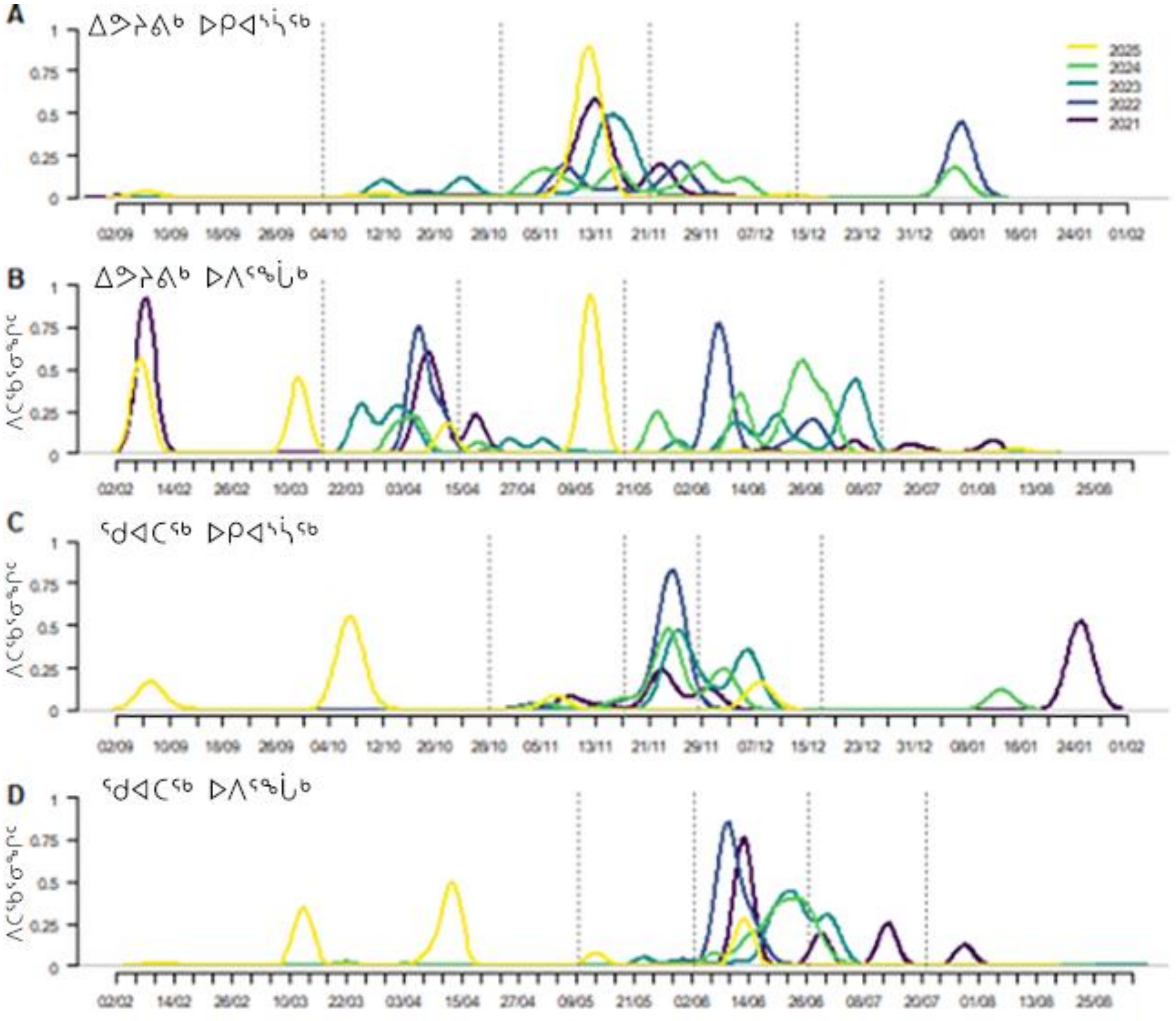
ᐃᓘᓐᓇᓕᒫᖓᓂ, ᑕᑯᔭᐅᑎᓪᓗᒋᑦ ᐊᒻᒪᓗ ᕿᓚᓗᒐᑕᐅᑎᓪᓗᒋᑦ ᖃᓂᒋᓂᖏᑕ ᓴᙳᖓᓂᖏᑦ ᑕᑯᔅᓴᐅᑎᑦᑎᒻᒪᑕ ᓇᓪᓕᕉᑎᓂᒻᒥ ᖁᕝᕙᓯᓛᖏᓐᓂᒃ ᑕᐃᒃᑯᐊᓗ ᐊᑐᓕᕿᑦᑖᖃᑦᑕᓚᐅᑦᑐᑎᒃ ᐊᕐᕌᒍᒥᒃ ᐊᕐᕌᒍᒧᑦ (ᐊᔾᔨᙳᐊᖅ 5). ᑖᓐᓇ ᐋᖅᑭᔅᓱᔅᓯᒪᓂᓪᓗᐋᑕᐅᓱᖅ ᐊᑐᑦᑕᐅᓚᐅᔅᓯᒪᒻᒪᑦ ᐊᒡᒍᐃᔾᔪᑎᒋᔭᐅᓪᓗᓂ ᓇᓪᓕᕇᑎᓃᑦ ᓇᐃᑦᑑᑕᐅᓂᔅᓴᓕᑦᑎᑕᐅᓪᓗᑎᒃ ᐱᕕᖃᓐᓃᑦ (ᑎᑎᕋᖅᓯᒪᔪᑦ 6) ᑕᒪᓐᓇᓗ ᑭᒡᒐᑦᑐᐃᑐᐃᓐᓇᕆᐋᖃᑦᑐᓂ ᐊᖅᑯᑎᒋᔭᐅᕙᑦᑐᓂᒃ ᐊᔾᔨᒌᖏᑦᑐᓄᑦ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓐᓄᑦ ᑲᑎᒻᒪᔪᓄᑦ ᓂᒋᐊᓂ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᑕ ᓇᓕᐋᓄᐋᑉᐸᓪᓕᐋᑎᓪᓗᒋᑦ.

ᐊᔾᔨᙳᐊᖅ 5. ᖃᓂᒌᓂᖏᓐᓄᑦ ᐊᐅᓚᓂᕆᔭᐅᔪᖅ ᓈᒻᒪᑦᑎᑦᑕᐅᓪᓗᓂ ᐊᕐᕌᒍᑕᒪᑦ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓐᓂᒃ ᑕᑯᕕᐅᖃᑦᑕᓂᖓ ᐊᒻᒪᓗ ᕿᓚᓗᒐᑐᖃᑦᑎᓪᓗᒍ ᐅᖃᐅᑎᒋᔭᐅᖃᑦᑕᓂᖏᑦ ᐆᒪᔪᐃᑦ ᐅᒪᔪᓂᐊᑎᖏᓐᓂᒃ ᐱᖓᓐᓇᖓᓂ ᐊᒻᒪᓗ ᑲᓇᓐᓇᖓᓂ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ: A) ᐃᕗᔨᕕᒃ, ᐅᑭᐊᔅᓵᒃᑯᑦ; B) ᐃᕗᔨᕕᒃ, ᐅᐱᕐᖔᒃᑯᑦ; C) ᖁᐊᖅᑕᖅ, ᐅᑭᐊᒃᓵᒃᑯᑦ; D) ᖁᐊᖅᑕᖅ, ᐅᐱᕐᖔᒃᑯᑦ. ᓇᓪᓕᕉᑎᓂᒃ ᐊᒻᒪᓗ ᓄᓇᓕᒃ ᑕᐃᓐᓇᓪᓗᐊᖅ ᓴᖑᖓᓂᖏᑦ ᕿᒥᕐᕈᔭᐅᓚᐅᒻᒪᑕ ᓇᓪᓕᕉᑎᓂᒻᒥ ᖁᕝᕙᓯᓐᓂᑉᐹᖏᑦ ᑕᐃᒫᓪᓗᐊᖃᑎᖃᓪᓗᑎᒃ ᓈᒻᒪᖁᑎᓂᖏᓄᑦ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᓇᓕᐋᓄᐊᓂᖏᓐᓂᒃ. ᑎᑎᑦᑐᓛᓯᒪᔪᖅ ᑕᑯᔅᓴᐅᑎᑦᑎᕗᑦ ᓄᖃᐅᑎᔭᐅᓂᖏᓐᓂᒃ ᐅᓪᓗᖏᓐᓂ ᓇᓗᓇᖏᑦᑎᐊᓂᖏᓄᑦ ᓇᓪᓕᕉᑎᓂᒻᒥ ᖁᕝᕙᓯᓛᖑᓂᖏᓐᓂᒃ ᑕᒪᒃᑯᐊᓗ ᐅᑎᑦᑕᖃᑦᑕᓚᐅᑦᑐᑎᒃ ᑕᐃᒪᓐᓇᐃᑦᑑᓂᖏᑦ ᐊᕐᕌᒍᒥᒃ ᐊᕐᕌᒍᒧᑦ ᐊᑐᑦᑕᐅᓚᐅᔅᓯᒪᓪᓗᑎᒃ ᐊᒡᒍᐃᔾᔪᑎᒋᔭᐅᓪᓗᑎᒃ ᓇᓪᓕᕉᑎᓂᓐᓂᒃ ᓇᐃᓈᔅᓯᒪᓂᔅᓴᐅᓕᓪᓗᑎᒃ ᐱᕕᖃᓂᖏᑦ ᐱᓕᕆᐊᕆᔭᐅᖁᓪᓗᒋᑦ ᑎᒥᙳᓐᓂᖏᑕ ᑲᑎᓯᒪᓂᖏᓐᓂᒃ ᖃᐅᔨᓇᓱᐋᔅᓯᓂᖅ. ᐅᑭᐊᔅᓵᒃᑯᑦ ᓇᓪᓕᕉᑎᓂᖅ ᐱᒋᐊᔅᓯᒪᒻᒪᑦ ᓯᑎᐱᕆ 1−ᒥᑦ ᑎᑭᓪᓗᒍ ᔭᓐᓄᐊᕆ 31−ᒧᑦ ᑭᖑᓂᖓᓂ ᐊᕐᕌᒍᑉ, ᑕᒪᓐᓇᓕ ᐅᐱᕐᖔᒃᑯᑦ ᓇᓪᓕᕉᑎᓂᖅ ᐱᒋᐊᓲᖑᒻᒪᑦ ᕕᕝᕗᐊᕆ 1−ᒥᑦ ᑎᑭᓪᓗᒍ ᐋᒡᒌᓯ 31−ᖓ.



ᑯᐸᐃᒃ ᓄᓇᓕᖃᕐᕕᐊᓂ

ᑐᑭᓯᒋᒋᐊᕈᑏᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᓄᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ
ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ ᐊᒻᒪ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ

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ᑎᑎᕋᖅᓯᒪᔪᑦ 6. ᐅᑎᑦᑕᓂᖓ ᐊᕐᕌᒍᑕᒪᑦ ᖁᕝᕙᓯᓛᑦ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᑕᑯᔭᐅᑎᓪᓗᒋᑦ ᐊᒻᒪᓗ ᕿᓚᓗᒐᕕᐅᑎᓪᓗᒋᑦ ᐅᖃᐅᑎᒋᔭᐅᓯᒪᔪᑦ ᐅᑯᓇᙵᑦ ᐆᒪᔪᐃᑦ ᐆᒪᔪᓂᐊᑎᖏᓐᓂᒃ ᖃᓂᒋᔭᖏᓐᓂ ᐃᕗᔨᕕᐅᑉ ᐊᒻᒪᓗ ᖁᐊᑦᑕᐅᑉ ᐊᑯᓂᖏᓐᓂ 2021 ᐊᒻᒪᓗ 2025. ᐊᑐᓂ ᐱᕕᖃᓂᐅᔪᓂ, ᐅᓄᓐᓂᖏᑦ ᑎᑭᙳᓂᖏᑕ ᖃᐅᔨᓴᒐᔅᓴᐅᓂᖏᑦ ᐱᔭᐅᓚᐅᑦᑐᑦ ᑕᐅᕙᖓᑦ ᐊᑯᓐᓂᖏᓐᓂ 2021 ᐊᒻᒪᓗ 2025 ᐅᖃᐅᑎᒋᔭᐅᕗᑦ.

ᓄᓇᓕᒃ ᓇᓪᓕᕈᑎᓂᖅ ᐅᓪᓗᖓᑕ ᑎᑭᐅᒪᔭᖓ

ᐅᓄᓐᓂᖏᑦ ᒫᓐᓇᕋᑖᖑᓚᐅᑦᑐᖅ
ᑎᒥᙳᓂᖏᑕ
ᖃᐅᔨᓴᒐᔅᓴᓕᐊᕆᔭᐅᓂᖏᑕ
ᐊᑐᐃᓐᓇᓂᖏᑦ

ᐃᕗᔨᕕᒃ

ᐅᐱᕐᖔᒃ

15 ᒫᑦᓯ – 12 ᐊᐃᕆᓕ 0
13 ᐊᐃᕆᓕ – 18 ᒪᐃ 0
19 ᒪᐃ – 9 ᔪᓚᐃ 42

ᐅᑭᐊᔅᓵᖅ

01 ᐅᑐᐱᕆ – 27 ᐅᑐᐱᕆ 0
28 ᐅᑐᐱᕆ – 19 ᓄᕕᐱᕆ 36
20 ᓄᕕᐱᕆ – 11 ᑎᓯᐱᕆ 3

ᖁᐊᖅᑕᖅ

ᐅᐱᕐᖔᒃ

7 ᒪᐃ – 31 ᒪᐃ 0
1 ᔫᓂ – 24 ᔫᓂ 39
25 ᔫᓂ – 19 ᔪᓚᐃ 34

ᐅᑭᐊᔅᓵᖅ

26 ᐅᑐᐱᕆ – 15 ᓄᕕᐱᕆ 25
16 ᓄᕕᐱᕆ – 26 ᓄᕕᐱᕆ 205
27 ᓄᕕᐱᕆ – 15 ᑎᓯᐱᕆ 122

ᑎᒥᙳᕈᑎᒥᒃ ᖃᐅᔨᒪᔾᔪᑎ

ᐃᑉᐱᒋᑦᑎᐊᕋᓱᐋᓪᓗᒍ ᒥᑭᓛᖅ ᖃᐅᔨᓴᒐᔅᓴᐅᑉ ᐊᖏᓂᖓ 10 ᐃᒻᒥᒃᑰᖓᐅᑦᑐᑦ ᓴᖅᑭᑎᑦᑎᒋᐋᖃᑦᑎᑕᐅᒻᒪᑦ ᑕᑎᒋᒐᔅᓴᐅᑦᑎᐊᑦᑐᒥ ᑎᒥᙳᓂᖓᑕ ᑲᑎᓯᒪᓂᖏᓐᓂᒃ ᖃᐅᔨᓴᔅᓯᔨᑦ (GMA) ᓴᖅᑭᑎᑕᖏᑦ, ᒫᓐᓇᕋᑖᓕᓴᐃᑦ (2021-2025) ᑲᑎᓯᒪᓂᖏᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᓂᒋᐊᓂ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ ᐅᑭᐊᔅᓵᖑᑎᓪᓗᒍ ᒥᔅᓴᐅᓴᑦᑕᐅᒍᓐᓇᒻᒪᑕ ᓄᓇᓕᖏᓐᓂᑐᐊᖅ ᐃᕗᔨᕕᒃᒥ ᐊᒻᒪᓗ ᖁᐊᖅᑕᕐᒥ (ᑎᑎᕋᖅᓯᒪᔪᑦ 5), ᓲᕐᓗ, ᐱᖓᓐᓇᖓᑕ ᐊᒻᒪᓗ ᑲᓇᓐᓇᖓᑕ ᐃᓱᖏᓐᓂ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᓇᐅᒃᑰᕕᒋᕙᑦᑕᖏᓐᓂ ᑕᒪᐅᓈᑦᑎᓪᓗᒋᑦ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᒍᑦ, ᐃᒻᒥᒃᑰᖓᓗᑎᒃ (ᐊᔾᔨᙳᐊᖅ 1). ᑎᒥᙳᓂᖓᑕ ᑲᑎᓯᒪᓂᖏᓐᓂᒃ ᖃᐅᔨᓴᔅᓯᔨᑦ (GMA) ᐊᑐᑦᑕᐅᓚᐅᒻᒪᑦ ᒥᔅᓴᐅᓴᔅᓯᒍᑎᒋᔭᐅᓪᓗᓂ ᐱᕕᔅᓴᐅᓂᖏᓐᓂᒃ ᑕᐃᒃᑯᓂᖓᓪᓗᐊᖅ ᑲᑎᓯᒪᓂᖏᓐᓂᒃ ᕿᓚᓗᒐᑦᑕᐅᔪᓂᒃ ᖃᐅᔨᓴᒐᔅᓴᑦᑖᕕᒋᔭᐅᓂᐊᓪᓗᑎᒃ ᐊᑯᓐᓂᖏᓐᓂ 2021 ᐊᒻᒪᓗ 2025 ᖃᓂᒋᔭᖏᓐᓂ ᐃᕗᔨᕕᐅᑉ ᐊᒻᒪᓗ ᖁᐊᖅᑕᐅᑉ ᐊᔾᔨᒌᖏᑦᑐᓄᑦ ᓇᓕᐊᓄᐊᑎᓪᓗᒋᑦ ᐱᓂᑉᐸᖑᓕᑦᑎᓪᓗᒋᑦ ᓇᓗᓇᐃᑦᑕᐅᓪᓗᑎᒃ ᖃᔨᒪᒋᐋᑦᑕᐅᓂᖏᓐᓄᑦ ᖃᐅᔨᒪᔾᔪᑎᒃᓴᓄᑦ (ᑎᑎᕋᖅᓯᒪᔪᑦ 7).

