A bisemilattice is an algebra with two binary operations, \(+\) and \(\cdot\), that are commutative, associative and idempotent. Each bisemilattice determines and is determined by two semilattices. If each of these semilattices is a chain then a bisemilattice is called a bichain. If a bisemilattice satisfies the equation \(x \cdot (x + y) = x + (x \cdot y)\) it is called a Birkhoff system. The authors prove that a finite bichain is weakly projective in the variety of Birkhoff systems if and only if it does not contain a three-element bichain with elements \(a, b, c\) such that \(b \cdot c = b\), \(b + c = c\) and \(a\) is absorbing. They also present a recursive method to construct the \(n\)-element weakly projective bichains having some special properties.

Reviewer: Jiří Močkoř (Ostrava)

MSC:

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