ᑯᐸᐃᒃ ᓄᓇᓕᖃᕐᕕᐊᓂ

ᑐᑭᓯᒋᒋᐊᕈᑏᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᓄᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ ᑲᓇᓐᓇᖓᓂ

ᑕᓯᐅᔭᖅᔪᐊᓂ ᐊᒻᒪ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ

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ᑎᑎᕋᖅᓯᒪᔪᑦ 7. ᑎᒥᙳᓂᖏᑕ ᑲᑎᓯᒪᐅᓂᖏᓐᓂᑦ ᖃᐅᔨᓇᓱᐊᑦᑎ ᐊᑐᓪᓗᓂ ᑎᒥᖑᕈᑎᑦ ᐃᓚᒌᑦᑐᓃᑦᑐᓂᑦ ᐊᒻᒪᓗ ᓄᑖᒥᑦ ᖃᐅᔨᔾᔪᑎᒡᓴᓂᒃ ᑲᑎᓯᒪᔪᓂᑦ ᓇᓗᓇᐃᔭᔅᓯᒪᔪᓂᒃ ᕿᑐᙵᖃᑦᑎᐅᔪᓂ Parent

et al. (2023) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓐᓄᑦ ᕿᓚᓗᒐᒃᑕᐅᔪᓂᒃ ᖃᓂᒋᔭᖏᓐᓂ ᓄᓇᓕᖏᑕ ᐃᕗᔨᕕᐅᑉ ᐊᒻᒪᓗ ᖁᐋᑦᑕᐅᑉ ᐊᑯᓐᓂᖏᓐᓂ 2021 ᐊᒻᒪᓗ 2025. Ns: ᐅᓄᓂᖏᑦ ᐃᒻᒥᒃᑰᖓᔪᑦ ᖃᐅᔨᓴᒐᔅᓴᐃᑦ; Nv: ᐅᓄᓐᓂᖏᑦ ᐊᔾᔨᒋᙱᑕᖏᑦ ᐊᖑᓇᓱᐊᑦᑕᐅᕕᖏᑕ ᐅᓪᓗᖏᑦ (ᖃᓄᐄᓗᕕᒋᔭᐅᔪᑦ); P: ᐅᓄᓐᓂᖏᑦ; WHB: ᐱᖓᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ, BEL-EHB: ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ, JAM: ᓯᕿᓂᕐᒥᐅᑦ, CSB: ᑎᓄᔾᔭᕐᕕᒃ, CI: ᖁᓚᓐᓇᖏᓐᓂᖏᑕ ᐊᑯᓐᓂᖓᓂ ᑐᙵᕕ ᐊᔾᔨᒌᖏᑦᑐᓂ ᐊᖑᓇᓱᐊᓂᐅᔪᓂᒃ ᖃᓄᐃᓘᓂᐅᔪᓂᒃ; CV: ᐅᓄᓂᕆᔭᐅᖏᓐᓇᕈᓐᓇᑦᑐᖅ ᐊᔾᔨᒌᒍᓐᓃᖃᑦᑕᓂᖏᓐᓂᒃ ᑐᙵᕕᖃᓪᓗᓂ ᐃᒻᒥᒃᑰᖓᔪᓂᒃ ᖃᐅᔨᓴᒐᔅᓴᓕᐊᕆᔭᐅᓯᒪᔪᓂᒃ (CVs)/ᐊᖑᓇᓱᐊᓂᒻᒥ ᖃᓄᐃᓘᕆᑎᒋᔭᐅᔪᓂ (CVv).

ᐃᓂᖓ ᓇᓪᓕᕈᑎᓂᖅ Ns/Nv WHB ᐅᓄᓐᓂᖏᑦ (%) BEL-EHB ᐱᕕᔅᓴᐅᔪᑦ (%) JAM ᐅᓄᓐᓂᖏᑦ (%) CSB ᐅᓄᓐᓂᖏᑦ (%)

P 95% CI CV P 95% CI CV P 95% CI CV P 95% CI CV

ᐃᕗᔨᕕᒃ

ᐅᑭᐅᖑᑐᖃᐅᓕᑦᑎᓪᓗᒍ

(15 ᒫᑦᓯ – 12 ᐊᐃᕆᓕ) 0/0 ᑐᑭᓯᒋᐊᕈᑎᑕᖃᖏᑦᑐᖅ – – ᑐᑭᓯᒋᐊᕈᑎᑕᖃᖏᑦᑐᖅ – – ᑐᑭᓯᒋᐊᕈᑎᑕᖃᖏᑦᑐᖅ – – ᑐᑭᓯᒋᐊᕈᑎᑕᖃᖏᑦᑐᖅ – –
ᐅᐱᕐᖓᓕᕋᑖᖅᑎᓪᓗᒍ

(13 ᐊᐃᕆᓕ – 18 ᒪᐃ) 0/0 ᑐᑭᓯᒋᐊᕈᑎᑕᖃᖏᑦᑐᖅ – – ᑐᑭᓯᒋᐊᕈᑎᑕᖃᖏᑦᑐᖅ – – ᑐᑭᓯᒋᐊᕈᑎᑕᖃᖏᑦᑐᖅ – – ᑐᑭᓯᒋᐊᕈᑎᑕᖃᖏᑦᑐᖅ – –
ᐅᐱᕐᖔᒃ (19 ᒪᐃ – 9 ᔪᓚᐃ) 42/13 69.9 42.8-90.7 18.0% 13.7 3.3-29.7 50.6% 14.4 1.0-42.5 75.6% 1.8 0.8-3.2 33.6%
ᐅᑭᐊᔅᓴᕋᑖᑦᑎᓪᓗᒍ

(01 ᐅᑐᐱᕆ – 27 ᐅᑐᐱᕆ) 0/0 ᑐᑭᓯᒋᐊᕈᑎᑕᖃᖏᑦᑐᖅ – – ᑐᑭᓯᒋᐊᕈᑎᑕᖃᖏᑦᑐᖅ – – ᑐᑭᓯᒋᐊᕈᑎᑕᖃᖏᑦᑐᖅ – – ᑐᑭᓯᒋᐊᕈᑎᑕᖃᖏᑦᑐᖅ – –
ᕿᑎᖓᓂ ᐅᑭᐊᔅᓴᑉ

(28 ᐅᑐᐱᕆ – 19 ᓄᕕᐱᕆ) 36/9 40.7 11.0-74.1 41.6% 54.4 20.1-86.4 32.3% 1.7 1.0-2.9 27.2% 3.2 0.7-8.6 58.7%
ᐅᑭᐊᔅᓵᑐᖃᐅᓕᑦᑎᓪᓗᒍ (20
ᓄᕕᐱᕆ – 11 ᑎᓯᐱᕆ) 3/2 ᑐᑭᓯᒋᐊᕈᑎᑕᖃᖏᑦᑐᖅ – – ᑐᑭᓯᒋᐊᕈᑎᑕᖃᖏᑦᑐᖅ – – ᑐᑭᓯᒋᐊᕈᑎᑕᖃᖏᑦᑐᖅ – – ᑐᑭᓯᒋᐊᕈᑎᑕᖃᖏᑦᑐᖅ – –

ᖁᐊᖅᑕᖅ

ᐅᐱᕐᖓᓕᕋᑖᖅᑎᓪᓗᒍ

(7 ᒪᐃ – 31 ᒪᐃ) 0/0 ᑐᑭᓯᒋᐊᕈᑎᑕᖃᖏᑦᑐᖅ – – ᑐᑭᓯᒋᐊᕈᑎᑕᖃᖏᑦᑐᖅ – – ᑐᑭᓯᒋᐊᕈᑎᑕᖃᖏᑦᑐᖅ – – ᑐᑭᓯᒋᐊᕈᑎᑕᖃᖏᑦᑐᖅ – –
ᐊᐅᔭᑉᐸᓪᓕᐊᓕᑦᑎᓪᓗᒍ

(1 ᔫᓂ – 24 ᔫᓂ) 39/23 78.2 55.5-93.9 12.9% 19.3 4.1-42.9 52.4% 1.3 0.5-2.7 40.3% 1.2 0.7-1.9 25.4%
ᐊᐅᔭᕋᑖᑦᑎᓪᓗᒍ

(25 ᔫᓂ – 19 ᔪᓚᐃ) 34/17 63.6 30.2-91.6 25.3% 8.5 0.2-26.9 93.8% 16.7 3.0-39.1 56.8% 11.2 0.6-34.2 81.5%
ᐅᑭᐊᔅᓴᕋᑖᑦᑎᓪᓗᒍ

(26 ᐅᑐᐱᕆ – 15 ᓄᕕᐱᕆ) 25/10 32.7 11.6-58.2 37.4% 62.4 32.7-86.8 22.9% 2.6 0.2-9.5 84.4% 2.3 0.2-7.8 76.0%
ᐅᑭᐊᒃᓵᑉ ᕿᑎᖓᓂ

(16 ᓄᕕᐱᕆ – 26 ᓄᕕᐱᕆ) 205/25 66.4 56.6-75.8 7.4% 11.4 1.7-28.8 62.5% 7.4 0.2-24.7 91.9% 14.8 8.9-21.8 22.4%
ᐅᑭᐊᔅᓵᑐᖃᐅᓕᑦᑎᓪᓗᒍ

(27 ᓄᕕᐱᕆ – 15 ᑎᓯᐱᕆ) 122/24 86.4 71.0-96.6 7.7% 6.8 0.3-21.7 87.2% 3.5 0.0-13.4 98.2% 3.3 0.1-10.9 91.1%
ᐅᐊᓐᓇᖓ
ᕿᑭᖅᑖᓗᑉ
ᓄᓇᕕᐅᓪᓗ
ᐃᑭᕋᓴᖓᒍᑦ

ᐅᐱᕐᖔᖅ

(01 ᕕᕝᕗᐊᕆ – 31 ᐋᒡᒌᓯ) 42/28 70.7 30.1-97.0 25.7% 6.5 0.5-18.9 75.9% 4.9 0.1-18.9 97.8% 17.9 0.2-59.8 93.0%

ᐅᑭᐊᔅᓵᖅ

(01 ᓯᑎᐱᕆ – 31 ᔭᓐᓄᐊᕆ) 78*/47 87.9 70.5-97.4 8.1% 0.6 0.2-1.2 40.8% 0.6 0.2-1.3 43.4% 10.9 1.9-28.4 60.0%
ᐅᑭᐊᔅᓴᕋᑖᑦᑎᓪᓗᒍ

(01 ᓯᑎᐱᕆ – 20 ᐅᑐᐱᕆ) 20/12 94.1 87.2-97.8 2.9% 1.4 0.3-3.0 41.2% 2.3 0.6-2.6 60.6% 2.2 0.1-4.6 37.0%
ᐅᑭᐊᔅᓵᑐᖃᐅᓕᑦᑎᓪᓗᒍ

(21 ᐅᑐᐱᕆ – ᔭᓐᓄᐊᕆ 31) 56/35 79.3 52.0-96.4 59.6% 0.9 0.3-1.9 46.1% 0.7 0.3-1.3 33.9% 19.1 2.9-46.2 59.6%
*ᒪᕐᕉᒃ ᖃᐅᔨᓴᒐᔅᓵᒃ ᐱᔭᐅᓚᐅᑦᑐᒃ ᐅᑐᐱᕆᒥ ᓇᓗᓇᐃᔅᓯᒪᓚᐅᖏᒻᒪᑎᒃ ᐱᔭᐅᔪᒥᓂᐅᕕᖏᓐᓂᒃ ᐅᓪᓗᖓᓂᑦ ᐊᒻᒪᓗ ᐊᑐᑦᑕᐅᒍᒪᒍᓐᓃᑦᑐᑎᒃ ᐱᒋᐊᓕᕋᑕᓂᖓᓂᒃ/ᐃᓱᓕᓕᓂᖓᓂ ᐅᑭᐋᔅᓴᒥ
ᖃᐅᔨᓴᒐᔅᓴᓕᐅᓂᒻᒥ.

ᑯᐸᐃᒃ ᓄᓇᓕᖃᕐᕕᐊᓂ

ᑐᑭᓯᒋᒋᐊᕈᑏᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᓄᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ
ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ ᐊᒻᒪ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ

19

ᐃᓚᖓ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᐅᐱᕐᖔᒃᑯᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᐃᕗᔨᕕᒃᒥ (13.7%, 95% CI: 3.3-29.7%) ᐊᒻᒪᓗ ᖁᐊᖅᑕᒻᒥ (19.3%; 95% CI: 4.1-42.9%) ᐊᔾᔨᒋᙱᓗᐋᓚᐅᖏᒻᒪᒋᑦ ᐊᒻᒪᓗ ᐊᔾᔨᐅᓂᔅᓯᐅᕋᔅᓴᐅᓪᓗᑎᒃ ᐅᓂᒃᑳᓕᐊᕆᔭᐅᓯᒪᔪᓄᑦ ᓂᒋᐊᓂ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ ᐊᑯᓐᓂᖏᓐᓂᒃ 1985-2021 (12.3%; 95% CI: 8.6-16.5%; Parent et al. 2023). ᖁᐋᖅᑕᒻᒥ, ᐃᓚᖓ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᐅᑭᐊᔅᓵᒃᑯᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᖃᔅᓰᓐᓇᕈᒃᑲᓂᓚᐅᒻᒪᑕ ᐱᒋᐊᓕᕋᑖᓂᖓᓂᒃ ᐅᑭᐅᔅᓵᑉ (62.4%; 95% CI: 32.7-86.8% ᑕᐅᕙᖓᑦ 26 ᐅᑎᐱᕆ – 15 ᓄᕕᐱᕆ) ᕿᑎᖓᓄᑦ (11.4%; 95% CI: 1.7-28.8% ᑕᐅᕙᖓᑦ 16 ᓄᕕᐱᕆ – 26 ᓄᕕᐱᕆ) ᐅᑭᐅᓕᑦᑎᓪᓗᒍ (6.8%; 95% CI: 0.3-21.7% 27 ᓄᕕᐱᕆ – 15 ᑎᓯᐱᕆ). ᑕᒪᓐᓇ ᖃᓄᐃᓕᕙᓪᓕᐊᓂᖓ ᐊᔾᔨᐸᓗᒋᒻᒪᒍ ᑕᐃᔅᓱᒪ ᐅᓂᒃᑳᓕᐊᕆᔭᐅᓯᒪᔫᑉ ᑭᖑᓪᓕᑉᐹᒥ ᖃᐅᔨᓴᖅᑕᐅᓂᕆᓚᐅᑦᑕᖏᓐᓂ ᓂᒋᑉᐸᓯᐊᓂ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᑕ ᐃᓗᐃᑦᑑᓇᑦᑕᐅᓪᓗᓂ (ᑕᑯᓗᒍ ᑎᑎᕋᖅᓯᒪᔪᑦ 7 ᐅᑯᓇᓂ Parent et al. 2023). ᑕᐃᒪᐃᑲᓗᐊᑦᑎᓪᓗᒍ ᖃᔅᓰᓐᓇᕈᒃᑲᓂᓐᓂᖏᑦ ᐅᓄᓐᓂᖏᑕ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᑦ ᑎᑭᓴᕋᐃᓐᓂᔅᓴᐅᖅᑰᔨᒻᒪᑕ ᐊᒻᒪᓗ ᕿᓚᒻᒥᐅᓂᔅᓴᐅᖂᔨᓪᓗᑎᒃ ᒫᓐᓇᕋᑖᒍᓚᐅᖅᑐᖅ ᐊᕐᕌᒍᓂ (2021-2025). ᑕᒪᓐᓇ ᑕᐃᒪᐃᓕᑎᑕᐅᒍᓐᓇᒻᒪᖔᑦ ᒥᑭᓂᔅᓴᐅᓕᓂᖏᓄᑦ ᐊᖏᓂᖏᑕ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᐱᕕᔅᓴᐅᓂᖏᑦ ᐱᓕᕆᐋᕆᔭᐅᒋᐋᖃᓕᑦᑎᑦᑎᒻᒪᑦ ᑕᐅᕗᖓᒃᑲᓂᖅ ᖃᐅᔨᓇᓱᐋᑕᐅᒋᐊᖃᓕᓪᓗᑎᒃ. ᐃᓚᖓ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᕿᑎᖓᓂ ᐅᑭᐊᒃᓵᑉ (28 ᐅᑐᐱᕆ – 19 ᓄᕕᐱᕆ) ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᐃᕗᔨᕕᒻᒥ (54.4%; 95% CI: 20.1-86.4) ᐊᔾᔨᐅᓂᔅᓯᐅᕋᔅᓴᐅᒻᒪᑕ ᖃᐅᔨᒪᔭᐅᒋᐋᓚᐅᑦᑐᓄᑦ ᐱᒋᐊᓕᕋᑖᓂᖓᓂ ᐅᑭᐊᔅᓵᖓᑕ ᖁᐊᖅᑕᕐᒥ, ᐊᒻᒪᓗ ᐅᓄᓐᓂᔅᓴᐅᓪᓗᑎᒃ ᐃᓚᖏᓐᓂᒃ ᐅᖃᐅᑎᒋᔭᐅᓚᐅᑦᑐᓂᒃ ᓂᒋᐊᓂ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᑕ ᐃᓗᐃᑦᑑᑎᑕᐅᓗᓂ ᖃᐅᔨᓴᑦᑕᐅᕋᑖᓚᐅᓂᖏᓐᓂ (ᑎᑭᐅᒪᓗᑎᒃ: 10.4-51.5%-ᖏᓄᑦ; ᑕᑯᓗᒍ ᑎᑎᕋᖅᓯᒪᔪᑦ 7 ᐅᑯᓇᓂ Parent et al. 2023). ᐱᔾᔪᑎᒋᓪᓗᒍ ᖃᐅᔨᓴᒐᔅᓴᐃᑦ ᐊᖏᓂᖏᑦ ᒥᑭᔫᓂᖏᓄᑦ ᐊᓯᖏᓐᓂᒃ ᐅᑭᐋᔅᓵᖑᑎᓪᓗᒍ, ᐃᓱᒪᓕᐅᕈᑎᒋᒐᔅᓴᐅᖏᒻᒪᑕ ᐃᒪᓐᓇᐅᒐᓗᐋᒻᒪᖔᑕᓗᓂᑦ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᑦ ᓱᕐᕋᒃᓯᒪᙱᓚᑦ ᐱᓪᓗᐊᑕᐅᓂᖏᑦ ᐱᕕᔅᓴᐅᓂᖏᑕ ᕿᓚᓗᒐᑦᑕᐅᓗᑎᒃ ᖃᓂᒋᔭᖓᓂ ᐃᕗᔨᕕᐅᑉ ᐊᑐᓂᓕᒫᖓᓂ ᓇᓪᓕᕉᑎᓂᖅ, ᐅᕝᕙᓘᓐᓃᑦ ᐅᓄᓐᓂᖏᑦ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᑦ ᖃᔅᓰᓐᓇᕈᕋᔭᓐᓂᑉᐸᑕ ᑕᐃᒪᓐᓇᑦᑕᐅᖅ ᖃᐅᔨᔭᐅᓯᒪᒻᒪᑕ ᖁᐊᑦᑕᒻᒥ. ᑕᐃᒪᐃᓂᖓᓄᑦ, ᐊᒥᒐᓂᖏᓄᑦ ᖃᐅᔨᓴᒐᔅᓴᐃᑦ ᐊᖏᓂᖏᑦ ᓴᓪᓗᓐᓂ ᐊᒻᒪᓗ ᑲᖏᖅᓱᔪᐋᒻᒥ ᑕᐃᒪᑦᑎᐊᕈᓐᓃᑦᑎᑦᑎᒪᑕ ᖃᐅᔨᓴᑕᐅᓂᖏᓐᓂᒃ ᐱᕕᔅᓴᐅᔪᑦ ᑲᑎᓯᒪᓂᖏᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᐊᒻᒪᓗ ᖃᓄᑐᐃᓐᓇᖅ ᐱᕕᖃᓂᒻᒥ ᖃᓄᐃᓕᕙᓪᓕᐊᓂᖏᑦ ᐃᓗᐊᓂ ᐅᑭᐋᔅᓴᒃᑯᑦ ᓇᓪᓕᕉᑎᓂᖓᓂ.

ᑎᓄᔾᔭᕐᕕᐅᑉ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᐱᐅᓈᕈᓐᓃᑦᑎᑦᑎᒻᒪᑕ ᐃᓚᖓᓂᒃ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓐᓂᒃ ᕿᓚᓗᒐᑦᑕᐅᔪᓂᒃ ᐊᕙᑎᖏᓐᓂ

ᐃᕗᔨᕕᐅᑉ ᐊᒻᒪᓗ ᖁᐋᖅᑕᐅᑉ ᐃᓘᓐᓇᑲᓴᖏᓐᓂ ᓇᓪᓕᕇᑎᓂᓕᒪᑦ (ᑎᑎᕋᖅᓯᒪᔪᑦ 7). ᑕᐃᒪᐃᒃᑲᓗᐊᑦᑎᓪᓗᒍ, ᖃᐅᔨᒪᒋᐋᕋᔅᓴᐅᓪᓗᐊᒻᒪᑦ ᑕᐃᒃᑯᐊ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᑎᓄᔾᔭᕐᕕᐅᑉ ᐅᓄᓐᓂᖏᓐᓃᙵᑦᑐᑦ ᑭᒡᒐᑦᑐᐃᒻᒪᑕ 14.8%-ᖏᓐᓂᒃ (95% CI: 8.9-21.8%) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓐᓄᑦ ᕿᓚᓗᒐᒃᑕᐅᔪᓂᒃ ᖁᐊᑦᑕᒻᒥ ᐊᑯᓂᖏᓐᓂ ᓄᕕᐱᕆ 16 ᐊᒻᒪᓗ 26 ᐊᕐᕌᒍᓚᐅᑦᑐᓂ. ᑖᒃᑯᓇᙵᑦ 205−ᓂᑦ ᖃᐅᔨᓴᒐᔅᓴᓕᐅᕕᐅᓯᒪᔪᓂᒃ ᓄᐋᑕᐅᓚᐅᑦᑐᓂᒃ ᕿᑎᖓᓂ ᐅᑭᐊᔅᓵᖓᓂ ᖃᓂᖏᔭᖏᓐᓂ ᖁᐊᖅᑕᐅᑉ, 1, 3 ᐊᒻᒪᓗ 3 ᖃᐅᔨᓴᒐᔅᓴᐃᑦ ᐱᔭᐅᓚᐅᑦᑐᑦ 2021−ᒥ, 2023−ᒥ ᐊᒻᒪᓗ 2024−ᒥ, ᐃᒻᒥᒃᑰᖓᓗᑎᒃ, ᐱᖃᓚᐅᒻᒪᑕ ᑎᒥᖑᕈᑎᑦ ᐃᓚᒌᑦᑐᓃᑦᑐᓂᒃ ᐱᖃᑦᑎᑐᐊᖑᓪᓗᑎᒃ ᑎᓄᔾᔭᕐᕕᐅᑉ ᐅᓄᓐᓂᐊᓐᓂ. ᑖᒃᑯᓇᙵᑦ, ᑕᓪᓕᒪᑦ ᓄᓂᐅᓚᐅᑉᐳᑦ ᐊᒻᒪᓗ ᒪᕐᕉᒃ ᐊᖑᑎᐅᓪᓗᑎᒃ. ᑖᓐᓇ ᐊᑐᓕᑦᑎᑦᑎᒻᒪᑕ ᑎᒥᙳᓂᖓᑕ ᑲᑎᓯᒪᓂᖏᓐᓂᒃ ᖃᐅᔨᓴᔅᓯᔨᑦ (GMA) ᖃᑯᑦᑕᑦ ᑎᓄᔾᔭᕐᕕᐅᑉ ᕿᓚᓗᒐᓐᓂᒃ ᖁᐋᑦᑕᒻᒥ ᑕᐃᒪᐃᓕᕚᓪᓗᓚᐅᖏᑦᑐᖅ ᖃᓄᐃᓘᓂᕆᔭᐅᔪᓂ. ᕿᓚᓗᒐᑦᑕᐅᓪᓗᐋᑕᓱᑦ ᐅᓄᓐᓂᖏᑦ ᑎᑎᖅᑕᐅᓯᒪᔪᑦ ᖃᓂᒋᔭᖏᓐᓂ ᖁᐋᑦᑕᐅᑉ ᕿᑭᖓᓂ ᐅᑭᐊᔅᓵᖑᑎᓪᓗᒍ ᐊᑯᓐᓂᖏᓐᓂ 20221

- 2025 ᐃᒪᓐᓇᑎᒋᐅᒻᒪᑕ 74 ± 6 ᖃᑯᑦᑕᑦ
ᕿᓚᓗᒐᐃᑦ. ᑖᓐᓇ ᒪᓕᑦᑎᐊᔅᓯᒪᒻᒪᑦ ᐊᕐᕌᒍᑕᒪᑦ ᐱᔭᐅᓪᓗᐊᑕᓲᓄᑦ 11 ± 1 ᑎᓄᔾᔭᕐᕕᐅᑉ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᕿᓚᓗᒐᒃᑕᐅᖃᑦᑕᑦᑐᓂᒃ ᐊᕐᕌᒍᑕᒪᑦ ᓄᓇᕕᐅᑉ ᐊᖑᓇᓱᐋᑦᑎᖏᓄᑦ ᑭᓚᓗᒐᑦᑕᐅᖃᑦᑕᑦᑐᓂᒃ ᖁᐊᖅᑕᕐᒥ ᕿᑎᖓᓂ ᐅᑭᐋᔅᓵᒃᑯᑦ. ᑎᓄᔾᔭᕐᕕᐅᑉ ᐅᓄᓐᓂᖏᑦ ᑎᑎᑦᑕᐅᓯᒪᕗᑦ ᐅᓗᕆᐋᓇᑦᑐᒦᑎᑕᐅᓂᕋᒃᑕᐅᓪᓗᑎᒃ ᐅᑯᑎᒎᓇ ᓂᕐᔪᑎᑦ ᖁᒃᓴᓇᑦᑐᒦᓂᕋᑕᐅᔪᓄᑦ ᒪᓕᒐᒻᒥ, ᒥᔅᓴᐅᓴᑦᑕᐅᓯᒪᓪᓗᑎᒃ ᐅᓄᓐᓂᖏᑕ ᐊᒥᓲᓂᖃᓪᓗᑎᒃ 1,090 ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓐᓂᒃ 2018−ᒥ (Watt et al. 2021).
ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᑎᓄᔾᔭᕐᕕᐅᑉ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᐊᐅᓚᑕᐅᓯᒪᓕᒻᒪᑕ ᑕᐅᕙᙵᓂᑦ 1980−ᖏᓐᓂᑦ ᐊᒻᒪᓗ ᒪᓐᓇ ᐊᒥᓲᓇᑦᑕᐅᒍᓐᓇᓂᖏᑦ ᐃᒪᓐᓇᑎᒋᐅᕗᑦ 41 ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᐊᑐᓂ ᐊᕐᕌᒍᓂ ᑕᐃᒪᐃᑎᑕᐅᓪᓗᑎᒃ ᐸᓐᓂᖅᑐᑉ ᓄᓇᓕᖓᓄᑦ (Watt et al. 2021; Richard and Pike 1993).

ᐱᔾᔪᑎᒋᓪᓗᒍ ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᐊᒻᒪᓗ ᖃᐅᔨᒪᔭᐅᒋᐊᕈᑎᓂᒃ ᖃᐅᔨᒪᔪᑎᔅᓴᐃᑦ ᐅᐋᓇᖓᓂ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᑕ ᐊᒥᒐᒻᒪᑕ, ᐊᕐᕌᒍᑕᒪᑦ ᐱᔭᐅᑎᑕᐅᓂᖏᑦ ᖃᐅᔨᓴᒐᔅᓴᐃᑦ ᐱᔭᐅᓯᒪᔪᑦ ᐊᑐᓚᐅᑦᑐᓂ ᖁᓕᐅᔪᖅᑐᓂ ᐊᕐᕌᒍᓂ ᖃᐅᔨᓴᑦᑕᐅᓚᐅᒻᒪᑦ

1 ᐅᒥᐅᔭᒻᒥ ᐆᒪᔪᓂᐊᑎᖃᓚᐅᖏᒻᒪᑕ ᓄᓇᓕᖓᓂ ᖁᐊᖅᑕᐅᑉ 2021−ᒥ, ᑕᐃᒪᐃᒻᒪᑦ ᕿᓚᓗᒐᑦᑕᐅᓯᒪᔪᓂᒃ ᐅᓂᒃᑳᔅᓯᒪᔪᓕᐊᕆᓯᒪᔪᑦ ᐱᔭᕇᑦᑕᐅᓯᒪᙱᓚᑦ.

ᑯᐸᐃᒃ ᓄᓇᓕᖃᕐᕕᐊᓂ

ᑐᑭᓯᒋᒋᐊᕈᑏᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᓄᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ
ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ ᐊᒻᒪ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ

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ᓇᓪᓕᕇᑎᓂᒻᒥ ᖁᕝᕙᓯᓛᑦ (ᐊᔾᔨᙳᐊᖅ 6), ᑕᐃᒃᑯᐊᓗ ᐊᑐᑦᑕᐅᓚᐅᑦᑐᑎᒃ ᐊᒡᒍᐃᔾᔪᑎᒋᔭᐅᓪᓗᑎᒃ ᓇᓪᓕᕉᑎᓂᓐᓂᒃ ᓇᐃᓇᑦᑎᔅᓯᒪᓪᓗᑎᒃ ᐱᕕᖃᓂᑦ (ᑎᑎᕋᖅᓯᒪᔪᑦ 8). ᐊᒥᒐᓚᐅᒻᒪᑕ ᐱᕕᖃᓂᐅᑉ ᖃᓄᐃᓕᖓᓂᖏᑦ ᑕᐃᒃᑯᓇᓂ ᖃᐅᔨᓴᒐᔅᓴᓕᐊᕆᔭᐅᓯᒪᔪᓂ ᓄᐋᑕᐅᓚᐅᑦᑐᓂ ᐅᐱᕐᖔᒃᑯᑦ ᐊᒡᒍᑦᑕᐅᒐᔭᑉᐸᑦ ᑖᓐᓇ ᓇᓪᓕᕉᑎᓂᖅ ᒥᑭᔫᑕᐅᓂᔅᓴᐅᓕᑦᑎᑕᐅᓗᑎᒃ ᐱᕕᖃᓃᑦ. ᑕᐃᒪᐃᒃᑲᓗᐊᑦᑎᓪᓗᒍ, ᐅᑭᐊᔅᓵᒃᑯᑦ ᓇᓪᓕᕉᑎᓂᖅ ᐊᒡᒍᑦᑕᐅᓚᐅᒻᒪᑕ ᐱᒋᐊᓕᕋᑖᓂᖓᓅᖓᓕᑦᑎᑕᐅᓪᓗᓂ ᐅᑭᐊᔅᓵᖓᑕ (01 ᓯᑎᐱᕆ – 22 ᐅᑐᐱᕆ) ᐊᒻᒪᓗ ᐃᓱᓕᓕᑦᑎᓪᓗᒍ ᐅᑭᐊᔅᓵᖓ (23 ᐅᑐᐱᕆ – 31 ᔭᓐᓄᐊᕆ).

ᐊᔾᔨᙳᐊᖅ 6. ᖃᓂᒌᓂᖏᓐᓄᑦ ᐊᐅᓚᓂᕆᔭᐅᔪᖅ ᓈᒻᒪᑦᑎᑕᐅᓯᒪᔪᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᓄᑦ ᐅᓪᓗᖓᓄᑦ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓂᑦ ᖃᐅᔨᓴᒐᔅᓴᓕᐅᕕᒋᔭᐅᔪᓂᒃ ᐱᔭᐅᓚᐅᑦᑐᓂᒃ ᐅᐋᓇᖓᓂᒃ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᑕ (ᓲᕐᓗ, ᑭᒻᒥᕈᒻᒥ ᐊᒻᒪᓗ ᑭᙵᕐᓂ) ᐊᑯᓐᓂᖏᓐᓂ 1989 ᐊᒻᒪᓗ 2020 ᐊᑐᑦᑎᓪᓗᒍ A) ᐅᑭᐊᔅᓵᖅ ᐊᒻᒪᓗ B) ᐅᐱᕐᖔᒃ. ᓇᓪᓕᕉᑎᓂᑦ ᓴᙳᖓᓂᖏᑦ ᖃᐅᔨᓴᑦᑕᐅᓚᐅᒻᒪᑕ ᖁᕝᔭᓯᓛᓂ ᒪᓕᑦᑎᐊᔅᓯᒪᔪᑦ ᖃᖓᒃᑰᓂᖏᓄᑦ ᖃᑯᑦᑕᐃᑦ ᕿᓚᓗᒐᐃᑦ ᓇᓕᐋᓄᐋᓂᖏᓐᓂᒃ. ᑎᑎᑦᑕᓛᓯᒪᔪᑦ ᑕᑯᔅᓴᐅᑎᑦᑎᒻᒪᑕ ᓄᖅᑲᑦᑎᑕᐅᕕᖏᓐᓂᒃ ᐅᓪᓗᖏᑕ ᓇᓗᓇᖏᑦᑎᐊᓂᖏᓄᑦ ᓇᓪᓕᕉᑎᓂᒻᒥ ᖁᕝᕙᓯᓛᓂᒃ ᑕᐃᒃᑯᐊ ᓴᖅᑭᒃᑲᓂᖃᑦᑕᔅᓯᒪᓪᓗᑎᒃ ᐊᕐᕌᒍᒥᒃ ᐊᕐᕌᒍᒃᑲᓂᒻᒧᑦ ᐊᒻᒪᓗ ᐊᑐᑦᑕᐅᓯᒪᓪᓗᑎᒃ ᐊᒡᒍᐃᔾᔪᑎᒋᔭᐅᓪᓗᑎᒃ ᓇᓪᓕᕉᑎᓂᓐᓂᒃ ᓇᐃᑦᑑᑕᐅᓂᔅᓴᐅᓕᑦᑎᑦᑎᒍᑎᒋᔭᐅᓪᓗᑎᒃ ᑎᑭᙳᓂᖏᑕ ᑲᑎᓯᒪᓂᖏᓐᓂᒃ ᖃᐅᔨᓴᔅᓯᒍᑎᒋᔭᐅᓪᓗᑎᒃ. ᐅᑭᐊᔅᓵᒃᑯᑦ ᓇᓪᓕᕉᑎᓂᖅ ᐱᒋᐊᔅᓯᒪᒻᒪᑦ ᓯᑎᐱᕆ 1−ᒥᑦ ᑎᑭᓪᓗᒍ ᔭᓐᓄᐊᕆ 31−ᒧᑦ ᑭᖑᓂᖓᓂ ᐊᕐᕌᒍᑉ, ᑕᒪᓐᓇᓕ ᐅᐱᕐᖔᒃᑯᑦ ᓇᓪᓕᕉᑎᓂᖅ ᐱᒋᐊᓲᖑᒻᒪᑦ ᕕᕝᕗᐊᕆ 1−ᒥᑦ ᑎᑭᓪᓗᒍ ᐋᒡᒌᓯ 31−ᖓ.

ᑎᑎᕋᖅᓯᒪᔪᑦ 8. ᖁᕝᕙᓯᓛᑦ ᓇᓪᓕᕉᑎᓂᒻᒥᒃ ᓇᓕᐋᓄᐋᑦᑎᑕᐅᓂᖏᓐᓂ ᖃᐅᔨᓴᒐᓴᐃᑦ ᓄᐋᑕᐅᓯᒪᔪᑦ ᑭᒻᒥᕈᒻᒧᑦ ᐊᒻᒪᓗ ᑭᙵᓐᓄᑦ ᓄᓇᓕᓐᓂᒃ ᐊᑯᓐᓂᖏᓐᓂ 1989-2020. ᐊᑐᓂ ᐱᕕᖃᓂᐅᔪᓐᓄᒃ, ᐅᓄᓐᓂᖏᑦ ᒫᓐᓇᕋᑖᖑᓚᐅᑦᑐᖅ ᑎᒥᙳᓂᖏᓂᒃ ᖃᐅᔨᓴᒐᔅᓯᓕᐊᖑᓯᒪᔪᑦ ᐱᔭᐅᓚᐅᑦᑐᑦ
ᓇᓗᓇᐃᑦᑕᐅᕗᑦ.

ᓇᓪᓕᕈᑎᓂᖅ ᐅᓪᓗᖓᑕ ᑎᑭᐅᒪᔭᖓ

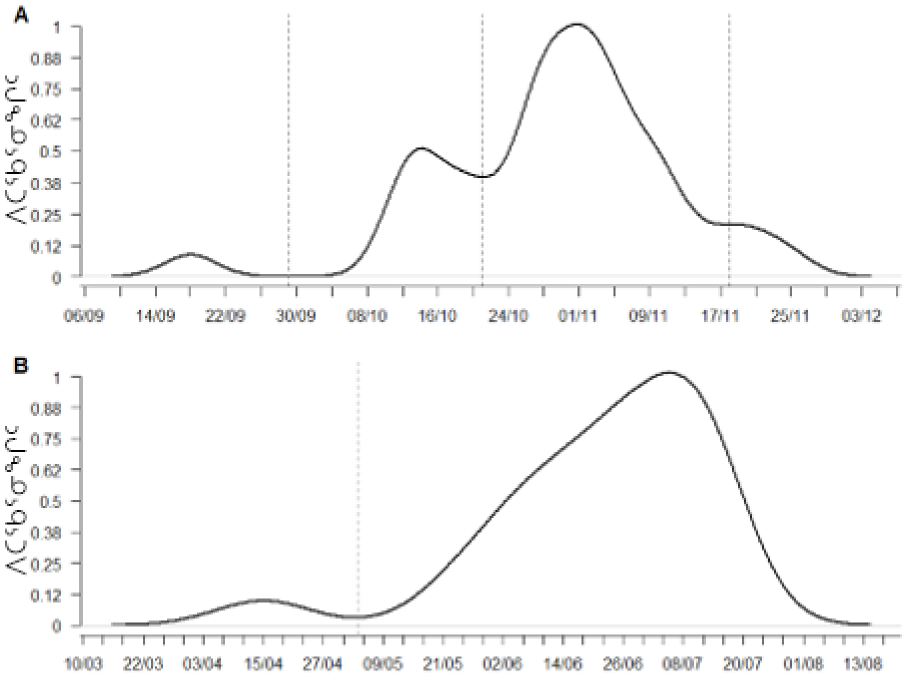
ᐅᓄᓐᓂᖏᑦ ᒫᓐᓇᕋᑖᖑᓚᐅᑦᑐᖅ
ᑎᒥᙳᓂᖏᑕ ᖃᐅᔨᓴᒐᔅᓴᓕᐊᕆᔭᐅᓂᖏᑕ
ᐊᑐᐃᓐᓇᓂᖏᑦ

ᐅᐱᕐᖔᒃ 11 ᐊᐃᕆᓕ – 03 ᒪᐃ 2

04 ᒪᐃ – 17 ᔪᓚᐃ 40

ᐅᑭᐊᔅᓵᖅ

01 ᓯᑎᐱᕆ – 28 ᓯᑎᐱᕆ 2
28 ᓯᑎᐱᕆ – ᐅᑐᐱᕆ 20 19
21 ᐅᑐᐱᕆ – 18 ᓄᕕᐱᕆ 51
18 ᓄᕕᐱᕆ – 01 ᑎᓯᐱᕆ 4



ᑯᐸᐃᒃ ᓄᓇᓕᖃᕐᕕᐊᓂ

ᑐᑭᓯᒋᒋᐊᕈᑏᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᓄᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ
ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ ᐊᒻᒪ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ

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ᐅᓄᓐᓂᔅᓴᐃᑦ 70%-ᖏᓐᓂᒃ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᐅᐋᓇᖓᓂ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂᑦ ᐃᓚᒋᔭᐅᓚᐅᒻᒪᑕ ᐅᑯᓄᖓ WHB (ᐱᖓᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᑕ) ᐅᓄᓐᓂᖏᓄᑦ. ᐃᓘᓐᓇᓕᒫᖏᓐᓂ ᓇᓪᓕᕉᑎᓂᑦ, ᐃᓚᖏᑦ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ) ᒥᑭᔫᓚᐅᒻᒪᑕ ᐊᒻᒪᓗ ᐊᑉᐸᓯᓂᔅᓴᐅᓪᓗᑎᒃ ᑭᒡᓕᓕᓯᒪᓂᖏᑦ ᖁᓚᓐᓇᖏᓐᓂᖏᑕ ᐊᑯᓐᓂᖓ ᖃᓂᔅᓴᓂᔅᓴᐅᓚᐅᒻᒪᑦ ᑭᓱᑕᖃᖏᓐᓂᖓᓄᑦ (0.6%, 95% CI: 0.2-1.2) ᐅᑭᐊᔅᓵᒃᑯᑦ ᐊᒻᒪᓗ 6.5%, 95% CI: 0.5-18.9 ᐅᐱᕐᖔᒃᑯᑦ). ᐊᔾᔨᓪᓗᐊᐸᓗᒋᓪᓗᓂᐅᒃ ᓂᒋᐊᑕ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᑕ ᕿᑎᖓᓂ ᐅᑭᐊᔅᓵᒃᑯᑦ, ᑎᓄᔾᔭᕐᕕᐅᑉ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᑭᒡᒐᑦᑐᐃᓚᐅᒻᒥᒻᒪᑕ ᐱᒻᒪᕆᐋᓗᓐᓂᒃ ᐅᓄᓐᓂᖏᓐᓂᒃ (19.1%; 95% CI: 2.9-46.2%) ᐅᐋᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐋᓂᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᓂᒃ ᑕᐅᕙᓂ 21 ᐅᑐᐱᕆ ᑎᑭᓪᓗᒍ 31 ᔭᓐᓄᐊᕆ. ᑕᒪᒃᑯᓇᓂ 51 ᖃᐅᔨᓴᒐᔅᓴᓂᒃ ᑕᐅᕙᙵᑦ ᐅᐋᓐᓇᖓᓂᑦ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂᑦ ᐃᓱᓕᓕᑦᑎᓪᓗᒍ ᐅᑭᐊᒃᓴᖓ, ᐊᑕᐅᓯᖅ ᑎᒡᒐᒃ ᐱᔭᐅᓪᓗᓂ 2001−ᒥ ᐱᖃᑦᑎᑐᐊᖅ ᑎᒥᖑᕈᑎᑦ ᐃᓚᒌᑦᑐᓃᑦᑐᑦ ᐅᑯᓇᙵᑦᑐᑦ ᑎᓄᔾᔭᕐᕕᒃ, ᑕᐃᒪᐃᒻᒪᑦ ᐃᑲᔪᑦᑐᑎᒃ ᑎᒥᙳᓂᖓᑕ ᑲᑎᓯᒪᓂᖏᓐᓂᒃ ᖃᐅᔨᓴᔅᓯᔨᑦ (GMA) ᒥᔅᓴᐅᓴᑦᑕᐅᓂᖏᓐᓂᒃ. ᑕᐃᒪᐃᑎᑕᐅᓪᓗᑎᒃ ᐊᔾᔨᒌᑦᑎᐊᖏᓐᓂᖏᓐᓄᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᓂᒃ ᐅᖃᐅᑎᒋᔭᐅᓯᒪᔪᓄᑦ ᐅᐋᓇᖓᓂ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ ᐊᑐᕋᑖᓚᐅᑦᑐᓂ ᐊᕐᕌᒍᓂ (ᐃᒻᒥᒃᑰᖓᓂᖅ 3), ᐊᔪᓐᓇᑲᓴᒻᒪᑦ ᒥᔅᓴᐅᓴᒐᓱᒋᐋᖏᑕ ᐊᕐᕌᒍᑕᒪᑦ ᐅᓄᓐᓂᕆᓲᖏᑦ ᑎᓄᔾᔭᕐᕕᐅᑉ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓐᓂᒃ ᑖᔅᓱᒪ ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᑭᒡᒐᑦᑐᑦᑕᖏᑦ.

ᖃᖓᑦᑕᑦᑎᑕᐅᓯᒪᔪᒃᑯ ᖃᐅᔨᒪᒋᐊᔅᓯᓂᒻᒧᑦ ᖃᐅᔨᒪᔾᔪᑎᒃᓴᑦ

ᐊᑯᓐᓂᖏᓐᓂ ᔪᓚᐃ ᐊᒻᒪᓗ ᐋᒡᒌᓯ 1993, 1999, ᐊᒻᒪᓗ 2002 ᑎᑭᓪᓗᒋᑦ 2004, ᐅᓄᓂᖃᑦᑐᓂᒃ 35−ᓂᒃ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓐᓂᒃ ᐱᔭᐅᔪᖃᓚᐅᒻᑦ ᑲᓇᓐᓇᑉᐸᓯᖏᓐᓂ ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐋᑕ (ᓲᕐᓗ, ᓇᔅᑕᐳᑲᒥ ᐊᒻᒪᓗ ᐊᕐᕕᕋᓛᑉ ᑰᖏᓐᓂ) ᐊᒻᒪᓗ ᐋᖅᑭᔅᓯᕕᒋᔭᐅᓪᓗᑎᒃ ᖃᖓᑦᑕᑦᑎᑕᐅᓯᒪᔪᒃᑯᑦ ᓂᕕᖓᑖᓕᔅᓯᒍᑎᓂᒃ [SPOT, SDR-16 (Wildlife Computers Ltd, ᐅᕆᐊᑦᒪᐅᓐᑦ, ᐅᐋᔅᓯᖕᑕᓐ, ᐊᒥᐊᓕᑲᐃᑦ ᓄᓇᖓᓐᓂ ᐅᕝᕙᓘᓐᓃᑦ SMRU (ᑕᑯᓗᒋᑦ ᐳᐃᔨᓂᒃ ᖃᐅᔨᓴᐊᓂᕐᒥ ᐱᓕᕆᔨᑦ, ᓴᐃᑦ ᐋᓐᑐᕈᔅ, ᑮᖕ ᓄᓇᖓᓂ)] ᐋᖅᑭᕕᔅᓯᒪᓪᓗᑎᒃ ᖃᕝᕙᓯᓂᖓᓂ ᑭᒡᓕᖓᑕ. ᓇᒦᒻᒪᖔᑕ ᖃᐅᔨᒪᔾᔪᑎᑦ ᐱᔭᐅᓚᐅᔅᓯᒪᒻᒪᑕ ARGOS ᖃᖓᑦᑕᑦᑎᑕᐅᓯᒪᔪᒃᑯᑦ, ᐊᒻᒪᓗ ᐋᖅᑭᔅᓱᑦᑕᐅᑦᑎᐊᑦᑐᑎᒃ ᐅᖃᐅᑎᒋᔭᐅᓯᒪᔪᒃᑯᑦ ᐆᒧᖓ Bailleul et al. (2012). ᖃᐅᔨᒪᔭᐅᒋᐋᓂᖏᑕ ᐊᑯᓂᐅᓂᖓ ᑎᑭᐅᒪᓚᐅᒻᒪᑦ ᐅᓪᓗᒐᓴᓐᓂᒃ ᑎᑭᓪᓗᒋᑦ ᖃᔅᓯᑲᓪᓚᒪᕆᑦ ᑕᖅᑮᑦ, ᐃᒪᓐᓇᑎᒋᐅᓪᓗᑎᒃ 129 ᐅᓪᓗᐃᑦ. ᖃᐅᔨᒪᔭᐅᓂᖏᑦ ᐱᒋᐊᓪᓗᑎᒃ 18 ᐃᒻᒥᒃᑰᖓᔪᓂᒃ ᖃᐅᔨᒪᓇᔅᓯᑎᑦᑎᓚᐅᒻᒪᑕ ᐅᑭᐊᔅᓵᒃᑯᑦ ᓇᓕᐋᓄᐋᓂᖏᓐᓂᒃ ᑕᐅᕗᖓ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ.

ᓈᓴᐅᓯᕆᐋᕆᓗᒋᑦ ᐃᖏᕐᕋᓂᖏᑦ ᓂᕕᖓᑖᓕᑦᑕᐅᓯᒪᔪᑦ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᐃᖏᕐᕋᓂᕆᓚᐅᑦᑕᖏᑦ ᓄᓇᓕᒻᒥᒃ ᐊᓯᖏᓐᓄᓪᓗ ᑕᒪᐅᓈ ᓂᒋᑉᐸᓯᖓᒍ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᑕ ᐱᔭᐅᑎᑦᑎᒻᒪᑕ ᐊᖏᔪᐋᓗᓐᓂᒃ ᑐᑭᓯᓂᐅᔪᓂᒃ ᐊᑯᓂᐅᓂᕆᓲᖏᓐᓂᒃ EHB (ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᓇᓕᐋᓄᐋᓂᕆᕙᒃᑕᖏᓐᓂᒃ. ᓂᒋᑉᐸᓯᖓᓂ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓ ᐊᒡᒍᑦᑕᐅᓚᐅᒻᒪᑦ ᑎᓴᒪᐅᓕᔭᐅᓪᓗᑎᒃ ᒥᔅᓴᐅᑦᑎᑕᐅᒐᓚᓪᓗᑎᒃ ᐊᖑᓇᓱᐋᕐᕕᐅᕙᒃᑐᓂᒃ ᖃᓂᒋᔭᖏᓐᓂ ᐊᑐᓂ ᓄᓇᓕᑦ (ᐊᔾᔨᙳᐊᖅ 7). ᓇᐅᒃᑰᓂᖏᑦ ᖃᐅᔨᔭᐅᓚᐅᒻᒪᑕ ᑕᒪᑯᓄᖓ ᓇᐅᒃᑰᕕᒋᔭᖏᓐᓂᒃ ᐊᒻᒪᓗ ᑎᑭᐅᑎᒐᔭᓐᓂᖏᑦ ᐊᒻᒪᓗ ᕿᒪᕉᑎᓕᕋᔭᓐᓂᖏᑦ ᐊᑐᓂ ᓇᒦᓂᐅᔪᓂ ᐊᒻᒪᓗ ᐊᑐᓂ ᐃᒻᒥᒃᑰᖓᔪᑦ ᓇᓗᓇᐃᔭᑦᑕᐅᓚᐅᑦᑐᑎᒃ (ᑎᑎᕋᔅᒪᓂᖓ 9).

ᑯᐸᐃᒃ ᓄᓇᓕᖃᕐᕕᐊᓂ

ᑐᑭᓯᒋᒋᐊᕈᑏᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᓄᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ
ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ ᐊᒻᒪ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ

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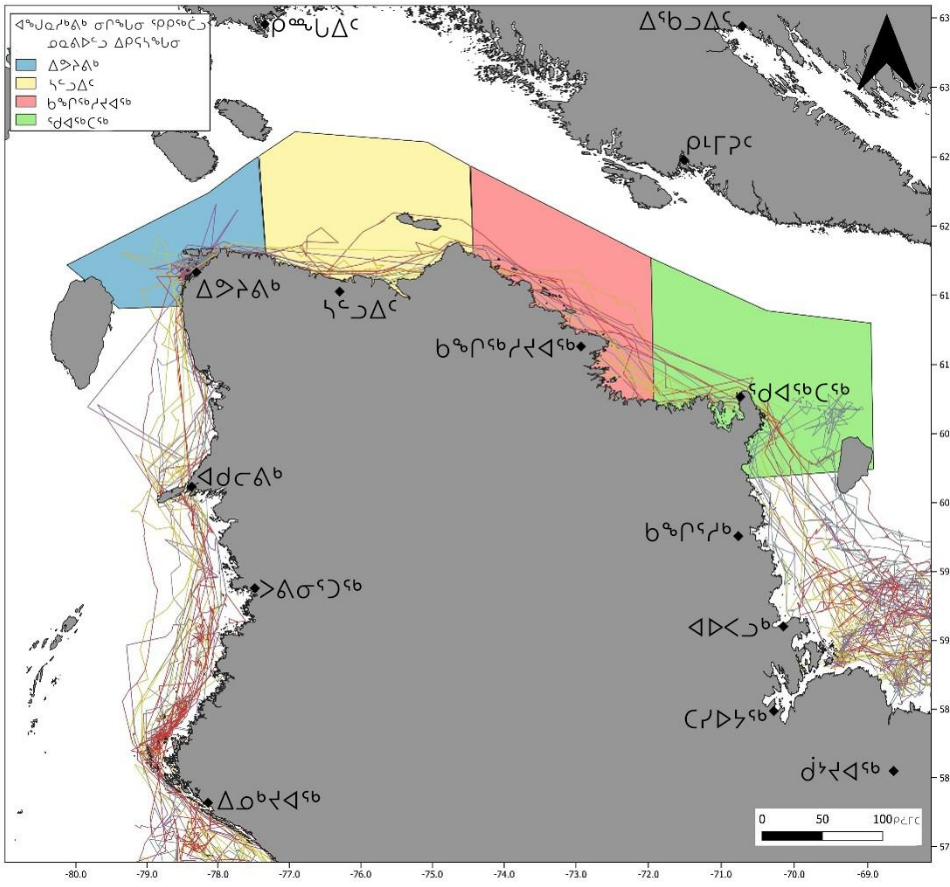
ᐊᔾᔨᙳᐊᖅ 7. ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ ᐊᐅᓚᑦᑎᕕᒋᔭᐅᔪᖅ ᐊᒡᒍᑦᑕᐅᓚᐅᒻᒪᑦ ᑎᓴᒪᐅᓕᔭᐅᓪᓗᓂ ᐊᕕᑦᑐᔅᓯᒪᐅᓂᖏᑦ ᒥᒃᓴᐅᑎᑦᑎᑕᐅᒋᐋᒐᓚᓪᓗᑎᒃ ᐊᖑᓇᓱᐊᕝᕕᐅᕙᑦᑐᓄᑦ ᑎᑭᐅᒪᔭᖏᓐᓂ ᐊᑐᓂ ᓄᓇᕕᒃᒥ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ ᓄᓇᓕᓐᓂᒃ. ᑕᒪᒃᑯᐊ ᐊᕕᔅᓯᒪᓂᑦ ᐊᑐᑦᑕᐅᓚᐅᒻᒪᑕ ᖃᐅᔨᔾᔪᑎᒋᔭᐅᒋᐊᓗᑎᒃ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓐᓂᒃ ᖃᐅᔨᒪᔾᔪᑎᒃᓴᑦ ᓇᓗᓇᐃᑦᑕᐅᖁᓪᓗᒋᑦ ᐃᖏᕐᕋᑎᓪᓗᒋᑦ

ᐊᑯᓂᐅᓂᖏᑦ ᐊᑯᓐᓂᖏᓐᓂ ᐊᑐᓂ ᓄᓇᓕᑦ ᐅᑭᐊᔅᓵᖑᑎᓪᓗᒍ ᓇᓕᐊᓄᐋᑦᑎᓪᓗᒋᑦ. ᐊᒥᐊᔅᓯᒪᓪᓚᕆᓐᓂᖏᑦ ᑎᑎᖅᓯᒪᔪᑦ ᑭᒡᒐᑦᑐᐃᒻᒪᑕ ᐃᒻᒥᒃᑰᖓᔪᓂᒃ ᖃᐅᔨᒪᔭᐅᒋᐊᑦᑐᓂᒃ ᐱᒋᐊᓪᓗᑎᒃ 18−ᓂᒃ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓐᓂᒃ ᓂᕕᖓᑖᓕᑦᑕᐅᓚᐅᑦᑐᓂᒃ ᐊᐅᔭᖓᓂ 2002 ᑎᑭᓪᓗᒋᑦ 2004 ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ ᑕᐃᒃᑯᐊᓗ ᐅᑭᐊᔅᓵᒃᑯᑦ ᓇᓕᐋᓄᐊᑉᐸᓕᐊᓕᓚᐅᑦᑐᑎᒃ ᑕᐅᕗᖓ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓄᑦ ᑎᑎᕋᔅᓯᒪᔪᓅᑦᑕᐅᓪᓗᑎᒃ.

ᖃᐅᔨᒪᒋᐊᔅᓯᓂᒻᒧᑦ ᖃᐅᔨᒪᔾᔪᑎᔅᓴᑦ ᓴᖅᑭᑎᑦᑎᓚᐅᒻᒪᑕ ᐱᒻᒪᕆᐋᓗᓐᓂᒃ ᐃᒻᒥᒃᑰᖓᓂᖏᑕ ᐊᔾᔨᒌᖏᓐᓂᖏᓐᓂ ᖃᖓᒃᑰᓐᓂᖏᓐᓂ ᐊᒻᒪᓗ ᐊᑯᓂᐅᓂᖏᓐᓂ EHB (ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᑕ ᐅᑭᐅᔅᓵᒃᑯᑦ ᓇᓕᐊᓄᐋᓂᖏᑦ ᑕᒪᐅᓇ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᒍᑦ. ᐱᔾᔪᑎᒋᓪᓗᒍ ᑖᓐᓇ ᐊᔾᔨᒌᖏᓐᓂᖓ ᖃᐅᔨᔭᐅᓚᐅᒻᒥᒻᒪᑦ ᑕᐃᒃᑯᓇᓂ ᐃᒻᒥᒃᑰᖓᔪᓂ ᓂᕕᖓᑖᓕᑦᑕᐅᓚᐅᑦᑐᓂ ᑕᐃᔅᓱᒪᓂᑦᑕᐃᓐᓇᖅ ᐊᕐᕌᒍᒥ, ᐊᕐᕌᒍᑕᒪᑦ ᐊᔾᔨᒌᒍᓐᓃᖃᑦᑕᓂᖏᑦ ᑖᑯᑑᓗᑎᒃ ᖃᐅᔨᔾᔪᑎᒋᔭᔅᓴᐅᖏᒻᒪᑕ ᖃᐅᔨᒪᔭᐅᒋᐊᑦᑎᓪᓗᒋᑦ ᐊᔾᔨᒌᖏᓐᓂᖏᑦ ᓇᓕᐊᓄᐋᑦᑎᓪᓗᒋᑦ ᓱᑲᓂᕆᔭᖏᑦ. ᖃᖓᒃᑰᓐᓂᖏᑦ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᐃᖏᕐᕋᑎᓪᓗᒋᑦ ᑕᒪᐅᓇ ᒥᔅᓴᐅᓴᑦᑕᐅᓚᐅᒻᒪᑕ ᖃᖓᒃᑰᓂᖏᑕ ᐊᔾᔨᒌᖏᓐᓂᖏᓐᓂᒃ ᐅᓪᓗᖏᑦᓂ ᐊᒻᒪᓗ ᖃᖓᒃᑰᕐᓂᖏᓐᓂᒃ ᓯᕗᓪᓕᑉᐹᒥ ᖃᐅᔨᔭᐅᕚᓪᓗᑦᑎᓪᓗᒋᑦ ᑕᒫᓂᓐᓂᖏᓐᓂᒃ ᐊᒻᒪᓗ ᐅᓪᓗᖓ ᐊᒻᒪᓗ ᖃᖓᒃᑰᕐᓂᖓ ᓯᕗᓪᓕᑉᐹᒥ ᖃᐅᔨᔭᐅᓚᐅᑦᑎᓪᓗᒋᑦ ᖃᓂᒋᔭᑦᑎᐊᖓᓂ ᓇᔪᑕᖓᑕ. ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᑦ ᓂᕕᖓᑖᓕᔅᓱᑦᑕᐅᔪᑦ ᐊᑯᓐᓂᖏᓐᓂ 12.1 ᐃᑲᕐᕋᐃᑦ ᐊᒻᒪᓗ 20.0 ᐅᓪᓗᓂ (ᒥᒃᓵᓂ 2.4 ᐅᓪᓗᓂ, ᐅᓄᓐᓂᖏᑦ 25% (q25) ᐊᒻᒪᓗ 75% (q75); 1.1 ᐊᒻᒪᓗ 6.7 ᐅᓪᓗᓂ, ᐃᒻᒥᒃᑰᖓᓗᑎᒃ) ᐃᖏᕐᕋᓗᑎᒃ ᐃᕗᔨᕕᒃᑯᑦ ᓴᓪᓗᓄᐋᓪᓗᑎᒃ, ᓲᕐᓗ ᖃᐅᔨᔭᐅᒋᐋᕐᖓᑦᑎᓪᓗᒋᑦ ᐃᕗᔨᕕᒻᒥ ᐊᒻᒪᓗ ᓯᕗᓪᓕᑉᐹᒥ ᖃᐅᔨᔭᐅᒋᐊᕐᖓᑦᑎᓪᓗᒋᑦ ᓴᓪᓗᕐᓂ. ᓂᕕᖓᑖᓕᑦᑕᐅᓯᒪᔪᑦ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᑎᑭᐅᑎᒐᓱᐋᓚᐅᑉᐳᑦ 1.0 ᑎᑭᓪᓗᒋᑦ 4.1 ᐅᓪᓗᓂ (ᒥᒃᓲᓂ 1.7 ᐅᓪᓗᓂ, q25: 1.4 ᐅᓪᓗᓂ, q75: 2.2 ᐅᓪᓗᓂ) ᓴᓪᓗᒃᑰᕋᔭᓪᓗᑎᒃ ᑎᑭᒐᓱᐋᓪᓗᑎᒃ ᑲᖏᖅᓱᔪᐋᕐᒧᑦ, ᐊᒻᒪᓗ ᐊᑯᓐᓂᖏᓐᓂ 1.2 ᑎᑭᓪᓗᒋᑦ 3.7 ᐅᓪᓗᓂ (ᒥᒃᓵᓂ: 1.8 ᐅᓪᓗᓂ, q25: 1.5 ᐅᓪᓗᓂ q75: 2.0 ᐅᓪᓗᓂ) ᑲᖏᖅᓱᔪᐊᒃᑰᕋᔭᓪᓗᑎᒃ ᑎᑭᒐᓱᐊᓪᓗᑎᒃ ᖁᐊᖅᑕᕐᒧᑦ. ᐃᓘᓐᓇᓕᒫᖓᓂ, ᐱᕕᖃᓂᖓ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᐃᑳᕋᓱᐊᕋᔭᓪᓗᑎᒃ ᕿᑭᑦᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ



ᑯᐸᐃᒃ ᓄᓇᓕᖃᕐᕕᐊᓂ

ᑐᑭᓯᒋᒋᐊᕈᑏᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᓄᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ
ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ ᐊᒻᒪ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ

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ᐃᑭᕋᓴᖓᒍ ᖁᐋᑦᑕᕐᒨᕋᓱᐊᓪᓗᑎᒃ ᑎᑭᐅᒪᒐᔭᑉᐳᑦ ᐊᑯᓐᓂᖏᓐᓂ 3.7 ᐊᒻᒪᓗ 24.0 ᐅᓪᓗᓄᑦ (ᒥᒃᓵᓂ: 6.9 ᐅᓪᓗᓂ, q25: 4.9 ᐅᓪᓗᓂ, q75: 9.0 ᐅᓪᓗᓂ). ᑕᒪᓐᓇ ᒪᓕᑦᑎᐊᔅᓯᒪᒻᒪᑦ ᓇᓕᐋᓐᓄᐋᓂᖏᓄᑦ ᓱᑲᓂᕆᔭᐅᔪᓂᒃ (ᑎᑎᕋᖅᓯᒪᔪᑦ 9) ᑖᒃᑯᐋᓗ ᒪᓕᑦᑎᐊᔅᓯᒪᓪᓗᑎᒃ Smith ᐊᒻᒪᓗ Martin (1994) ᐊᒻᒪᓗ Richard et al. (1998) ᑕᐃᓐᓇᓗ ᓱᑲᓂᖃᓂᕋᐃᓚᑦᑐᓂ 1.6-5.99 ᖃᓛᒥᑐ/ᐃᑲᕐᕋᒻᒥ ᐊᒻᒪᓗ 1-10 ᖃᓛᒥᑐ/ᐃᑲᕐᕋᒻᒥ, ᐃᒻᒥᒃᑰᖓᓗᑎᒃ, ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᐅᑭᐊᔅᓵᒃᑯᑦ ᓇᓕᐋᓄᐋᑦᑎᓪᓗᒋᑦ.

ᐅᓄᓐᓂᖏᑦ ᖃᐅᔨᓴᒐᔅᓴᓕᐊᕆᔭᐅᓯᒪᔪᑦ ᑎᒥᙳᓂᖏᓐᓂᒃ ᖃᐅᔨᓴᔅᓯᑦᑎᐋᓐᓂᖅ ᒫᓐᓇᕋᑖᖑᓚᐅᑦᑐᒥᓂᑦ (2021-2025) ᐊᕐᕌᒍᓂᑦ ᒥᑭᓗᐊᒻᒪᑕ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓐᓂᒃ ᕿᓚᓗᒐᑕᐅᔪᒥᓂᓐᓂᒃ ᓄᓇᓕᖓᓂᑦ ᐃᕗᔨᕕᐅᑉ ᐃᒍᓇᑦᑎᑕᐅᒐᔭᓪᓗᓂ ᐅᑭᐊᔅᓵᒃᑯᑦ ᓇᓪᓕᕉᑎᓂᖅ ᕿᓚᒻᒥᐅᓕᑦᑎᑕᐅᓗᓂ ᑕᐃᒪᓐᓇᐃᑎᑕᐅᓚᐅᔅᓯᒪᒻᒪᑦ ᑖᔅᓱᒪᓂ ᖃᐅᔨᓇᓱᐊᔅᓯᓂᒻᒥ ᖁᐊᖅᑕᕐᒥ, ᐊᒻᒪᓗ ᐊᒥᒐᑦᑐᑎᒃ ᒥᔅᓴᐅᓴᔅᓯᒍᑎᒋᒐᓱᒋᐋᖏᑕ ᓄᓇᓕᒻᒨᖓᔪᓂᒃ ᐅᑭᐊᔅᓵᒃᑯᑦ ᑎᒥᙳᓂᖓᓅᖓᔪᓂᒃ ᑲᑎᑦᑎᓂᒻᒥᒃ ᕿᓚᓗᒐᑦᑕᐅᔪᓂᒃ ᖃᓂᒋᔭᖓᓂ ᓴᓪᓗᐃᑦ ᐊᒻᒪᓗ ᑲᖏᖅᓱᔪᐊᑉ. ᑕᐃᒪᐃᒃᑲᓗᐊᑦᑎᓪᓗᒍ, ᓇᓕᐋᓐᓄᐊᑦᑎᓪᓗᒋᑦ ᐊᑯᓂᐅᓂᕆᓪᓗᐋᑕᓲᖏᑦ ᖃᐅᔨᒪᔭᐅᒋᐋᑦᑎᓪᓗᒋᑦ ᖃᐅᔨᒪᔾᔪᑎᔅᓴᓄᑦ ᐊᑐᑦᑕᐅᒍᓐᓇᒻᒪᑕ ᑭᖑᒧᖔᖅ ᓈᓴᐅᓯᕆᐋᕆᔭᐅᓗᑎᒃ ᖃᖓᒃᑰᓂᖏᓐᓂᒃ ᐱᓪᓗᐋᑕᐅᔪᑦ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᑲᑎᒻᒪᖃᑎᒌᑦᑐᑦ ᐃᑳᑦᑎᓪᓗᒋᑦ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᒍᑦ, ᑐᙵᕕᒋᓗᒋᑦ ᖃᐅᔨᒪᓂᕆᔭᐅᓂᑉᐹᒍᔪᑦ ᑖᒃᑯᓂᖓ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᓐᓂ ᖁᐊᖅᑕᕐᒥ ᒫᓐᓇᕋᑖᖑᓚᐅᑦᑐᒥᑦ (2021-2025) ᑎᒥᙳᔅᓯᒪᓂᖏᓐᓂᒃ ᖃᐅᔨᒪᔾᔪᑎᒡᓴᓂᒃ (26 ᐅᑐᐱᕆ−15 ᓄᕕᐱᕆ; ᑎᑎᕋᖅᓯᒪᔪᑦ 7). ᒪᓕᔅᓯᒪᑦᑎᐊᓗᑎᒃ, BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᑦ ᒥᔅᓴᐅᓴᑦᑕᐅᓪᓗᑎᒃ ᓴᕐᕈᓚᐅᕐᒪᑕ ᓄᓇᓕᖓᓂᑦ ᑲᖏᖅᓱᔪᐊᑉ 24 ᐅᑐᐱᕆᒥ – 13 ᓄᕕᐱᕆᒥ, ᓴᕐᕈᓪᓗᑎᒃ ᓴᓪᓗᓂᒃ 22 ᐅᑐᐱᕆ – 12 ᓄᕕᐱᕆ, ᐊᒻᒪᓗ ᓴᕐᕈᓪᓗᑎᒃ ᐃᕗᔨᕕᒃᑯᑦ 20−ᖓᓂ ᐅᑐᐱᕆ – 9 ᓄᕕᐱᕆᒥ. ᐊᑯᓂᐅᓂᔅᓴᐅᓕᑦᑎᒋᐋᓪᓗᒋᑦ ᑕᒪᒃᑯᐊ ᖃᖓᒃᑰᕐᓂᖏᑦ ᐊᑐᑦᑕᐅᒍᓐᓇᖁᓪᓗᒋᑦ ᓇᓕᐋᓄᐋᓂᖏᓄᑦ ᐊᑯᓂᐅᓂᕆᔭᐅᔪᓄᑦ 25% ᐊᒻᒪᓗ 75% ᐅᓄᓐᓂᖏᑦ ᓴᖅᑭᑎᑦᑎᒐᔭᒻᒪᑕ ᒪᑯᓇᓂ ᓇᓕᐋᓐᓄᐋᓂᖏᓐᓂ ᐊᑯᓂᐅᓂᕆᒐᔭᑦᑕᖏᓐᓂᒃ: ᑲᖏᖅᓱᔪᐊᖅ 24 ᐅᑐᐱᕆ – 13 ᓄᕕᐱᕆ, ᓴᓪᓗᒃᑯᑦ 22 ᐅᑐᐱᕆ – 12 ᓄᕕᐱᕆ ᐊᒻᒪᓗ ᐃᓄᒡᔪᐊᒃᑯᑦ 15 ᐅᑐᐱᕆ – 11 ᓄᕕᐱᕆ. ᐊᑑᑎᒋᑎᑕᐅᒐᓱᐋᓂᖓ ᐊᕐᕌᒍᑕᒪᑦ ᒪᑐᔭᐅᓂᖓᑕ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᑕ ᐊᑯᓂᖏᓐᓂ ᓯᑎᐱᕆ 1 ᐊᒻᒪᓗ ᐅᑐᐱᕆ 31 ᒫᓐᓇᕋᑖᖑᓚᐅᑦᑐᖅ ᓄᓇᕕᐅᑉ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᑕ ᐊᐅᓚᑕᐅᓂᖏᓄᑦ ᐸᕐᓇᒍᑎ ᒥᑭᓂᔅᓴᐅᓕᑦᑎᑦᑎᒍᑎᒋᔭᐅᒐᓱᐊᒻᒪᑕ ᐅᓄᓐᓂᖏᓐᓂᒃ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᕿᓚᓗᒐᑦᑕᐅᓚᐅᑦᑐᓂᒃ ᐅᑭᐊᔅᓵᖑᑎᓪᓗᒍ ᓇᓕᐋᓄᐋᑦᑎᓪᓗᒋᑦ. ᑖᓐᓇ ᖃᐅᔨᒐᓱᐋᔅᓯᓂᖅ ᓇᓗᓇᐃᔅᓯᒻᒪᑦ ᑖᐃᒃᑯᐊ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᑦ ᓱᓕ ᓇᓕᐋᓄᐋᓱᖑᒻᒪᑕ ᑕᒪᐅᓈᓪᓗᑎᒃ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᒎᓱᖑᒻᒪᑕ ᐅᑐᐱᕆ 31−ᖓᓂ. ᐅᓪᓗᖏᑦ ᑎᑭᐅᒪᑎᑕᐅᔪᑦ ᓇᓗᓇᐃᔅᓯᒻᒪᑕ ᑕᒪᑐᒥᖓ ᖃᐅᔨᓇᓱᐊᔅᓯᓂᒻᒥᒃ ᐊᑐᑦᑕᐅᒍᓐᓇᒻᒪᑕ ᖃᐅᔨᒪᓇᔅᓯᑎᑦᑎᒍᑎᒋᔭᐅᒐᔭᓪᓗᑎᒃ ᐱᐅᓂᑉᐸ ᖃᖓᒃᑰᓂᖓᓂᒃ ᐅᑭᐊᔅᓵᒃᑯᑦ ᒪᑐᔭᐅᒐᔭᓂᖓᓂᒃ ᓴᐳᒻᒥᔅᓯᒍᑎᒋᔭᐅᒐᓱᐋᓪᓗᓂ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᑕᒪᐅᓈᑦᑎᓪᓗᒋᑦ ᓇᓕᐋᓄᐋᕕᒋᕙᑦᑕᖏᑎᒍ ᑕᒪᐅᓇ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᒍᑦ.

ᑯᐸᐃᒃ ᓄᓇᓕᖃᕐᕕᐊᓂ

ᑐᑭᓯᒋᒋᐊᕈᑏᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᓄᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ
ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ ᐊᒻᒪ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ

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ᑎᑎᕋᖅᓯᒪᔪᑦ 9. ᐅᓪᓗᖓ ᐊᒻᒪᓗ ᖃᖓᒃᑰᓂᖓ ᑕᐃᔅᓱᒪᓂ 18 ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᖃᖓᑦᑕᑦᑎᑕᐅᓯᒪᔪᒃᑯᑦ ᓂᕕᖓᑖᓕᑦ ᓯᕗᓪᓕᑉᐹᒥ ᓇᒦᓐᓂᕋᑦᑕᐅᓚᐅᒻᒪᑕ ᐃᕗᔨᕕᒃᒥ, ᓴᓪᓕᕐᒥ, ᑲᖏᖅᓱᔪᐊᕐᒥ ᐊᒻᒪᓗ ᖁᐊᖅᑕᕐᒥ (ᑕᑯᓗᒋᑦ ᐊᔾᔨᙳᐊᖅ 7). ᑕᒪᒃᑯᐊ ᐊᑐᑦᑕᐅᓚᐅᒻᒪᑕ ᐱᕕᒋᔭᐅᔪᑦ ᖃᖓᒃᑰᓂᖓᓂᒃ (ᐅᓪᓗᖏᓐᓂ) ᐃᓚᒋᔭᐅᓪᓗᑎᒃ ᐃᖏᕐᕋᕙᓪᓕᐋᓂᕆᓪᓗᐋᑕᓲᖏᑦ (ᓈᑦᔅ) ᐃᒻᒥᒃᑰᑦᑐᓂ ᓇᓕᐋᓐᓄᐋᑦᑐᓂ ᑕᒪᐅᓇ ᐃᖏᕐᕋᕕᒋᔭᖏᑎᒍ. ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᓈᓴᐅᓯᕆᐊᕆᔭᐅᓚᐅᒻᒪᑕ ᐊᕕᑦᑐᑦᑕᐅᓪᓗᑎᒃ ᖃᖓᒃᑰᓂᖓᑕ ᐊᑯᓐᓂᖏᓐᓂ ᓇᐅᒃᑰᕝᕕᒋᔭᖓᒍᑦ ᑕᐅᕘᓇᓪᓗᐊᖅ ᑲᓇᓐᓇᖓᒍ ᐱᖓᓐᓇᖓᒍᑦ ᐅᖓᓯᓂᖏᑎᒍ ᑕᒪᐅᓇ ᓄᓇᕕᐅᑉ ᓯᒡᔭᖏᑎᒍ ᐆᒃᑐᖅᑕᐅᓪᓗᑎᒃ ᑎᑭᐅᒪᔪᓂᒃ 300-500 ᒦᑕᓄᑦ ᑕᒪᙵᑦ ᓯᒡᔭᕐᒥᑦ.

ᓈᓴᐅᑎᖓ ᐊᕐᕌᒍ ᐃᕗᔨᕕᒃ ᓴᓪᓗᐃᑦ ᑲᖏᖅᓱᔪᐊᖅ ᖁᐊᖅᑕᖅ

ᐃᖏᕐᕋᓂᕆᔭᐅᔪᖅ
ᐃᕗᔨᕕᒻᒥᒃ ᓴᓪᓕᕐᒧᑦ
(ᓱᑲᓂᕆᔭᐅᔪᖅ)

ᐃᖏᕐᕋᓂᕆᔭᐅᔪᖅ
ᓴᓪᓕᕐᒥᑦ ᑲᖏᖅᓱᔪᐋᕐᒧᑦ
(ᓱᑲᓂᕆᔭᐅᔪᖅ)

ᐃᖏᕐᕋᓂᕆᔭᐅᔪᖅ
ᑲᖏᖅᓱᔪᐋᕐᒥᑦ
ᖁᐋᖅᑕᕐᒧᑦ
(ᓱᑲᓂᕆᔭᐅᔪᖅ)

ᐃᖏᕐᕋᓂᕆᔭᐅᔪᖅ
ᐃᕗᔨᕕᒻᒥᒃ

ᖁᐋᖅᑕᕐᒧᑦ
(ᓱᑲᓂᕆᔭᐅᔪᖅ)
11751 1995 24 ᐅᑐᐱᕆ 06:41 30 ᐅᑐᐱᕆ 15:32 – – 6.4 (0.34) – – –
17905 2002 09 ᐅᑐᐱᕆ 15:00 11 ᐅᑐᐱᕆ 14:00 – 15 ᐅᑐᐱᕆ 05:57 2.4 (0.93) – – 6.1 (3.39)
17905 2003 09 ᓄᕕᐱᕆ 01:06 10 ᓄᕕᐱᕆ 01:01 11 ᓄᕕᐱᕆ 01:10 13 ᓄᕕᐱᕆ 01:13 1.0 (2.23) 1.0 (7.78) 2.0 (4.33) 4.0 (5.15)
17906 2003 17 ᓄᕕᐱᕆ 01:09 17 ᓄᕕᐱᕆ 13:19 19 ᓄᕕᐱᕆ 02:20 22 ᓄᕕᐱᕆ 01:02 0.5 (4.39) 1.5 (5.07) 2.9 (2.93) 5.0 (4.13)
17906 2002 29 ᐅᑐᐱᕆ 08:23 31 ᐅᑐᐱᕆ 03:10 01 ᓄᕕᐱᕆ 04:02 03 ᓄᕕᐱᕆ 03:49 1.8 (1.25) 1.0 (7.56) 2.0 (4.35) 4.8 (4.30)
17911 2003 14 ᓄᕕᐱᕆ 01:48 14 ᓄᕕᐱᕆ 13:56 17 ᓄᕕᐱᕆ 01:26 18 ᓄᕕᐱᕆ 14:35 0.5 (4.41) 2.5 (3.17) 1.5 (5.59) 4.5 (4.56)
1852 2003 06 ᐅᑐᐱᕆ 03:04 26 ᐅᑐᐱᕆ 03:06 28 ᐅᑐᐱᕆ 04:25 30 ᐅᑐᐱᕆ 03:16 20.0 (0.11) 2.1 (3.82) 2.0 (4.44) 24.0 (0.85)
1852 2002 06 ᓄᕕᐱᕆ 00:04 10 ᓄᕕᐱᕆ 00:11 11 ᓄᕕᐱᕆ 07:38 13 ᓄᕕᐱᕆ 00:41 4.0 (0.56) 1.3 (5.98) 1.7 (5.07) 7.0 (2.93)
1853 2003 22 ᐅᑐᐱᕆ 15:31 – 26 ᐅᑐᐱᕆ 11:16 30 ᐅᑐᐱᕆ 03:14 – – 3.7 (2.37) 7.5 (2.76)
1854 2003 17 ᐅᑐᐱᕆ 07:48 23 ᐅᑐᐱᕆ 06:37 – 25 ᐅᑐᐱᕆ 09:42 6.0 (0.37) – – 8.1 (2.56)
1855 2002 03 ᓄᕕᐱᕆ 09:10 05 ᓄᕕᐱᕆ 00:24 09 ᓄᕕᐱᕆ 03:12 10 ᓄᕕᐱᕆ 07:28 1.6 (1.36) 4.1 (1.91) 1.2 (7.35) 6.9 (2.98)
3022 2003 25 ᐅᑐᐱᕆ 12:55 01 ᓄᕕᐱᕆ 14:39 03 ᓄᕕᐱᕆ 00:44 04 ᓄᕕᐱᕆ 11:49 7.1 (0.31) 1.4 (5.52) 1.5 (5.93) 10.0 (2.20)
3415 2003 09 ᓄᕕᐱᕆ 10:09 10 ᓄᕕᐱᕆ 14:25 13 ᓄᕕᐱᕆ 09:55 15 ᓄᕕᐱᕆ 03:37 1.8 (1.89) 2.8 (2.78) 1.7 (4.98) 5.7 (3.59)
45723 2004 12 ᐅᑐᐱᕆ 15:03 – 17 ᐅᑐᐱᕆ 07:08 – – – – –
45724 2004 05 ᑎᓯᐱᕆ 09:35 06 ᑎᓯᐱᕆ 05:55 07 ᑎᓯᐱᕆ 16:24 09 ᑎᓯᐱᕆ 02:50 0.8 (2.63) 1.4 (5.44) 1.4 (6.04) 3.7 (5.54)
45729 2004 11 ᐅᑐᐱᕆ 23:54 – 22 ᐅᑐᐱᕆ 17:45 – – – – –
45730 2004 10 ᐅᑐᐱᕆ 19:09 27 ᐅᑐᐱᕆ 20:49 29 ᐅᑐᐱᕆ 21:46 31 ᐅᑐᐱᕆ 16:23 17.1 (0.13) 2.0 (3.83) 1.8 (4.89) 20.9 (0.98)
45731 2004 17 ᐅᑐᐱᕆ 09:44 25 ᐅᑐᐱᕆ 13:04 27 ᐅᑐᐱᕆ 10:16 29 ᐅᑐᐱᕆ 18:47 8.1 (0.27) 1.9 (4.17) 2.4 (3.69) 12.4 (1.67)

ᑯᐸᐃᒃ ᓄᓇᓕᖃᕐᕕᐊᓂ

ᑐᑭᓯᒋᒋᐊᕈᑏᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᓄᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ
ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ ᐊᒻᒪ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ

25

ᖃᐅᔨᔭᐅᔪᑦ

ᐃᓚᓕᐅᑎᔭᐅᑎᓪᓗᒋᑦ 2025 ᕿᓚᓗᒐᑦᑕᐅᔪᓂᒃ ᖃᐅᔨᒪᔾᔪᑎᑦ ᐅᑯᓄᖓᑦᑕᐅᓗᑎᒃ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓐᓄᑦ ᐃᓚᓕᐅᑎᔭᐅᓗᑎᒃ ᐅᓄᓐᓂᖏᑕ ᐋᖅᑭᔅᓱᐃᒍᑎᖏᓄᑦ ᓴᖅᑭᑎᑕᐅᓚᐅᒻᒪᑕ 2025−ᒥ ᐅᓄᓐᓂᖏᑕ ᒥᔅᓴᐅᓴᑦᑕᐅᑎᓪᓗᒋᑦ ᐃᒪᓐᓇᑎᒋᐅᓗᑎᒃ 2,100 (95% Crl = [1,700; 2,500]) ᐃᒻᒥᒃᑰᖓᔪᑦ ᑖᒃᑯᓄᖓ ᐱᕕᔅᓴᐅᔪᓄᑦ. ᑖᒃᑯᐊ ᑭᒡᒐᑦᑐᐃᒻᒪᑕ ᖃᔅᓰᓐᓇᕈᑲᓂᓐᓂᖏᓐᓂᒃ ᐃᒪᓐᓇᑎᒋᓂᒃ 5.0% (95% Crl = [1.4; 9.2]) ᐊᑯᓐᓂᖏᓐᓂ 2024 ᐊᒻᒪᓗ 2025. ᒫᓐᓇ ᐊᑐᑦᑕᐅᔪᑦ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᐅᓄᓐᓂᖏᑦ ᒥᔅᓴᐅᓴᑦᑕᐅᒻᒪᑕ ᖃᔅᓰᓐᓇᐅᓂᑉᐹᒍᓂᕋᑦᑕᐅᓗᑎᒃ ᐊᓂᒍᑦᑐᓂ ᐊᕝᕙᖓᓂ ᕼᓐᓇᓚᑦ ᐊᕐᕌᒍᓂ. ᒫᓐᓇ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂᑦ) ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᐅᓄᓐᓂᖏᑦ ᐃᓘᓐᓇᓕᒫᖏᓐᓂ ᐱᕕᔅᓴᐅᑎᑕᐅᔪᓄᑦ ᑎᑭᐅᒪᔭᐅᔪᑦ, ᒥᔅᓴᐅᓴᑦᑕᐅᒻᒪᑕ
ᑎᑭᐅᒪᑎᑕᐅᓪᓗᑎᒃ 138 ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓐᓄᑦ 2025−ᒥ ᐊᒻᒪᓗ 142 ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᐊᑯᓂᖏᓐᓂ 2021 ᐊᒻᒪᓗ 2025

ᖃᔅᓰᓐᓇᕈᕆᐊᑦᑕᐅᒋᐋᖃᒻᒪᑕ ᐃᒪᓐᓇᑎᒋᐅᓕᓪᓗᑎᒃ 51, 44, ᐅᕝᕙᓘᓐᓃᑦ 35 BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᑦ ᐱᕕᔅᓴᐅᔪᑦ ᓱᕐᕌᒍᓐᓃᓚᐅᒻᒪᑕ 2025−ᒥ ᐅᓄᓐᓂᕆᔭᖏᓐᓂᒃ ᐃᒪᓐᓇᑎᒋᐅᓗᑎᒃ 50%, 80%, 95%-ᖏᓐᓂᒃ ᑕᐃᒫᖑᑐᐃᓐᓇᕆᐊᖃᓂᖃᓪᓗᑎᒃ, ᐃᒻᒥᒃᑰᖓᓗᑎᒃ. ᑕᐃᒪᓕ ᒫᓐᓇ ᕿᓚᓗᒐᑦᑕᐅᕙᒃᑐᑦ ᐅᓄᓐᓂᖏᑦ ᑕᐃᒫᑦᑕᐃᓐᓈᑦᑎᑕᐅᑉᐸᑕ, ᐱᕕᔅᓴᐅᔪᑦ ᑎᑭᐅᑎᑐᐃᓐᓇᕆᐊᖃᒻᒪᑕ ᓄᖑᑕᐅᓂᐋᑦᑐᕆᔭᐅᓕᓪᓗᑎᒃ ᐊᑯᓐᓂᖏᓐᓂ 2038 ᐊᒻᒪᓗ 2040. ᑎᒥᙳᓂᖏᓐᓂᑦ ᖃᐅᔨᒐᓱᐋᔅᓯᔨ ᐊᑐᓪᓗᓂ mtDNA (ᖄᕈᐱᐋᖓ ᐃᓗᑦᑎᕈᑎᐅᑉ) ᖃᐅᔨᒪᔾᔪᑎᔅᓴᑦ ᒥᔅᓴᐅᓴᔅᓯᓚᐅᒻᒪᑕ 91% ᐊᒻᒪᓗ 62% ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᑦ ᐃᓄᒃᔪᐊᑉ ᐃᓱᒪᔅᓱᓪᓗᑎᒃ ᒪᑐᔭᐅᕕᒋᓯᒪᔭᖓᓂ ᐅᐱᕐᖔᖑᑎᓪᓗᒍ ᐊᒻᒪᓗ ᐅᑭᐋᔅᓵᒃᑯᑦ, ᐃᒻᒥᒃᑰᖓᓗᑎᒃ, ᐅᑯᓇᙶᓚᐅᒻᒪᑕ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᐱᕕᔅᓴᐅᔪᓂᑦ. ᑕᒪᒃᑯᐊ ᐱᕕᔅᓴᐅᔪᑦ ᑲᑎᓯᒪᓂᖏᑦ ᒥᔅᓴᐅᓴᔅᓯᒍᑎᑦ ᑐᙵᕕᖃᒻᒪᑕ ᐊᔅᓱᐋᓗᒃ ᑭᒡᓕᓕᓯᒪᔪᓂᒃ ᐅᓐᓄᓂᖏᓐᓂᒃ ᖃᐅᔨᓴᒐᔅᓴᓕᐋᕆᔭᐅᓯᒪᔪᓂᑦ ᐊᒻᒪᓗ ᕿᓚᓗᒐᑦᑕᐅᓯᒪᔪᓄᑦ ᐅᓪᓗᕆᔭᐅᑎᑕᐅᔪᓂᒃ, ᐊᒻᒪᓗ ᑕᐃᒫᖑᓂᖓᓄᑦ ᐊᓯᕈᑦᑕᐅᒍᓇᒻᒪᑕ ᓄᑖᓂᒃ ᖃᐅᔨᓴᒐᔅᓴᓂᒃ ᐱᒐᔅᓴᐅᔪᖃᓕᑐᐋᓂᑉᐸᑦ. ᑕᒪᓐᓇᐅᒐᓗᐋᑦᑎᓪᓗᒍ ᐱᕕᖃᑦᑎᑕᐅᒻᒪᑕ ᓇᓗᓇᐃᔅᓯᒍᑎᖏᓐᓂᒃ ᑖᒃᑯᐊ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᑦ ᐱᔭᐅᑎᑦᑎᒻᒪᑕ ᐅᓄᓂᔅᓴᓄᑦ ᓴᖅᐱᓕᓐᓂᒃ ᐱᔭᐅᔪᓂᑦ ᐃᓄᒃᔪᐋᒻᒥ ᓇᓕᐋᓐᓄᐊᑉᐸᓪᓕᐋᑎᓪᓗᒋᑦ, ᐱᓗᐊᙳᐊᑦᑐᒥᒃ ᐅᐱᕐᖔᒃᑯᑦ. ᐊᓯᕈᑦᑕᐅᓂᖓᓄᑦ ᐅᐋᓐᓇᒻᒥ ᑭᒡᓕᒋᑎᑕᐅᔪᖅ ᑲᓇᓐᓇᖓᓄᑦ ᑕᓯᐅᔭᖅᔪᐋᓄᑦ ᐊᐅᓚᑦᑎᕕᒋᔭᐅᔪᒥ ᐱᒋᐊᔅᓯᒪᓪᓗᓂ 2024−ᒥᑦ ᓴᖅᑭᑎᑦᑎᓯᒪᒻᒪᑦ ᐅᓄᓐᓂᔅᓴᐅᓕᑦᑎᑦᑎᓪᓗᓂ ᐃᒪᓐᓇᑎᒋᓂᒃ 17 ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓐᓂᒃ ᕿᓚᓗᒐᑦᑕᐅᒍᓐᓇᔅᓯᑎᑦᑎᓪᓗᓂ ᑕᒫᓂ ᓴᖑᖓᓂᖓᓂ ᐊᑯᓐᓂᖏᓐᓂ 2021-2023 ᐊᒻᒪᓗ 2024-2025. ᑐᙵᕕᒋᓗᒍ ᓇᓪᓕᕉᑎᓂᒻᒥ ᑕᐃᓐᓇᓪᓗᐊᖅ ᐱᕕᔅᓴᐅᔪᑦ ᑲᑎᓯᒪᓂᖏᑕ ᐅᓄᓐᓂᖏᑕ ᒥᔅᓴᐅᓴᑦᑕᐅᓂᖏᑦ ᑖᔅᓱᒧᖓ ᓇᔪᑦᑕᐅᕙᑦᑐᒧᑦ, ᑖᓐᓇ ᑭᒡᒐᑦᑐᐃᒻᒪᑦ 11−ᓂᒃ ᐊᒻᒪᓗ 14−ᓂᒃ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᓐᓂᒃ ᕿᓚᓗᒐᕕᐅᓯᒪᔪᓂᑦ ᐃᓄᒃᔪᐊᕐᒥ ᐃᓱᒪᔅᓱᓪᓗᑎᒃ ᒪᑐᔭᐅᓯᒪᕕᒋᔭᖓᓂ 2024−ᒥ ᐊᒻᒪᓗ 2025−ᒥ, ᐃᒻᒥᒃᑰᖓᓗᑎᒃ.

ᐅᓄᓐᓂᔅᓴᓂᒃ 60% ᐳᓴᖏᑕ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᒥᓃᑦ ᐊᑯᓂᖏᓐᓂ 2021-2025−ᒥ ᐃᓄᒃᔪᐊᒻᒥ ᐊᒻᒪᓗ

ᖁᐋᑦᑕᒥ ᐊᑐᑦᑎᓪᓗᒋᑦ 28 ᐅᑐᐱᕆ – 19 ᓄᕕᐱᕆ ᐊᒻᒪᓗ 26 ᐅᑐᐱᕆ – 16 ᓄᕕᐱᕆ ᐊᑐᑦᑎᓪᓗᒋᑦ, ᐃᒻᒥᒃᑰᖓᓗᑎᒃ, ᒥᔅᓴᐅᓴᑦᑕᐅᓚᐅᒻᒪᑕ ᑕᐅᕙᖔᔅᓯᒪᓂᕋᑦᑕᐅᓪᓗᑎᒃ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂᑦ) ᐱᕕᔅᓴᐅᔪᓂᑦ. ᖁᐊᖅᑕᒻᒥ, ᑭᖑᓂᖓᒍᑦ 16 ᓄᕕᐱᕆ, ᑖᒃᑯᐊ ᐅᓄᓐᓂᖏᑦ ᐊᔅᓱᐋᓗᒃ ᐅᓄᕈᓐᓃᑲᓪᓚᓚᐅᒻᒪᑕ. ᑭᒡᓕᓕᓯᒪᔪᑦ ᖃᐅᔨᓴᒐᔅᓴᓪᓗᐋᑦ ᑭᖑᓂᖓᓂ 19 ᓄᕕᐱᕆ ᑕᐃᒫᑦᑎᐊᕈᓐᓃᑦᑎᑦᑎᒻᒪᑦ ᖃᐅᔨᒐᓱᐋᓂᒻᒥᒃ ᐃᒪᓐᓇᐅᒐᓗᐊᒻᒪᖓᑦ ᑕᒪᓐᓇ ᖃᓄᐄᓕᕙᓪᓕᐋᓂᖅ ᐊᑐᓚᐅᒻᒥᒻᒪᑦ ᑎᑭᐅᒪᔭᖓᓂ ᐃᓄᔾᔪᐊᑉ. ᖃᐅᔨᒪᒋᐋᔅᓯᓂᖅ ᖃᐅᔨᒪᔾᔪᑎᔅᓴᓂᒃ ᑕᐅᕙᙵᑦᑐᓂᒃ EHB (ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᓐᓂᒃ ᐅᑭᐊᒃᓵᒃᑯᑦ ᓇᓕᐋᓐᓄᐋᓕᑦᑎᓪᓗᒋᑦ ᐃᒪᓐᓇᐅᓕᑦᑎᑦᑎᒻᒪᑕ ᐊᑯᓐᓈᕿᓗᓂ ᓇᓕᐋᓐᓄᐊᓂᖏᑕ ᐊᑯᓂᐅᓂᕆᔭᖏᑦ 2.4−ᓂᒃ ᐅᓪᓗᓂᒃ ᐃᖏᕐᕋᒐᔭᓪᓗᑎᒃ ᐃᓄᒃᔪᐋᒻᒥᒃ ᑕᐅᕗᖓ ᓴᓪᓗᓄᑦ 1.7−ᓂᒃ ᐅᓪᓗᓂᒃ ᐃᖏᕐᕋᒐᔭᓪᓗᑎᒃ ᑕᐅᕙᙵᑦ ᓴᓪᓕᓂᑦ ᑲᖏᖅᓱᔪᐋᒧᓪᓗᑎᒃ, ᐊᒻᒪᓗ 1.8−ᓂᒃ ᐅᓪᓗᓂᒃ ᐃᖏᕐᕋᒐᔭᓪᓗᑎᒃ ᑲᖏᖅᓱᔪᐋᒻᒥᑦ ᖁᐊᖅᑕᕐᒧᑦ. ᑕᒪᒃᑯᐊ ᓇᓕᐋᓄᐋᓂᑦ ᐊᑯᓂᐅᓂᖏᑦ ᐊᑯᓐᓂᖏᓐᓂ ᓄᓇᓖᑦ, ᐃᓚᓕᐅᑎᓯᒪᓗᑎᒃ ᖃᐅᔨᔭᐅᓯᒪᔪᑦ ᐊᓯᕈᓂᖏᓐᓂᒃ ᑎᒥᙳᓐᓂᖏᑕ ᑲᑎᓯᒪᓂᖏᑦ ᕿᓚᓗᒐᑦᑕᐅᔪᓂᒃ ᖁᐊᖅᑕᒻᒥ, ᐱᕕᖃᓕᑦᑎᑦᑎᒍᓐᓇᒪᑕ ᑭᖑᒧᖔᖅ ᓈᓴᐅᓯᕆᐊᕆᔭᐅᒍᓐᓇᔅᓯᓗᑎᒃ ᐅᓪᓗᖏᑦ ᑕᐃᔅᓱᒪᓂ EHB (ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᑦ ᐊᖅᑯᓵᓚᐅᒻᒪᑕ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᒍᑦ ᓯᒡᔭᖏᑎᒍ ᐊᑐᕋᑖᓚᐅᑦᑐᓂ ᐊᕐᕌᒍᓚᐅᑦᑐᓂ. ᑐᙵᕕᒋᓗᒋᑦ ᑎᒥᙳᓂᖏᑕ ᖃᐅᔨᒪᔾᔪᑎᓴᓕᐋᕆᔭᐅᓯᒪᓂᖏᑦ ᑕᐅᕙᖓᑦ 2021-2025−ᒥᑦ, EHB (ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᒥᔅᓴᐅᓴᑦᑕᐅᓚᐅᒻᒪᑕ ᓴᕐᕈᓂᕋᑦᑕᐅᓪᓗᑎᒃ ᓄᓇᓕᖓᓄᑦ ᑲᖏᖅᓱᔪᐊᑉ 24 ᐅᑐᐱᕆ – 13 ᓄᕕᐱᕆ, ᓴᓪᓗᐃᑦ 22 ᐅᑐᐱᕆ – 13 ᓄᕕᐱᕆ ᐊᒻᒪᓗ ᐃᓄᒡᔪᐊᒃᑯᑦ 16 ᐅᑐᐱᕆ – 7 ᓄᕕᐱᕆ. ᑕᒪᒃᑯᐊ ᐅᑭᐋᔅᓵᒃᑯᑦ ᓇᓕᐋᓄᐊᓂᖏᑕ ᖃᐅᔨᒪᔪᑎᔅᓴᖏᑕ ᑎᑭᐅᒪᔅᓯᓂᖏᑦ ᐊᑐᑦᑕᐅᒍᓐᓇᒻᒪᑕ ᖃᐅᔨᒍᑎᒋᔭᐅᒍᓐᓇᓪᓗᑎᒃ ᐊᓯᕈᓂᖏᓐᓂᒃ ᖃᖓᒃᑰᖃᑦᑕᓂᖏᓐᓂᒃ ᐅᑭᐅᒃᓴᒃᑯᑦ ᒪᑐᑎᓪᓗᒋᑦ ᓄᓇᕕᐅᑉ ᕿᑭᑦᑖᓗᓪᓗ ᐃᑭᕋᓴᖓᓂ ᐊᔅᓱᐋᓗᕈᓐᓃᑦᑎᑕᐅᖁᓪᓗᒋᑦ ᕿᓚᓗᒐᑦᑕᐅᖃᑦᑕᓂᖏᓄᑦ ᐊᔅᓱᕈᓇᕈᑎᖏᑦ ᖃᔅᓰᓐᓇᐅᔪᓂ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᐱᕕᔅᓴᐅᓂᖏᓐᓂᒃ ᐊᖑᓇᓱᐋᑦᑎᑕᐅᖔᕋᔭᓪᓗᑎᒃ ᐅᓄᓐᓂᔅᓴᓂᒃ WHB (ᐱᖓᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓐᓂᒃ ᐱᕕᔅᓴᐅᑎᐅᔪᓂᑦ. ᐃᓚᒃᑲᓂᖏᑦ ᖃᐅᔨᓴᒐᔅᓴᓕᐅᕕᐅᓯᒪᔪᑦ ᑕᐃᒃᑯᓇᙵᑦ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂᑦ, ᐱᓗᐊᙳᐊᑦᑐᒥᒃ

ᑯᐸᐃᒃ ᓄᓇᓕᖃᕐᕕᐊᓂ

ᑐᑭᓯᒋᒋᐊᕈᑏᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᓄᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ
ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ ᐊᒻᒪ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ

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ᓴᓪᓗᓐᓂᑦ ᐊᒻᒪᓗ ᑲᖏᖅᓱᔪᐋᒻᒥᒃ, ᐃᑲᔪᕋᔭᒻᒪᑕ ᐋᖅᑭᑦᑎᐋᑎᑕᐅᓗᑎᒃ ᑕᒪᒃᑯᓂᖓ ᒥᔅᓴᐅᓴᔅᓯᒍᑎᒋᔭᐅᕙᑦᑐᓂᒃ. ᐃᓚᒋᔭᐅᒃᑲᓂᓪᓗᑎᒃ, ᒫᓐᓇ ᖃᐅᔨᒪᒋᐊᔅᓯᒍᑎᑕᖃᖏᒻᒪᑦ ᖃᐅᔨᒪᔾᔪᑎᔅᓴᓂᒃ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓂᒃ ᐊᐅᔭᔅᓯᐅᑉᐸᑦᑐᓂᒃ ᑕᐅᕙᓂ ᓴᓂᑭᓗᐊᒻᒥ. ᑕᐃᒪᐃᒻᒪᑦ, ᓈᒻᒪᓇᕆᒋᐊᓂᖅ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᓇᓕᐋᓄᐊᑉᐸᑦᑐᓂᒃ ᐱᕕᒋᔭᐅᒍᓐᓇᑦᑐᓂᒃ ᓂᕕᖓᑖᓕᔅᓯᓂᒻᒥᒃ ᖃᐅᔨᒪᔾᔪᑎᔅᓴᓂᒃ ᑐᙵᕕᖃᑦᑎᑕᐅᓗᐋᙳᐋᒻᒪᑕ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᓂᕕᖓᑖᓕᑦᑕᐅᓂᖏᓐᓂᒃ ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐋᓂ ᐃᒥᖅ ᐱᐋᑦᑐᓂ ᐊᐅᔭᐅᑎᓪᓗᒍ (ᓲᕐᓗ, ᑐᑭᓯᓇᔅᓯᒍᑎᖓᒍᑦ, EHB (ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ) ᐊᒻᒪᓗ ᓇᓚᐅᑦᑎᓚᕆᖏᑐᐃᓐᓇᕆᐋᖃᑦᑐᑎᒃ ᑭᒡᒐᑦᑐᐃᓂᖏᑦ BEL (ᓴᓂᑭᓗᐊᑉ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᓐᓂᒃ ᓇᓕᐋᓄᐋᓕᑦᑎᓪᓗᒋᑦ ᐃᓕᖅᑯᓯᕆᓲᖏᑦ ᐊᔾᔨᒋᓐᓂᖏᑉᐸᒋᑦ ᑖᒃᑯᐊ EHB (ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᖏᑕ.

ᑕᐃᓐᓇ ᓄᑖᖅ ᑎᒥᙳᓂᐅᔪᒧᑦ ᑐᓴᐅᒪᔾᔪᑎᔅᓴᖅ ᓴᖅᑭᑕᐅᓚᐅᑦᑐᖅ ᑖᔅᓱᒪᓂ ᑎᑎᕋᔅᓯᒪᔪᖁᑎᒥ ᐃᓚᓕᐅᑎᔭᐅᓯᒪᓚᐅᖏᒻᒪᑦ ᐅᑯᓇᓂ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᐅᓄᓐᓂᖏᓐᓂ ᐋᖅᑭᔅᓱᐃᒍᑎᖓᓂ, ᑕᒪᓐᓇ ᐊᓯᕈᑦᑕᐅᑎᑦᑎᒋᐋᖃᕋᔭᓛᐅᒻᒪᑦ ᐊᒻᒪᓗ ᐃᓱᒪᓕᐅᕈᑎᒋᔭᐅᒋᐋᖃᓕᓪᓗᓂ ᑐᕌᖓᔪᓂᒃ ᐃᓗᐋᓂ ᐋᖅᑭᔅᓱᓯᒪᒍᑎᐅᑉ ᐋᖅᑭᔅᓱᔅᓯᒪᓂᖓᑕ. ᑖᓐᓇ ᐃᓚᓕᐅᔾᔨᓂᖅ ᐃᓱᒪᔅᓴᔅᓯᐅᕈᑎᒋᔭᐅᒍᓐᓇᓛᒻᒪᑦ ᓯᕗᓂᔅᓴᒥ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᐱᕕᔅᓴᐅᓂᖏᑕ ᖃᐅᔨᓴᑦᑕᐅᓂᖏᓐᓂ ᓴᖅᑭᑎᑦᑎᒐᔭᓪᓗᓂ ᖃᐅᔨᓇᓱᐊᓂᒻᒥ ᐅᖃᐅᔾᔨᒋᐋᕈᑎᒥᒃ. ᑐᑭᒧᖓᖃᑎᒌᑦᑐᓂ, ᑕᐅᓄᖓᒃᑲᓐᓂᖅ ᐃᓕᖅᖁᓯᖃᓕᑦᑎᑦᑎᓂᑦ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᐅᓄᓐᓂᖏᑕ ᐋᖅᑭᔅᓱᔅᓯᒪᓂᖏᓐᓂᒃ ᑲᓇᓐᓇᐸᓯᐊᓂ ᑲᓇᑕᐅᑉ ᐊᑐᑦᑕᐅᓗᑎᒃ nDNA ᐱᓕᕆᐋᕆᔭᐅᕙᓪᓕᐋᓕᑦᑑᒐᓗᐊᖅ, ᐊᒻᒪᓗ ᑭᓱᕋᔭᐅᓂᓕᕆᔾᔪᑎ ᓴᓇᕐᕈᑏᑦ ᐊᑐᑦᑕᐅᒍᓐᓇᔅᓯᑎᑦᑎᒍᑎᒋᒻᒪᒍ ᐊᐅᓚᑦᑎᒍᑎᒋᔭᐅᒍᓐᓇᔅᓯᓗᓂ ᐊᑐᑦᑕᐅᒍᑎᒋᒍᓇᕋᔭᑦᑕᖏᓂᒃ ᐱᕙᓪᓕᐋᑎᑕᐅᓕᑦᑑᒐᓗᐊᑦ. ᑕᒪᒃᑯᐊ ᐅᖃᐅᑎᒋᔭᐅᓯᒪᔪᑦ ᐃᑲᔪᓕᑐᐃᓐᓇᕆᐋᓕᑦ ᐃᒻᒥᒃᑰᖓᔪᓂᒃ ᐃᓕᕆᐊᕆᔭᐅᑎᑕᐅᓯᒪᔪᓂᑦ ᖃᑯᖅᑕᑦ ᕿᓚᓗᒐᓐᓂ ᑕᐃᒃᑯᓄᖓᓪᓗᐊᖅ ᐅᓄᓂᖃᑦᑐᓄᑦ, ᑕᑎᒋᔭᐅᙱᖔᓪᓗᑎᒃ ᓇᓪᓕᕉᑎᓂ ᐊᒻᒪᓗ ᐊᕕᔅᓯᒪᓂᒻᒥ ᐅᖃᐅᓯᖃᔅᓯᒪᔪᑦ ᐱᔭᐅᖃᑦᑕᓂᖏᑕ ᖃᔅᓯᐅᓂᖏᓐᓂ ᐱᔭᐅᖃᑦᑕᔅᓯᒪᔪᓂᒃ ᑎᒥᙳᓂᖓᑕ ᑲᑎᓯᒪᓂᖏᓐᓂᒃ ᖃᐅᔨᓴᔅᓯᔨᑦ (GMA). ᐃᓘᓐᓇᓕᒫᖏᓐᓂ, 31% ᖃᑯᖅᑕᑦ ᕿᓚᓗᒐᐃᑦ ᐱᔭᐅᔪᑦ ᓄᓇᕕᒃᒥ ᐊᖑᓇᓱᐊᖅᑎᓄᑦ ᖃᐅᔨᓴᒐᔅᓴᓕᐅᕝᕕᒋᔭᐅᓚᐅᒻᒪᑕ ᐊᑐᑦᑎᓪᓗᒋᑦ ᐊᕐᕌᒍᐃᑦ 2021-2025. ᐊᒥᓲᓂᔅᓴᐅᓕᑦᑎᑕᐅᑉᐸᑕ ᖃᐅᔨᓴᒐᔅᓴᓕᐅᕝᕕᒋᔭᐅᕙᑦᑐᑦ ᖃᔅᓯᐅᓂᖏᑦ ᓄᓇᕕᓕᒫᒻᒥ ᐱᐅᓂᔅᓴᐅᓕᑦᑎᑦᑎᒐᔭᒻᒪᑕ ᐱᐅᓈᔅᓯᒪᓂᖏᓐᓂᒃ ᖃᐅᔨᒪᔾᔪᑎᔅᓴᐃᑦ ᐱᒐᔅᓴᐅᔪᑦ ᖃᐅᔨᓴᑦᑕᐅᖁᓪᓗᒋᑦ ᐊᐅᓚᑕᐅᑦᑎᐋᓂᕆᔭᖏᑕ ᐱᓕᕆᐊᕆᔭᐅᓂᖏᑦ ᐱᓕᕆᒍᑎᒋᔭᐅᒐᓱᐊᑦᑐᓂᒃ ᐊᖑᓇᓱᑦᑕᐅᓂᔅᓴᐅᓕᓂᖏᓐᓂᒃ ᐊᔅᓱᕈᓇᔅᓯᑎᓪᓗᒋᑦ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᐋᖅᑭᐅᒪᑎᑕᐅᓗᑎᒃ ᐆᒪᒐᓱᐊᕈᑎᒋᔭᐅᓂᖏᑦ ᐊᖑᓴᓱᐊᑕᐅᓗᑎᒃ ᐃᓘᓐᓇᓕᒫᖓᓂ ᓄᓇᕕᐅᑉ.

ᖃᐅᔨᒪᒋᐊᔅᓯᒍᑎᑦ ᖃᐅᔨᒪᒍᑎᔅᓴᐃᑦ ᐅᑯᓂᖓ BEL (ᓴᓂᑭᓗᐊᖅ) ᐊᒻᒪᓗ EHB (ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᖅᑕᑦ ᕿᓚᓗᒐᐃᑦ ᐊᖑᒻᒪᑎᒍᓃᒻᒪᑕ ᐅᓪᓗᒥᒧᑦ ᐊᒻᒪᓗ ᐱᑕᖃᕋᑎᒃ, ᑭᒡᒐᑦᑐᐃᒐᔭᑉᐸᑕ. ᐊᑑᑎᖃᑦᑎᐊᓕᑦᑎᑦᑎᓂᖅ ᐅᓪᓗᒥᓕᓴᓐᓂᒃ ᖃᖓᑦᑕᑦᑎᑕᐅᓯᒪᔪᒃᑯᑦ ᖃᐅᔨᒪᒍᓐᓇᐅᑎᓂᒃ ᓂᕕᖓᑖᓕᑦᑕᐅᒍᑎᓂᒃ ᓄᐋᑦᑎᒍᑎᒋᔭᐅᒍᓐᓇᔅᓯᒐᔭᒻᒪᑕ ᓇᒦᒻᒪᖓᑕ ᖃᐅᔨᒪᔭᐅᒍᓐᓇᔅᓯᓗᑎᒃ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᑕ ᓯᒡᔭᖏᓐᓂ ᐊᒻᒪᓗ ᑕᐅᕙᖓᑦ ᓴᓂᑭᓗᐊᑉ ᕿᑭᑦᑕᖓᓂᒃ

ᐱᔭᐅᑎᑦᑎᒍᓐᓇᔅᓯᒐᔭᒻᒪᑕ ᓄᑖᓂᒃ ᖃᐅᔨᒪᒍᑎᔅᓴᓂᒃ BEL-EHB (ᓴᓂᑭᓗᐊᖅ−ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᖅ) ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᓇᓕᐋᓄᐋᓂᖏᓐᓂᒃ ᖃᓄᐃᓘᖃᑦᑕᓲᖑᒪᖔᑕ.

ᑎᑎᕋᖅᑕᐅᓯᒪᔪᑦ ᑲᑎᒪᓂᕐᒧᑦ ᐃᓚᒋᔭᐅᖃᑕᐅᔪᑦ

ᐊᑎᖓ	**ᐱᓕᕆᖃᑎᖏᑦ**
Cyr, Charley	ᐃᒪᕐᒥᐅᑕᓕᕆᔨᒃᑯᑦ ᖃᐅᔨᓇᓱᐊᓐᓂᖅ
Gosselin, Jean-François	ᐃᒪᕐᒥᐅᑕᓕᕆᔨᒃᑯᑦ ᖃᐅᔨᓇᓱᐊᓐᓂᖅ
Hale, Michael	ᐃᒪᕐᒥᐅᑕᓕᕆᔨᒃᑯᑦ ᐃᖃᓗᓕᕆᓂᒻᒥ ᐊᐅᓚᑦᑎᓂᖅ
Hammill, Mike	ᐱᔭᐅᓯᒪᔪᑦ ᐃᒪᕐᒥᐅᑕᓕᕆᔨᒃᑯᓂᒃ ᑲᓇᑕᒥ ᖃᐅᔨᓇᓱᐊᑦᑎᖏᓐᓂᒃ
Khan, Sarah	ᓄᓇᕕᒻᒥ ᑕᕆᐅᕐᒥᐅᑕᓕᕆᔨᒃᑯᑦ ᑲᑎᒪᔨᖏᑦ
Lapointe-Ste-Pierre, Mathilde	ᒪᑭᕝᕕᒃ
Lee, David	ᓄᓇᕗᑦ ᑐᙵᕕᒃᑯᑦ
Mainguy, Julien	ᒪᑭᕝᕕᒃ
Mosnier, Arnaud	ᐃᒪᕐᒥᐅᑕᓕᕆᔨᒃᑯᑦ ᖃᐅᔨᓇᓱᐊᓐᓂᖅ
Pallisser, Billy	ᐊᖑᕕᒐᖅ
Parent, Geneviève	ᐃᒪᕐᒥᐅᑕᓕᕆᔨᒃᑯᑦ ᖃᐅᔨᓇᓱᐊᓐᓂᖅ
Sauvé, Caroline	ᐃᒪᕐᒥᐅᑕᓕᕆᔨᒃᑯᑦ ᖃᐅᔨᓇᓱᐊᓐᓂᖅ
Stott, Wendylee	ᐃᒪᕐᒥᐅᑕᓕᕆᔨᒃᑯᑦ ᖃᐅᔨᓇᓱᐊᓐᓂᖅ

ᐱᓕᕆᔾᔪᑕᐅᔪᓐᓇᖅᑐᑦ ᑐᓴᐅᒪᔾᔪᑎᑦᓴᑦ

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ᑐᑭᓯᒋᒋᐊᕈᑏᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᓄᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ ᐊᒻᒪ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ

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ᐃᒻᒥᒃᑰᖓᓂᖅ 1 –ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓐᓂᑦ ᖃᐅᔨᓴᒐᔅᓴᓕᐅᕕᒋᔭᐅᓯᒪᔪᑦ ᑎᓄᔾᔭᕕᒻᒥᒃ 2022-2025 ᐊᒻᒪᓗ ᑕᐃᒃᑯᐊ ᐊᖓᔪᖅᑳᑦᑕᖏᑕ ᐃᓗᑦᑎᖅᓯᒪᒍᑎᖏᑕ ᖃᓄᐃᑦᑑᓂᕋᕈᑎᖏᑦ (mtDNA). *ᓇᓗᓇᐃᔅᓯᒪᑕ ᐃᒻᒥᒃᑰᖓᓂᖓᓂᒃ ᖃᓄᐃᑦᑑᓂᕋᕈᑎᖏᑕ.

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ᐊᕐᕌᒍ ᐊᖑᑕᐅᓂᖓ mtDNA

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BM_BIOP_0188
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ᐊᕐᕌᒍ ᐊᖑᑕᐅᓂᖓ mtDNA

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ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ ᐊᒻᒪ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ

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ᐃᒻᒥᒃᑰᖓᓂᖅ 2 –ᖁᕝᕙᓯᓛᑦ ᐊᒻᒪᓗ ᐊᕙᑎᖏᓐᓃᑦᑐᑦ ᒥᑭᓛᖅ ᖃᐅᔨᔭᐅᓯᒪᔪᓂ ᐃᒪᓐᓇᐅᑐᐃᓐᓇᕆᐋᖃᓂᖏᓐᓂᒃ ᐅᓄᓐᓂᖏᑦᒃ ᐊᓯᕈᓂᖏᑦ ᑕᐃᒪᐃᓕᑎᑕᐅᓪᓗᑎᒃ ᐅᓄᓐᓂᖏᓐᓂᒃ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᓂᒃ ᖃᐅᔨᔭᐅᓯᒪᔪᓂᒃ, ᐱᔭᐅᔪᓂᑦ ᐅᕝᕙᓘᓐᓃᑦ ᐃᑭᓕᑦᑕᐅᓪᓗᑎᒃ ᐊᓯᐅᔨᔭᐅᓪᓗᑎᓪᓗ ᐅᖃᐅᑎᒋᔭᐅᓯᒪᔪᑦ ᐊᑯᓐᓂᖏᓐᓂ 2021 ᐊᒻᒪᓗ 2025 ᐆᒪᔪᐃᑦ ᖃᐅᔨᓴᑦᑎᓂᒃ ᑎᑭᐅᒪᔭᖓᓂ ᐃᕗᔨᕕᐅᑉ ᐊᒻᒪᓗ ᖁᐊᖅᑕᐅᑉ ᓄᓇᓕᖏᓐᓂ ᓂᒋᐋᓂᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓ, ᓄᓇᕕᒃᓯ.

ᓄᓇᓕᒃ ᓇᓪᓕᕈᑎᓂᖅ ᐊᕐᕌᒍ ᒥᑭᓛᖏᓐᓂ ᐅᓄᓛᖏᓐᓂ ᑭᖑᓂᖓᒍᑦ

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ᑐᑭᓯᒋᒋᐊᕈᑏᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᓄᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ
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ᓄᓇᓕᒃ ᓇᓪᓕᕈᑎᓂᖅ ᐊᕐᕌᒍ ᒥᑭᓛᖏᓐᓂ ᐅᓄᓛᖏᓐᓂ ᑭᖑᓂᖓᒍᑦ

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16 ᔭᓐᓄᐊᕆ 24 ᔭᓐᓄᐊᕆ 31 ᔭᓐᓄᐊᕆ
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27 ᓄᕕᐱᕆ 01 ᑎᓯᐱᕆ 10 ᑎᓯᐱᕆ

ᑯᐸᐃᒃ ᓄᓇᓕᖃᕐᕕᐊᓂ

ᑐᑭᓯᒋᒋᐊᕈᑏᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᓄᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ
ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ ᐊᒻᒪ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ

35

ᐃᒻᒥᒃᑰᖓᓂᖅ 3 –ᐊᕐᕌᒍᑕᒪᑦ ᐅᓄᓐᓂᖏᑦ ᖃᑯᑦᑕᑦ ᕿᓚᓗᒐᐃᑦ ᐱᔭᐅᖃᑦᑕᑦᑐᑦ ᐅᖃᐅᑎᒋᔭᐅᓯᒪᔪᑦ ᓄᓇᓕᓐᓂᒃ ᑭᒻᒥᕈᒻᒥᒃ ᐊᒻᒪᓗ ᑭᙵᓐᓂᑦ, ᐅᐋᓇᖓᓂ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓ, ᐊᑐᓚᐅᑦᑐᓂ ᐊᓂᒍᑦᑐᓂ 10 ᐊᕐᕌᒍᓚᐅᑦᑐᓂ

ᐊᕐᕌᒍ ᑭᒻᒥᕈᑦ ᑭᙵᐃᑦ
2025 ᐅᖃᐅᑎᒋᔭᐅᓯᒪᔪᑦᑕᖃᖏᑦᑐᖅ ᐅᖃᐅᑎᒋᔭᐅᓯᒪᔪᑦᑕᖃᖏᑦᑐᖅ
2024 13 ᐅᖃᐅᑎᒋᔭᐅᓯᒪᔪᑦᑕᖃᖏᑦᑐᖅ
2023 44 ᐅᖃᐅᑎᒋᔭᐅᓯᒪᔪᑦᑕᖃᖏᑦᑐᖅ
2022 15 141
2021 30 17
2020 6 37
2019 2 9
2018 15 10
2017 20 12
2016 30 4

ᑯᐸᐃᒃ ᓄᓇᓕᖃᕐᕕᐊᓂ

ᑐᑭᓯᒋᒋᐊᕈᑏᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᓄᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᑦ ᑲᓇᓐᓇᖓᓂ ᑕᓯᐅᔭᖅᔪᐊᓂ ᐊᒻᒪ ᕿᑭᖅᑖᓗᑉ ᓄᓇᕕᐅᓪᓗ ᐃᑭᕋᓴᖓᓂ

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ᐅᓇ ᐅᓂᒃᑳᓕᐊᖅ ᐊᑐᐃᓐᓇᐅᔪᖅ ᐅᕙᙵᑦ:

Center for Science Advice (CSA)
Québec Region
Fisheries and Oceans Canada
Maurice-Lamontagne Institute
C.P. 1000
Mont-Joli (Québec) G5H 3Z4

E-Mail: dfo.csaquebec-quebeccas.mpo@dfo-mpo.gc.ca
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ᐋᖅᑭᒋᐊᖅᑕᐅᔪᑦ ᑎᑎᕋᖅᑕᐅᓯᒪᔪᑦ ᐅᕗᖓ ᓴᖅᑭᖅᑎᑕᐅᓂᖏᓐᓄᑦ:
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Also available in English:

DFO. 2026. Updates on Stock-Specific Composition of Beluga Harvest in the Eastern Hudson Bay and Hudson Strait. DFO Can. Sci. Advis. Sec. Sci. Resp. 2026/028.

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MPO. 2026. Mises à jour de la composition des stocks de bélugas récoltés dans l’est de la baie d’Hudson et le détroit d’Hudson. Secr. can. des avis sci. du MPO. Rép. des Sci. 2026/028.